

PIPE LABORATORY TEST
REPORT

PRODUCT NAME: PP-R PIPE PN 25 Ø20x3,4 mm
PRODUCT CODE: 4420020
STANDARD OF PRODUCT: TS EN ISO 15874-2

REPORT NO: 1
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
LONGITUDINAL REVERSION TEST	TS EN ISO 2505	135 °C, 1 h	Maximum 2% difference between initial dimension and the last dimension.	0,5% (OK)
IMPACT TEST	TS ISO 9854-1	0 °C, 1 h, 15 joule	Break ≤ 10%	No break (OK)
TEMPERATURE CYCLE TEST	TS EN 12293	20 °C 15 min, 90 °C 15 min, 5000 cycle	Must be no leakage or damage	Not applied
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage must occur during the test period	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	16 MPa, 1 h, 20 °C	No damage must occur during the test period	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	4,3 MPa, 22 h, 95 °C	No damage must occur during the test period	OK
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	3,8 MPa, 165 h, 95 °C	No damage must occur during the test period	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	3,5 MPa, 1000 h, 95 °C	No damage must occur during the test period	Not applied
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not applied
MFR TEST	TS EN ISO 1133	g/10 min, 2,16kg, 230 °C	The difference between MFR-pipe and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac pipes must not transmit visible light more than 0,2%.	Pipes are not opac, this test is not necessary.
OUTLOOK CONTROL	TS EN ISO 15874-2	-	Outside and inside surfaces of the pipes must be clean. There must not be bubbles or any other surface problems.	OK
DIMENSION CONTROL			CONTROL METHODS: TS EN ISO 15874-2	
Measured mean outside diameter (mm)		Standard min. outside diameter (mm)	Standard max. outside diameter (mm)	
20,25		20,0	20,3	OK
Measured wall thickness (e) (mm)		Standard e-min (mm)	Standard e-max (mm)	
3,42 - 3,48		3,4	3,9	OK

This test results comply with standard TS EN ISO 15874-2

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



PIPE LABORATORY TEST
REPORT

PRODUCT NAME: PP-R PIPE PN 25 Ø25x4,2 mm
PRODUCT CODE: 4420025
STANDARD OF PRODUCT: TS EN ISO 15874-2

REPORT NO: 2
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
LONGITUDINAL REVERSION TEST	TS EN ISO 2505	135 °C, 1 h	Maximum 2% difference between initial dimension and the last dimension.	0,5% (OK)
IMPACT TEST	TS ISO 9854-1	0 °C, 1 h, 15 joule	Break ≤ 10%	No break (OK)
TEMPERATURE CYCLE TEST	TS EN 12293	20 °C 15 min, 90 °C 15 min, 5000 cycle	Must be no leakage or damage	Not applied
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage must occur during the test period	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	16 MPa, 1 h, 20 °C	No damage must occur during the test period	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	4,3 MPa, 22 h, 95 °C	No damage must occur during the test period	OK
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	3,8 MPa, 165 h, 95 °C	No damage must occur during the test period	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	3,5 MPa, 1000 h, 95 °C	No damage must occur during the test period	Not applied
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not applied
MFR TEST	TS EN ISO 1133	g/10 min, 2,16kg, 230 °C	The difference between MFR-pipe and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac pipes must not transmit visible light more than 0,2%.	Pipes are not opac, this test is not necessary.
OUTLOOK CONTROL	TS EN ISO 15874-2	-	Outside and inside surfaces of the pipes must be clean. There must not be bubbles or any other surface problems.	OK
DIMENSION CONTROL			CONTROL METHODS: TS EN ISO 15874-2	
Measured mean outside diameter (mm)		Standard min. outside diameter (mm)	Standard max. outside diameter (mm)	
25,20		25,0	25,3	OK
Measured wall thickness (e) (mm)		Standard e-min (mm)	Standard e-max (mm)	
4,25 - 4,35		4,2	4,8	OK

