

Chemical resistance

The table below indicates the effects of specific chemicals on rubber expansion joints. The table comprises recommendations which do not imply an undertaking or a guarantee on the part of Trelleborg Expansion Joints.

Get in touch with your nearest Trelleborg sales office for further information.

Chemicals in system	Innerliner of expansion joint									
	ECO	NR	CR	NBR	EPDM	CSM	IIR	SBR	FKM	PTFE
Acetaldehyde D	-	X	X	X	B	C	B	X	A	A
Acetic acid 5%	B	B	A	B	A	A	A	B	A	A
10%	B	B	B	B	A	B	A	B	A	A
20%	B	B	B	B	A	B	B	B	B	A
30%	B	B	B	B	A	B	B	B	B	A
50%	B	B	C	C	A	B	B	C	C	A
99,5% glacial	X	B	X	C	B	C	B	C	X	A
Acetic acid. Amhydride	X	C	C	X	A	C	A	C	X	A
Aceton	X	B	C	X	A	C	A	C	X	A
Acetylene	-	B	A	A	A	B	A	B	A	A
Ammonia gas, cold	-	A	B	A	A	A	A	A	X	A
Ammonia gas, hot	-	X	B	X	B	B	B	X	X	A
Ammonia, liquid	-	B	A	B	A	B	A	B	X	A
Ammonium hydroxid	B	B	B	C	A	A	A	B	B	A
Amyl acetate	X	C	X	X	A	C	A	X	X	A
Aniline	X	X	X	X	B	X	B	X	B	A
Aniline dyes	-	B	B	C	B	B	B	B	B	A
Animal fats	A	X	B	A	B	B	B	X	A	A
Argon	-	X	X	C	A	X	B	X	A	A
Arsenic acid	-	B	B	B	A	A	A	B	A	A
Beer	A	A	A	A	A	A	A	A	A	A
Benzene (Benzol)	X	X	X	X	X	X	X	X	A	A
Black liquer	-	X	C	A	X	C	X	X	A	A
Brandy	-	A	A	A	A	A	A	A	A	A
Bromine liquid	-	X	X	X	X	X	X	X	A	A
Butane	A	X	A	A	X	B	X	X	A	A
Butanol (butyl alcohol)	-	A	A	A	A	A	A	A	A	A
Butyl acetat	X	X	X	X	B	C	X	X	X	A
Caicium hypochlorite	B	C	X	C	A	A	B	X	A	A
Caustic potash	-	B	B	C	B	A	A	B	C	A
Caustic soda	-	A	B	C	A	B	A	B	B	A
Chlorine gas,dry, 40°C	B	X	X	X	C	C	X	X	A	A
Chlorine gas,wet, 40°C	B	X	X	X	C	C	X	X	C	A
Chlorine solution, 0,1 gr/l	-	-	-	-	A	A	A	-	-	A
Chlorine solution, 0,1-1g/l	-	-	-	-	A	A	A	-	-	A
Chlorine sol. 1-10g/l, 40°C	-	-	-	-	B	B	B	-	-	-
Chlorine sol. >10g/l, 40°C	-	-	-	-	C	C	C	-	-	-
Chlorosulphonic acid	-	X	X	X	X	X	X	X	C	A
Chromic acid	-	X	X	X	C	B	C	X	A	A

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	ECO	NR	CR	NBR	EPDM	CSM	IIR	SBR	FKM	PTFE
Detergent	A	B	B	A	A	A	A	B	A	A
Diesel oil	A	X	C	A	X	C	X	X	A	A
Ethane	-	X	B	A	X	B	X	X	A	A
Ethanol	B	A	A	A	A	A	A	A	B	A
Ether, Ethyl ether	B	X	X	C	X	X	C	X	X	A
Ethyl acetat	-	X	X	X	B	X	B	X	X	A
Ethyl chloride	B	B	X	B	A	C	A	B	A	A
Ethyl glycol (Cellosolve)	-	X	X	C	B	C	B	X	C	A
Ethylene chloride	-	X	X	X	C	X	C	X	B	A
Ethylene glycol	A	A	A	A	A	A	A	A	A	A
Ferrous salts, non oxidizing	-	A	A	A	A	A	A	A	A	A
Formaldehyde,formalin, 40°C	B	B	B	B	A	A	A	B	A	A
Formic acid, 40°C	B	B	B	X	A	B	A	A	X	A
Fuel oil	A	X	C	A	X	C	X	X	A	A
Furan (Furfuran)	-	X	X	X	X	X	X	X	C	A
Furfural (Furfurol)	X	X	X	X	B	C	B	X	X	A
Glucose	A	A	A	A	A	A	A	A	A	A
Glycerine, glycerol	A	A	A	A	A	A	A	A	A	A
Green liquor, white liquor	A	A	A	A	A	A	A	A	A	A
Hydraulic oil (petroleum)	A	X	B	A	X	B	X	X	A	A
Hydrobromic acid, max 40°C	-	-	-	-	C	A	A	B	-	B
Hydrochloric acid,37%,	B	-	-	-	X	A	A	-	-	-
Hydrochloric acid,37%,70°C	C	X	X	X	X	C	X	X	X	A
Hydrochloric acid, diluted	-	-	-	-	C	A	A	B	-	A
Hydrofluoric acid, 50%, 40°C	-	C	C	X	B	B	B	C	A	A
Hydrofluosilicic acid, 40°C	-	A	B	B	A	A	A	B	A	A
Hydrogen	-	B	A	A	A	A	A	B	A	A
Hydrogen peroxid, 3%,40°C	-	B	B	B	A	A	A	B	A	A
30%,20°C	-	C	C	C	B	A	B	C	A	A
90%,20°C	-	C	C	C	-	-	-	-	B	A
Hydrogen sulphide,dry, 20°C	-	A	A	A	A	A	A	A	X	A
,wet,20°C	B	X	A	C	A	A	A	X	X	A
,wet,40°C	B	X	C	X	B	C	B	X	X	A
Lactic acid	-	B	A	A	A	A	B	B	A	A
Linseed oil	A	X	B	A	B	B	A	X	A	A
Liquid manure	-	-	-	-	A	A	A	-	-	-
LP- gas	A	X	B	A	X	X	X	X	A	A
Lubricating oil	A	X	C	A	X	X	X	X	A	A
Methanol, methyl alcohol	B	A	A	B	A	A	A	A	X	A

