

## Cable material-data

Materials	PVC	PUR	TPE-E	X-PVC	X-PUR	PP	PE
Outer-jacket	P00 S1118 S2010	S90, S366 S74, S1117 S2020		XOR	S398		
Wire insulation	P00, S90		S74	XOR		S366	S398
Material symbol	Y	11Y	12Y	X	11X	9Y	2Y
Temperature resistance permanent	70°C	90°C	105°C	80°C	90°C	70°C	90°C
Temperature resistance until 500h	—	—	150°C	—	—	80°C	110°C <sup>1</sup>
Temperature resistance temporary	—	—	—	250°Cx6h	250°Cx6h	110°C	140°C <sup>1</sup>
Short-circuit proof according to VDE0298	160°Cx5s	160°Cx5s	160°Cx5s	160°Cx5s	160°Cx5s	160°Cx5s	—
Non-inflammability according to DIN VDE 0472 section 804	●	● <sup>2</sup>	●	●	●	● <sup>2</sup>	● <sup>2</sup>
Oil-resistance according to DIN VDE 0472	● <sup>3</sup>	●●	○	●● <sup>3</sup>	●● <sup>3</sup>	●	●
Acid-resistance sulphuric acid (battery acid)	○	○	●	●	●	●	●
Acid-resistance hydrochloric acid 20%	○	○	●	●	●	●	●
General chemical-resistance	○ <sup>4</sup>	○ <sup>4</sup>	●	● <sup>4</sup>	● <sup>4</sup>	●	●
Hydrolysis-resistance	●	●	●	●	●	●	●
Microbes-resistance	●	●	●	●	●	●	●
Cold-winding resistance	-15°C	-40°C	-50°C	-15°C	-40°C	—	—
Cold-shock resistance	-15°C	-40°C	-50°C	-15°C	-40°C	—	—
Cold-intrusion temperature according to DIN 53372	-30°C	-60°C	-70°C	-30°C	-60°C	-50°C	-10°C
Ozone- and UV-resistance	●	●	●	●●●	●●●	●	●
Abrasion strength	●	●●●	●	●●●	●●●	●	●
HOT-SET-values (heat expansion)	—	—	—	● <sup>5</sup>	● <sup>5</sup>	—	—
Specific insulation resistance RSDw (Ωxcm)	>10	>10	>10	>10	>10	>10	>10
Direct-current resistance	●	●	●	●●●	●●●	●●●	●●●
Dielectric strength [kV/mm]	●	●	70	●●●	●●●	50	30
Specific weight	1,40	1,17	1,25	1,36	1,36	0,94	0,91
Halogen-free	no	yes <sup>7</sup>	yes <sup>6</sup>	no	yes <sup>7</sup>	yes <sup>6</sup>	yes <sup>6</sup>

1 without mechanical stresses

2 if necessary

3 indicate possible oil contamination

4 individually modifiable

5 if necessary

6 if not non-inflammable

7 also if inflammable

●●● very good

●● very good to good

● good

○ conditionally resistant

## Chemical resistance of outer jacket

Outer jacket	Soft-PVC P00, XOR, S1118, S2010	PUR-elastomer S90, S366, S74, S398, S1117, S2020
<b>Chemical</b>		
Aceton	—	—
Aluminium chloride 10%	●●	●
Formic acid	—	—
Amoniac	○	●●
Ammonium chloride	●●	●
Anilin	—	—
ASTM-oil I	●●	●●
ASTM-oil II	●●	●●
ASTM-oil III	●●	●●
ASTM-fuel I	●●	●●
ASTM-fuel II	●	○
ASTM-fuel III	●	○
Benzene	—	—
Brake-fluid ATE	●	—
Butanol	—	—
Butylacetat	—	—
Calcium chloride 40%	●●	●
Chlorobenzene	—	—
Chloroform	—	—
Chrome acid	—	—
Cyclohexan	—	○
Cyclohexanon	—	—
Diesel oil	—	●
Dimethylformamid	—	—
Iron-III-chloride 10%	●●	●
Vinegar acid 10%	●	●
Ethanol	—	○
Ethyl ether	—	○
Ethylacetat	—	—
Ethylene chloride	—	●
Freon 12	●	○
Freon 22	●	○
Transmission oil SAE90	●	—
Glycerin	●●	●●
Glykol	○	●●
Isopropanol	—	○
Lye 10%	●●	●●
Bichromate of potash	●●	●●
Potassium nitrate	●●	●●
Potassium permanganate	○	—
Magnesium chloride 30%	●●	●
Methanol	—	○
Methyl acetate	—	—
Methylene chloride	—	—
Methyl ethylketon	—	○
Methyl glykol	—	—
Methyl glykolacetate	—	—
Lactic acid 10%	●●	○

Outer jacket	Soft-PVC P00, XOR, S1118, S2010	PUR-elastomer S90, S366, S74, S398, S1117, S2020
<b>Chemical</b>		
Sodium chloride 10%	●●	●
Sodium hypo-chloride solution	○	●●
Soda lye 10%	●●	●●
Ozone	●●	●●
Per-chlorine ethylene	●●	—
Petrol ether	—	●●
Petrol	—	●
Phosphoric acid	●●	—
Nitric acid	—	—
Hydrochloric acid	●●	●●
Carbon disulfide	—	—
Sulphur carbonate 30%	●●	●●
Tetra chlorethylene	—	—
Carbon tetrachloride	—	—
Tetra hydro furan	—	—
Toluene	—	—
Trichloroethylene	—	—
Hydrogen peroxide 3%	●●	●●
Xylol	—	—

●● resistant   ● largely resistant   ○ conditionally resistant   — not resistant

The suitability for certain applications must be constantly checked by the users. The given chemical resistant is only valid for free storage and at room temperature, if not otherwise stated.