This test results comply with standard TS EN ISO 15874-2

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



PIPE LABORATORY TEST
REPORT

PRODUCT NAME: PP-R PIPE PN 25 Ø32x5,4 mm
PRODUCT CODE: 4420032
STANDARD OF PRODUCT: TS EN ISO 15874-2

REPORT NO: 3
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
LONGITUDINAL REVERSION TEST	TS EN ISO 2505	135 °C, 1 h	Maximum 2% difference between initial dimension and the last dimension.	0,6% (OK)
IMPACT TEST	TS ISO 9854-1	0 °C, 1 h, 15 joule	Break ≤ 10%	No break (OK)
TEMPERATURE CYCLE TEST	TS EN 12293	20 °C 15 min, 90 °C 15 min, 5000 cycle	Must be no leakage or damage	Not applied
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage must occur during the test period	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	16 MPa, 1 h, 20 °C	No damage must occur during the test period	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	4,3 MPa, 22 h, 95 °C	No damage must occur during the test period	OK
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	3,8 MPa, 165 h, 95 °C	No damage must occur during the test period	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	3,5 MPa, 1000 h, 95 °C	No damage must occur during the test period	Not applied
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not applied
MFR TEST	TS EN ISO 1133	g/10 min, 2,16kg, 230 °C	The difference between MFR-pipe and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac pipes must not transmit visible light more than 0,2%.	Pipes are not opac, this test is not necessary.
OUTLOOK CONTROL	TS EN ISO 15874-2	-	Outside and inside surfaces of the pipes must be clean. There must not be bubbles or any other surface problems.	OK
DIMENSION CONTROL			CONTROL METHODS: TS EN ISO 15874-2	
Measured mean outside diameter (mm)		Standard min. outside diameter (mm)	Standard max. outside diameter (mm)	
32,30		32,0	32,3	OK
Measured wall thickness (e) (mm)		Standard e-min (mm)	Standard e-max (mm)	
5,40 - 5,55		5,4	6,1	OK

This test results comply with standard TS EN ISO 15874-2

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R MUFF PN 25 Ø20 mm
PRODUCT CODE: 4420120
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 4
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	Not available
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		19,30	19,35	19,2	19,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,05		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R MUFF PN 25 Ø25 mm
PRODUCT CODE: 4420125
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 5
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	Not available
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Inside Diameter (mm)		Result
		min	max	min	max	
		24,20	24,30	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R MUFF PN 25 Ø32 mm
PRODUCT CODE: 4420132
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 6
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width.≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	Not available
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		31,25	31,40	31,1	31,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,15	0,5	OK		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R REDUCTION PN 25 Ø32-25 mm
PRODUCT CODE: 4420233
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 7
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	Not available
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Inside Diameter (mm)		Result
		min	max	min	max	
		24,20	24,25	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,05		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R ELBOW 90° PN 25 Ø20 mm
PRODUCT CODE: 4420320
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 8
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	Not available
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		19,30	19,32	19,2	19,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,02		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R ELBOW 90° PN 25 Ø25 mm
PRODUCT CODE: 4420325
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 9
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	Not available
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,15	24,30	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,15		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R ELBOW 90° PN 25 Ø32 mm
PRODUCT CODE: 4420332
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 10
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width.≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	Not available
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		31,25	31,40	31,1	31,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,15	0,5	OK		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R T PN 25 Ø20 mm
PRODUCT CODE: 4420720
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 11
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	Not available
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		19,30	19,35	19,2	19,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,05		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R T PN 25 Ø25 mm
PRODUCT CODE: 4420725
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 12
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	Not available
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,20	24,35	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,15		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



PIPE LABORATORY TEST
REPORT

PRODUCT NAME: PP-R T PN 25 Ø32 mm
PRODUCT CODE: 4420732
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 19
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width.≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	Not available
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		31,15	31,25	31,1	31,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10		0,5		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R FEMALE ADAPTOR PN 25 Ø20 mm 1/2"
PRODUCT CODE: 4421020
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 14
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		19,25	19,30	19,2	19,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,05		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



