Polyamide hose (PA 12 HIPHL)

Art. No. 194136 to 194420

P 7-274 e

PA 12 has a low water absorptive capacity and is therefore dimensionally stable if the ambient humidity varies. PA 12 resists greases, oil, fuels, hydraulic fluids, alkalis and salt solutions. Sufficient UV resistance can only be guaranteed if the material is pigmented black! Suitable for use with push-in fittings. Suitable for vacuum up to 12x9 mm.

Main applications:
- Compressed air lines (low-pressure range) in industry and manual trades.
- Hydraulic lines (miniature hydraulics) in instrumentation and control.
- Lines for liquid and free-flowing substances.
- Pneumatic braking systems in motor vehicles and trailers (DIN 73378:1996-02 and DIN 74324-1:1996-02).
- Fuel and lubricant supply systems.
- Vacuum lines
- Suitable for drag chains

Temperature range	-40 °C to 130 °C (for pressure utilization see table)
Shore hardness	D 62
Colour	Polyamide hoses are available in colours natural (N), blue (B), yellow (G), red (R), black (S), green (GR) and silver (SI)

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Type No.	Tube O.D mm	Tube I.D. mm	Wall Thickness mm	Max. operating pressure at 23 °C bar	Bending radius min. mm	Colour	Reel Length m
259.08 X-V2	3	1.5	0.75	49	15	N, B, S	25
259.09 X-V2	4	2	1	49	15	N, B, G, R, S, GR, SI	25
259.07 X-V2	4.3	3	0.65	28	20	N, B, S	25
259.10 X-V2	5	3	1	37	30	N, B, G, R, S, GR, SI	25
259.11 X-V2	6	4	1	29	35	N, B, G, R, S, GR, SI	25
259.12 X-V2	8	6	1	21	40	N, B, G, R, S, GR, SI	25
259.61 X-V2	10	7	1.5	26	45	N, B, S	25
259.13 X-V2	10	8	1	16	60	N, B, G, R, S, GR, SI	25
259.14 X-V2	12	9	1.5	21	70	N, B, G, R, S, GR, SI	25
259.22 X-V2	12	10	1	13	85	N, B, G, R, S, GR, SI	25
259.62 X-V2	14	11	1.5	17	100	N, B, S	25
259.24 X-V2	14	12	1	11	85	N, B, G, R, S, GR, SI	25
259.25 X-V2	16	12	2	21	150	N, S	25

The material of our hoses, which are made from PA12 HIPHL, is certified according to UL 94 HB.

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Polyamide hose (PA 12 HIPHL)), roll of 100 m, packed in a paper box							
Type No.	Tube O.D mm	Tube I.D. mm	Wall Thickness mm	Max. operating pressure at 23 °C bar	Bending radius min. mm	Colour	Reel Length m
259.09 X-100-V2	4	2	1	49	15	N, B, S	100
259.11 X-100-V2	6	4	1	29	35	N, B, S	100
259.12 X-100-V2	8	6	1	21	40	N, B, S	100
259.13 X-100-V2	10	8	1	16	60	N, B, S	100
259.14 X-100-V2	12	9	1.5	21	70	N, B, S	100

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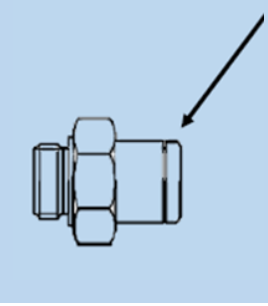
Tolerances		
Outside tolerance acc. to DIN 73378	Ø 4 mm - 10 mm	+/- 0.10 mm
	Ø 11 mm - 20 mm	+/- 0.15 mm
Tolerance (roll length)	+/- 2 %	

Pressure utilization	
Utilization in %	Temperature
100 %	23° C
87 %	30° C
74 %	40° C
64 %	50° C
57 %	60° C
52 %	70° C
47 %	80° C
44 %	90° C
40 %	100° C
36 %	110° C
33 %	120 ° C
30 %	130° C

Applications	Polyamide 12	Polyethylene
Industrial automation		
Compressed air	•	•
Transport of liquids	•	•
Chemical environments	•	
Micropneumatics	•	
Thermoforming	•	•
Vacuum	•	
Automotive		
Brake systems for trucks	•	
Brake system for trailers	•	
Thermoforming	•	
Fuel line	•	
Coupling system	•	

The applications and areas of application are responsible for the user. All further claims, in particular liability for consequential damages, are in principle excluded.