PIPE LABORATORY TEST
REPORT

PRODUCT NAME: PP-R FEMALE ADAPTOR PN 25 Ø25 mm 1/2"
PRODUCT CODE: 4421022
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 15
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width.≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,25	24,35	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R FEMALE ADAPTOR PN 25 Ø32 mm 3/4"
PRODUCT CODE: 4421027
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 16
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		31,25	31,30	31,1	31,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,05		0,5		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R FEMALE ADAPTOR PN 25 Ø32 mm 1"
PRODUCT CODE: 4421032
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 17
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		31,20	31,30	31,1	31,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10	0,5	OK		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R MALE ADAPTOR PN 25 Ø20 mm 1/2"
PRODUCT CODE: 4421220
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 18
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		19,25	19,30	19,2	19,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,05		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R MALE ADAPTOR PN 25 Ø25 mm 1/2"
PRODUCT CODE: 4421222
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 19
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,25	24,30	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,05		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R MALE ADAPTOR PN 25 Ø25 mm 3/4"
PRODUCT CODE: 4421225
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 20
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,25	24,35	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R MALE ADAPTOR PN 25 Ø32 mm 3/4"
PRODUCT CODE: 4421227
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 21
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		31,25	31,30	31,1	31,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,05		0,5		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R MALE ADAPTOR PN 25 Ø32 mm 1"
PRODUCT CODE: 4421232
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 22
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		31,20	31,30	31,1	31,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10	0,5	OK		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R FEMALE ELBOW PN 25 Ø20 mm 1/2"
PRODUCT CODE: 4421420
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 23
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		19,20	19,30	19,2	19,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R FEMALE ELBOW PN 25 Ø25 mm 1/2"
PRODUCT CODE: 4421422
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 24
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,25	24,40	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,15		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R FEMALE ELBOW PN 25 Ø25 mm 3/4"
PRODUCT CODE: 4421425
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 25
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,25	24,40	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,15		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R FEMALE ELBOW PN 25 Ø32 mm 3/4"
PRODUCT CODE: 4421427
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 26
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		31,20	31,30	31,1	31,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10		0,5		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R FEMALE ELBOW PN 25 Ø32 mm 1"
PRODUCT CODE: 4421432
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 27
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		31,20	31,35	31,1	31,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,15		0,5		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R FEMALE T PN 25 Ø20 mm 1/2"
PRODUCT CODE: 4421620
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 28
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		19,20	19,30	19,2	19,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



PIPE LABORATORY TEST
REPORT

PRODUCT NAME: PP-R FEMALE T PN 25 Ø25 mm 1/2"
PRODUCT CODE: 4421622
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 29
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,30	24,40	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R FEMALE T PN 25 Ø25 mm 3/4"
PRODUCT CODE: 4421625
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 30
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,25	24,40	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,15		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R FEMALE T PN 25 Ø32 mm 1"
PRODUCT CODE: 4421632
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 31
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width.≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		31,20	31,30	31,1	31,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10		0,5		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



PIPE LABORATORY TEST
REPORT

PRODUCT NAME: PP-R CROMINIUM VALVE PN 25 Ø20 mm REPORT NO: 32
PRODUCT CODE: 4421920 TEST DATE: 15.01.2025
STANDARD OF PRODUCT: TS EN ISO 15874-3 REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		19,25	19,35	19,2	19,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R CROMINIUM VALVE PN 25 Ø25 mm
PRODUCT CODE: 4421925
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 33
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,25	24,30	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,05		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R CROMINIUM VALVEN PN 25 Ø32 mm
PRODUCT CODE: 4421932
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 34
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width.≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		31,20	31,35	31,1	31,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,15		0,5		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



PIPE LABORATORY TEST
REPORT

PRODUCT NAME: PP-R TAP PN 25 20 mm
PRODUCT CODE: 4422220
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 35
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	Not available
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		-	-	-	-	Not available
		Measured ovality (mm)		Standard max ovality (mm)		Result
		-	-	-	-	

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R FEMALE NİPEL PN 25 Ø20 mm 1/2"
PRODUCT CODE: 4422320
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 36
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width.≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		19,25	19,35	19,2	19,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R FEMALE NİPEL PN 25 Ø25 mm 3/4"
PRODUCT CODE: 4422325
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 37
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width.≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,25	24,30	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,05		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R FEMALE NİPEL PN 25 Ø20 mm 1/2"
PRODUCT CODE: 4422332
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 38
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width.≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		31,20	31,35	31,1	31,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,15		0,5		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



PIPE LABORATORY TEST
REPORT

PRODUCT NAME: PP-R MALE NİPEL PN 25 Ø20 mm 1/2"
PRODUCT CODE: 4422420
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 39
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width.≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		19,25	19,35	19,2	19,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



PIPE LABORATORY TEST
REPORT

PRODUCT NAME: PP-R MALE NİPEL PN 25 Ø25 mm 3/4"
PRODUCT CODE: 4422425
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 40
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,25	24,30	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,05		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R MALE NİPEL PN 25 Ø32 mm 1"
PRODUCT CODE: 4422432
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 41
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width.≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		31,20	31,35	31,1	31,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,15		0,5		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



PIPE LABORATORY TEST
REPORT

PRODUCT NAME: PP-R VALVE PN 25 Ø20 mm REPORT NO: 42
PRODUCT CODE: 4421820 TEST DATE: 15.01.2025
STANDARD OF PRODUCT: TS EN ISO 15874-3 REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		19,25	19,30	19,2	19,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,05		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R VALVE PN 25 Ø25 mm **REPORT NO:** 43
PRODUCT CODE: 4421825 **TEST DATE:** 15.01.2025
STANDARD OF PRODUCT: TS EN ISO 15874-3 **REPORT DATE:** 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,20	24,30	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R SPHERE VALVE PN 25 Ø20 mm
PRODUCT CODE: 4422520
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 44
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		19,20	19,30	19,2	19,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10	0,4	OK		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R SPHERE VALVE PN 25 Ø25 mm
PRODUCT CODE: 4422525
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 45
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,20	24,30	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



PIPE LABORATORY TEST
REPORT

PRODUCT NAME: PP-R SPHERE VALVE PN 25 Ø32 mm
PRODUCT CODE: 4422532
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 46
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		31,20	31,35	31,1	31,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,15		0,5		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R BRIDGE PN 25 Ø25 mm
PRODUCT CODE: 4423725
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 47
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	Not available
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,20	24,30	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10	0,4	OK		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



PIPE LABORATORY TEST
REPORT

PRODUCT NAME: PP-R BATTERY CONNECTION PN 25 Ø25 mm 1/2" REPORT NO: 48
PRODUCT CODE: 4424125 TEST DATE: 15.01.2025
STANDARD OF PRODUCT: TS EN ISO 15874-3 REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width.≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,25	24,35	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R TWIN BATTERY CONNECTION PN 25 Ø20 mm 1/2"
PRODUCT CODE: 4424920
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 49
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		19,20	19,40	19,2	19,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,20	0,4	OK		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R BATTERY CONNECTION TYPE 2 PN 25 Ø25 mm 1/2" **REPORT NO:** 50
PRODUCT CODE: 4420622 **TEST DATE:** 15.01.2025
STANDARD OF PRODUCT: TS EN ISO 15874-3 **REPORT DATE:** 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,20	24,30	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R CAP PN 25 Ø25 mm
PRODUCT CODE: 4420925
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 51
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	Not available
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Inside Diameter (mm)		Result
		min	max	min	max	
		24,20	24,30	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R DOUBLE SIDED NİPEL PN 25 Ø25 mm 3/4"
PRODUCT CODE: 4422625
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 52
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,25	24,30	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,05		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R RADIATOR VALVE PN 25 Ø20 mm 1/2"
PRODUCT CODE: 4423420
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 53
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		19,20	19,40	19,2	19,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,20	0,4	OK		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R ELBOW 45° PN 25 Ø25 mm
PRODUCT CODE: 4420425
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 54
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width.≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	Not available
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,15	24,30	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,15		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R REDUCER PN 25 Ø32-20 mm
PRODUCT CODE: 4420232
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 55
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	Not available
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		19,25	19,35	19,2	19,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R FEMALE NİPEL PN 25 Ø25 mm
PRODUCT CODE: 4421025
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 56
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width.≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		24,25	24,30	24,2	24,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,05		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