We recommend for improved strength of push-in fittings with PA hoses, the following Push-in fitting - hose combination:

	For tube O.D.	Recommended hose Ø	Recommended hose
	3	3x0.75	259.08 X-V2
	4	4x1	259.09 X-V2
	5	5x1.5	259.10 X-V2
	6	6x1*	259.11 X-V2
	8	8x1*	259.12 X-V2
	10	10x1.5	259.61 X-V2
	12	12x1.5*	259.14 X-V2
	14	14x1.5*	259.62 X-V2
	16	16x1	259.25 X-V2

* Recommended and based on ISO 14743

CHEMICAL RESISTANCE AT 23 ° C		
SUBSTANCE	POLYAMIDE 12	POLYETHYLENE
ACETALDEHYD	o	o
ACETIC ACID	o	o
ACETONE	o	o
ACETYLENE	o	-
AMMONIA LIQUID	o	G
AMYL ACETATE	o	-
ANILINE	G	-
ANTIFREEZE	o	-
BENZOL	G	N
BENZYL ACOHOL	N	G
BROMINE	N	N
BUTANE	o	o
BUTANOL	o	-
CARBON TETRACHLORIDE	L	N
CHLORINE	N	-
CHLOROBENZOL	N	-
CHLOROFORM	N	N
CITRIC ACID	o	-
CONCENTRATED SULPHURIC ACID	N	G
CRESOL	L	N
DECALINE	o	N
ENGINE OIL	o	o
ETHANOL	o	o
ETHER	o	N
ETHYL ACETATE	o	o
ETHYL OXIDE	o	N
FORMALDEYDE	L	o
FORMIC ACID	L	o
FRIGEN F 12 LIQUID	G	-
GASOIL	o	-
GLYCERIN	oG	o
GLYCOLE	o	o
GREESE	o	o
GREESE FOOD	o	o
HEPTANE	o	G
HYDRAULIC OIL	o	o
HYDROCLORIC ACID 1 %	L	o
HYDROCLORIC ACID 10 %	L	o
HYDROFLUORIDRIC GAS	-	-
HYDROGEN PEROXIDE 20 %	L	G
HYDROGEN XXXX	-	o
IODINE TINCTURE	-	-
ISOOCTANE	oG	N
ISOPROPANOL	-	-
KEROSENE	o	-
LACTIC ACID	o	o
MAGNESIUM CHLORIDE 10 %	o	o
MERCURY	o	o
METHANOL	L	o
METHYLENE CHLORIDE	o	N
MILK	o	o

CHEMICAL RESISTANCE AT 23 ° C		
SUBSTANCE	**POLYAMIDE 12**	**POLYETHYLENE**
MINERAL OIL	o	o
NAPTHA	o	-
NAPTHALENE	o	o
NITRIC ACID	N	N
NITROBENZOL	L	-
OIL ETHER	-	-
OILS	o	-
OLEIC ACID	o	o
OLEUM	L	N
OXALIC ACID	o	o
OXIGEN	o	-
OZONE	L	N
PARAFIN OIL	o	o
PERCHLOROETHYLENE	N	-
PETROL	G	G
PETROLEUM	o	oG
PHENOL	N	N
POTASSIUM CARBONATE	o	-
POTASSIUM HYDROXIDE 10 %	oG	o
POTASSIUM HYDROXIDE 50 %	oG	o
POTASSIUM PERMANGANATE	N	o
PROPANE	o	-
PYRIDINE	N	oG
SALICYLIC ACID	o	-
SEA WATER	o	o
SILICON OIL	o	o
SOAP SUDS	o	G
SODA 10 %	o	-
SODA 50 %	o	-
SODIUM CARBONATE 10 %	o	-
SODIUM CARBONATE 50 %	L	-
SODIUM CHLORIDE (saturated sodium chloride)	o	o
SODIUM CHLORIDE (table salt)	o	o
SODIUM SULPHATE (copper sulphate)	o	o
SODIUM SULPHATE (sodium sulphate)	o	-
STARCH	o	o
STEARIC ACID	o	G
STEARINE	o	-
STYRENE	o	-
SULOHUR CHLORIDE	L	N
SULPHURIC ACID 10 %	L	G
TALLOW	o	o
TARTARIC ACID	o	o
TETRALIN	-	-
TOLUOLE	o	N

CHEMICAL RESISTANCE AT 23 ° C		
SUBSTANCE	POLYAMIDE 12	POLYETHYLENE
TRANSFORMER OIL	o	o
TRICHLORETHANE	L	N
TURPENTINE	o	oG
UREA	o	o
UREIC ACID	o	N
URINE	o	o
VASELLINE	o	o
VINEGAR	o	o
WATER	o	o
WAX	o	-
XYOLO	o	-
ZINC CHLORIDE (WATER BASED)	o	o

O = GOOD RESISTANCE
N = POOR RESISTANCE
G = SWELLING EFFECT
- = NO INFORMATION AVAILABLE
L = LIMITED DURABILITY

THE APPLICATIONS AND AREAS OF APPLICATION ARE RESPONSIBLE FOR THE USER. ALL FURTHER CLAIMS, IN PARTICULAR LIABILITY FOR CONSEQUENTIAL DAMAGES, ARE IN PRINCIPLE EXCLUDED