**PIPE LABORATORY TEST
REPORT**

PRODUCT NAME: PP-R FEMALE NİPEL PN 25 Ø20 mm 3/4"
PRODUCT CODE: 21021
STANDARD OF PRODUCT: TS EN ISO 15874-3

REPORT NO: 57
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
MFR TEST	TS EN ISO 1133	g/10 min, 2,16 kg, 230 °C	The difference between MFR-fitting and MFR-raw material, must not be more than 30% of MFR-raw material	0,31g - 0,30g OK (difference = 3%)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	51,8 bar, 20 °C, 1 h	No damage or leakage must occur during the test period	No damage or leakage (OK)
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167-1	11,3 bar, 95 °C, 1000 h	No damage or leakage must occur during the test period	Not applied
OPACITY TEST	TS EN ISO 7686	Light width. ≤ 0,25-0,3d	Opac fittings must not transmit visible light more than 0,2%.	Fittings are not opac, this test is not necessary.
THERMAL DETERMINATION TEST	TS EN ISO 1167-1	8760 h, 110 °C	No damage or leakage must occur during the test period	Not applied
OUTLOOK CONTROL	TS EN ISO 15874-3	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK
USE OF METALLIC FITTINGS WITH PIPES	TS EN 1254-3	-	When metallic fittings are combined with pipes, system must be suitable according to the standard.	OK
EFFECT OF FITTING ON DRINKING WATER	TS EN ISO 15874-1	-	Fittings must not have harmful effect on drinking water.	Applied at the Hifzissihha Institute (OK)
WATERTIGHTNESS PARTS	TS EN ISO 15874-5, TS EN 681-2	-	Fittings must not have harmful effect on the joint system. Elastomeric material of fittings must be suitable according to the standard.	OK
PERFORMANCE FEATURES	TS EN ISO 15874-5	-	Fitting and pipe joint system must be suitable according to standard.	OK
MEASURING DIMENSIONS	TS EN ISO 3126	-	Dimensions must be measured according to the standard.	OK

DIMENSION CONTROL	CONTROL METHODS: EN ISO 15874-3	Measured Inside Diameter (mm)		Standard Mean Inside Diameter (mm)		Result
		min	max	min	max	
		19,25	19,35	19,2	19,5	OK
		Measured ovality (mm)		Standard max ovality (mm)		Result
		0,10		0,4		

This test results comply with standard TS EN ISO 15874-3

Reported by
Barış BORAGANLI
Laboratory Chief



Approval
Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC WASTE WATER PIPE TYPE 1 Ø50-150 mm REPORT NO: 58
 PRODUCT CODE: 503-32000 TEST DATE: 15.01.2025
 STANDARD OF PRODUCT: TS 275-1 EN 1329-1 REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available for operation class B
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	OK
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not applied
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	OK
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not applied
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not applied
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 80% of pipe material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the pipes must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 50 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	50,10	50,0 - 50,3	0,70	1,80		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,05	3,0	2,75	2,7	2,30	2,3	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC WASTE WATER PIPE TYPE 1 Ø50-250 mm REPORT NO: 59
 PRODUCT CODE: 503-32002 TEST DATE: 15.01.2025
 STANDARD OF PRODUCT: TS 275-1 EN 1329-1 REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available for operation class B
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	OK
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not applied
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	OK
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not applied
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not applied
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 80% of pipe material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the pipes must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 50 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	50,10	50,0 - 50,3	0,70	1,80		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,05	3,0	2,75	2,7	2,30	2,3	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC WASTE WATER PIPE TYPE 1 Ø50-500 mm REPORT NO: 60
 PRODUCT CODE: 503-32004 TEST DATE: 15.01.2025
 STANDARD OF PRODUCT: TS 275-1 EN 1329-1 REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available for operation class B
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	OK
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not applied
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	OK
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not applied
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not applied
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 80% of pipe material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the pipes must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 50 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	50,10	50,0 - 50,3	0,70	1,80		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,05	3,0	2,75	2,7	2,30	2,3	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC WASTE WATER PIPE TYPE 1 Ø50-1000 mm
PRODUCT CODE: 503-32006
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 61
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available for operation class B
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	OK
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not applied
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	OK
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not applied
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not applied
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 80% of pipe material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the pipes must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 50 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	50,10	50,0 - 50,3	0,70	1,80		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,05	3,0	2,75	2,7	2,30	2,3	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC WASTE WATER PIPE TYPE 1 Ø50-2000 mm
PRODUCT CODE: 503-32008
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 62
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available for operation class B
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	OK
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not applied
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	OK
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not applied
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not applied
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 80% of pipe material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the pipes must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 50 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	50,10	50,0 - 50,3	0,70	1,80		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,05	3,0	2,75	2,7	2,30	2,3	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC WASTE WATER PIPE TYPE 1 Ø50-3000 mm
PRODUCT CODE: 503-32010
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 63
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available for operation class B
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	OK
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not applied
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	OK
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not applied
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not applied
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 80% of pipe material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the pipes must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 50 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	50,10	50,0 - 50,3	0,70	1,80		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,05	3,0	2,75	2,7	2,30	2,3	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC WASTE WATER PIPE TYPE 1 Ø50-6000 mm
PRODUCT CODE: 503-32012
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 64
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available for operation class B
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	OK
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not applied
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	OK
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not applied
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not applied
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 80% of pipe material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the pipes must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 50 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	50,10	50,0 - 50,3	0,70	1,80		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,05	3,0	2,75	2,7	2,30	2,3	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC WASTE WATER PIPE TYPE 1 Ø110-150 mm
PRODUCT CODE: 503-32028
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 65
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available for operation class B
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	OK
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not applied
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	OK
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not applied
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not applied
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 80% of pipe material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the pipes must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 110 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	110,00	110,0 - 110,3	1,20	2,64		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,20	3,2	2,95	2,9	2,40	2,4	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC WASTE WATER PIPE TYPE 1 Ø110-250 mm
PRODUCT CODE: 503-32030
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 66
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available for operation class B
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	OK
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not applied
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	OK
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not applied
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not applied
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 80% of pipe material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the pipes must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 110 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	110,00	110,0 - 110,3	1,20	2,64		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,20	3,2	2,95	2,9	2,40	2,4	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC WASTE WATER PIPE TYPE 1 Ø110-500 mm
PRODUCT CODE: 503-32032
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 67
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available for operation class B
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	OK
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not applied
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	OK
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not applied
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not applied
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 80% of pipe material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the pipes must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 110 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	110,00	110,0 - 110,3	1,20	2,64		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,20	3,2	2,95	2,9	2,40	2,4	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC WASTE WATER PIPE TYPE 1 Ø110-1000 mm REPORT NO: 68
 PRODUCT CODE: 503-32034 TEST DATE: 15.01.2025
 STANDARD OF PRODUCT: TS 275-1 EN 1329-1 REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available for operation class B
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	OK
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not applied
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	OK
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not applied
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not applied
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 80% of pipe material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the pipes must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 110 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	110,00	110,0 - 110,3	1,20	2,64		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,20	3,2	2,95	2,9	2,40	2,4	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC WASTE WATER PIPE TYPE 1 Ø110-2000 mm REPORT NO: 69
 PRODUCT CODE: 503-32036 TEST DATE: 15.01.2025
 STANDARD OF PRODUCT: TS 275-1 EN 1329-1 REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available for operation class B
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	OK
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not applied
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	OK
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not applied
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not applied
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 80% of pipe material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the pipes must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 110 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	110,00	110,0 - 110,3	1,20	2,64		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,20	3,2	2,95	2,9	2,40	2,4	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC WASTE WATER PIPE TYPE 1 Ø110-3000 mm REPORT NO: 70
 PRODUCT CODE: 503-32038 TEST DATE: 15.01.2025
 STANDARD OF PRODUCT: TS 275-1 EN 1329-1 REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available for operation class B
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	OK
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not applied
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	OK
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not applied
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not applied
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 80% of pipe material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the pipes must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 110 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	110,00	110,0 - 110,3	1,20	2,64		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,20	3,2	2,95	2,9	2,40	2,4	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC WASTE WATER PIPE TYPE 1 Ø110-6000 mm REPORT NO: 71
 PRODUCT CODE: 503-32040 TEST DATE: 15.01.2025
 STANDARD OF PRODUCT: TS 275-1 EN 1329-1 REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available for operation class B
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	OK
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not applied
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	OK
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not applied
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not applied
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 80% of pipe material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the pipes must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 110 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	110,00	110,0 - 110,3	1,20	2,64		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,20	3,2	2,95	2,9	2,40	2,4	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC ELBOW 50x45°
PRODUCT CODE: 503-32200
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 72
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation near the enjection area, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	Not available
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not available
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not available
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not available
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 85% of fitting material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 50 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	50,10	50,00 - 50,20	0,50	1,20		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,00	3,00	2,75	2,70	2,35	2,30	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC ELBOW 110x45°
PRODUCT CODE: 503-32204
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 73
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation near the enjection area, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	Not available
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not available
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not available
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not available
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 85% of fitting material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 110 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	110,10	110,00 - 110,30	0,80	2,64		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,20	3,20	2,95	2,90	2,45	2,40	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC ELBOW 50x87°
PRODUCT CODE: 503-32224
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 74
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation near the enjection area, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	Not available
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not available
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not available
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not available
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 85% of fitting material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 50 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	50,10	50,00 - 50,20	0,50	1,20		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,10	3,00	2,75	2,70	2,35	2,30	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC ELBOW 110x87°
PRODUCT CODE: 503-32228
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 75
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation near the enjection area, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	Not available
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not available
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not available
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not available
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 85% of fitting material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 110 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	110,10	110,00 - 110,30	0,80	2,64		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,25	3,20	2,90	2,90	2,45	2,40	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC BRANCH 50x50x45°
PRODUCT CODE: 503-32250
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 76
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation near the enjection area, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	Not available
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not available
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not available
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not available
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 85% of fitting material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 50 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	50,10	50,00 - 50,20	0,50	1,20		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,10	3,00	2,75	2,70	2,35	2,30	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC BRANCH 110x50x45°
PRODUCT CODE: 503-32256
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 77
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation near the enjection area, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	Not available
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not available
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not available
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not available
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 85% of fitting material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 110 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	110,10	110,00 - 110,30	1,80	2,64		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,25	3,20	2,90	2,90	2,45	2,40	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC BRANCH 110x110x45°
PRODUCT CODE: 503-32260
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 78
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation near the enjection area, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	Not available
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not available
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not available
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not available
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 85% of fitting material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 110 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	110,10	110,00 - 110,30	0,70	2,64		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,25	3,20	2,90	2,90	2,40	2,40	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC T 50x50x87°
PRODUCT CODE: 503-32300
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 79
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation near the enjection area, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	Not available
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not available
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not available
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not available
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 85% of fitting material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 50 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	50,10	50,00 - 50,20	0,70	1,20		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,10	3,00	2,75	2,70	2,35	2,30	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC T 110x50x87°
PRODUCT CODE: 503-32306
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 80
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation near the enjection area, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	Not available
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not available
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not available
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not available
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 85% of fitting material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 110 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	110,10	110,00 - 110,30	1,90	2,64		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,25	3,20	2,90	2,90	2,45	2,40	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC T 110x110x87°
PRODUCT CODE: 503-32310
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 81
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation near the enjection area, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	Not available
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not available
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not available
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not available
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 85% of fitting material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 110 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	110,10	110,00 - 110,30	0,80	2,64		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,20	3,20	2,90	2,90	2,45	2,40	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC REDUCER 110x50 mm
PRODUCT CODE: 503-32402
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 82
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation near the enjection area, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	Not available
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not available
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not available
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not available
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 85% of fitting material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 110 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	110,10	110,00 - 110,30	1,70	2,64		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,20	3,20	3,00	2,90	2,40	2,40	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC REDUCER 125x110 mm
PRODUCT CODE: 503-32406
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 83
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation near the enjection area, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	Not available
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not available
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not available
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not available
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 85% of fitting material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 125 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	125,10	125,00 - 125,30	2,00	3,00		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,25	3,20	2,95	2,90	2,45	2,40	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC PLUGINS 75 mm
PRODUCT CODE: 503-32482
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 84
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT	
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation near the enjection area, must not be more than %30 of wall thickness.	OK	
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)	
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)	
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK	
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not available	
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available	
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	Not available	
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not available	
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not available	
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not available	
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not available	
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 85% of fitting material	Not applied	
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK	
DIMENSION CONTROL			CONTROL METHODS: TS 275-1 EN 1329-1		
Nominal dimension 75 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality	
	75,10	75,00 - 75,30	0,50	1,80	OK
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)
3,05	3,00	-	-	-	-
					OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC PLUGINS 110 mm
PRODUCT CODE: 503-32484
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 85
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT	
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation near the enjection area, must not be more than %30 of wall thickness.	OK	
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)	
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)	
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK	
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not available	
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available	
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	Not available	
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not available	
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not available	
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not available	
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not available	
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 85% of fitting material	Not applied	
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK	
DIMENSION CONTROL			CONTROL METHODS: TS 275-1 EN 1329-1		
Nominal dimension 110 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality	
	110,20	110,00 - 110,30	0,60	2,64	OK
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)
3,25	3,20	-	-	-	-
OK					

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC SLIDING COUPLING 50 mm
PRODUCT CODE: 503-32420
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 86
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation near the enjection area, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not available
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	Not available
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not available
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not available
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not available
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 85% of fitting material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 50 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	-	-	-	-	-	
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
-	-	2,75	2,70	2,35	2,30	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC SLIDING COUPLING 110 mm
PRODUCT CODE: 503-32424
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 87
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation near the enjection area, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not available
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	Not available
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not available
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not available
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not available
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 85% of fitting material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 110 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	-	-	-	-	-	
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
-	-	2,90	2,90	2,40	2,40	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager



PRODUCT NAME: U PVC COMPLETE S 110x110x45°
PRODUCT CODE: 503-32434
STANDARD OF PRODUCT: TS 275-1 EN 1329-1

REPORT NO: 88
TEST DATE: 15.01.2025
REPORT DATE: 15.01.2025

TEST NAME	TEST METHOD	TEST CONDITIONS	REQUIREMENTS	TEST RESULT
HEAT EFFECT TEST	TS EN ISO 580	150 °C, 30 min	Depth of deformation near the enjection area, must not be more than %30 of wall thickness.	OK
WATERTIGHTNESS TEST	TS EN 1053	23 ± 5 °C, 15 min, 0,5 bar	Must be no leakage	No leakage (OK)
AIRTIGHTNESS TEST	TS EN 1054	23 ± 5 °C, 1 min, 0,1 bar	Must be no leakage	No leakage (OK)
VICAT SOFTENING TEMPERATURE TEST	TS EN 727	50 ± 5 °C/hour Heating velocity	Vicat softening point must be ≥ 79°C	OK
HIGH TEMPERATURE CYCLE TEST	TS EN 1055	20 °C 15 min, 80 °C 15 min	Must be no leakage	Not applied
HYDROSTATIC PRESSURE TEST	TS EN ISO 1167	60 °C, 1000 h, 10 MPa	Must be no damage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the round)	TS EN 744	0 °C, 1 h	TIR ≤ 10 %	Not available
CHANGE OF LONGITUDINAL DIMENSION	TS EN 2505	150 °C, 30 min	≤ 5 %	Not available
COMBINED WATERTIGHTNESS TEST	TS EN 1277	23 ± 5 °C, 15 min	Must be no leakage	Not available
RESISTANCE TO EXTERNAL BLOW TEST (by the staircase)	TS EN 1411	0 °C, 1 h	H 50 ≥ 1 m	Not available
RESISTANCE TO DICHLOROMETHANE	TS EN 580	15 °C, 30 min	Sample must not decay in dichloromethane	Not available
PVC-U MATERIAL	TS EN 1905	-	PVC must be ≥ 85% of fitting material	Not applied
OUTLOOK CONTROL	TS 275-1 EN 1329-1	-	Outside and inside surfaces of the fittings must be clean. There must not be bubbles or any other surface problems.	OK

DIMENSION CONTROL

CONTROL METHODS: TS 275-1 EN 1329-1

Nominal dimension 110 mm (Operation class B)	measured mean outside diameter	standard mean outside diameter	measured ovality	standard max ovality		
	110,10	110,00 - 110,30	0,70	2,64		
(Wall thickness) measured e-min (mm)	standard e-min (mm)	measured e2-min (mm)	standard e2-min (mm)	measured e3-min (mm)	standard e3-min (mm)	
3,25	3,20	2,90	2,90	2,40	2,40	OK

This test results comply with standard TS 275-1 EN 1329-1

Reported by
Barış BORAGANLI
Laboratory Chief



Barış GÜNEŞ
Factory Manager