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Chemical resistance – Trelleborg Expansion Joints

Rating code A Excellent B Good C Conditional X Inappropriate - Please ask	Innerliner of expansion joint									
	ECO	NR	CR	NBR	EPDM	CSM	IIR	SBR	FKM	PTFE
Chemicals in system	Epichloridine	Natural	Chloroprene	Nitrile	EPDM	Hypalon	Butyl	SBR	Viton	Teflon
Methyl chloride	-	X	X	X	C	X	C	X	A	A
Methyl ethyl ketone MEK	X	X	X	X	A	X	B	X	X	B
Methyl isobutyl ketone	X	X	X	X	B	X	C	X	X	A
Methyl isopropyl ketone	-	X	X	X	C	X	C	X	X	A
Methylene chloride	-	X	X	X	X	X	X	X	B	A
Milk	-	A	A	A	A	A	A	A	A	A
Natural gas	A	C	A	A	X	A	X	C	A	A
Nitric acid,20%, 40°C	X	X	C	X	A	A	A	X	A	A
20%, 50°C	X	X	X	X	B	A	B	X	A	A
40%, 50°C	X	X	X	X	C	A	C	X	A	A
50%, 50°C	X	X	X	X	X	B	X	X	A	A
60%, 20°C	X	X	X	X	X	C	X	X	A	A
70%, 20°C	X	X	X	X	X	C	X	X	A	A
Nitric acid, fuming	X	X	X	X	X	X	X	X	C	A
Nitrobenzene	X	X	X	X	B	X	B	X	B	A
Nitrogen	A	A	A	A	A	A	A	A	A	A
Nitrous gases	-	X	X	X	C	X	X	X	X	B
Oleic acid	A	X	C	A	X	C	X	X	A	A
Olive oil	A	X	C	A	C	C	C	X	A	A
Oxalic acid	-	C	C	C	A	B	A	B	B	A
Oxygen	B	C	B	C	A	B	A	X	A	A
Ozone	A	X	C	X	B	B	C	X	A	A
Palmitic acid	B	B	B	A	B	C	B	B	A	A
Paraffin, kerosene	-	X	C	A	X	C	X	X	A	A
Perchloroethylene	B	X	X	C	X	X	X	X	A	A
Petrol, 100 octan	C	X	X	C	X	X	X	X	A	A
65 octan	B	X	X	B	X	C	X	X	A	A
Petroleum ether	B	X	B	B	X	X	X	X	A	A
Petroleum oils,high aromatic	B	X	X	B	X	X	X	X	A	A
low aromatic	A	X	C	A	X	B	X	X	A	A
Phenol	-	X	X	X	C	C	B	X	A	A
Phosphoric acid,45%, 40°C	-	C	B	C	A	B	B	C	A	A
85%, 40°C	-	C	C	X	B	B	B	C	A	A
Plating sol. w/o chromium.	-	X	X	X	A	C	C	X	A	A
Propan, LP-gas	A	X	C	A	X	C	X	X	A	A

Rating code A Excellent B Good C Conditional X Inappropriate - Please ask	Innerliner of expansion joint									
	ECO	NR	CR	NBR	EPDM	CSM	IIR	SBR	FKM	PTFE
Chemicals in system	Epichloridine	Natural	Chloroprene	Nitrile	EPDM	Hypalon	Butyl	SBR	Viton	Teflon
Propanol, propyl alcohol	A	A	A	A	A	A	A	A	A	A
Rapeseed oil	A	X	X	X	A	C	A	X	A	A
Rosin oil	-	X	C	A	X	C	X	X	A	A
Salicylic acid	-	A	C	B	A	A	A	B	A	A
Salt solutions, non oxidizing	-	A	A	A	A	A	A	A	A	A
Sewage water	-	B	B	A	B	A	B	B	A	A
Silicofluoric acid, 40°C	-	B	B	B	B	A	B	B	A	A
Sodium hypochlorite,<10g/l	B	C	B	C	A	A	B	C	A	A
>10g/l	B	X	X	X	B	B	C	X	A	A
Styrene, 40°C	-	X	X	X	X	X	X	X	B	A
Sugar solutions	-	A	A	A	A	A	A	A	A	A
Sulphur chloride, 40°C	-	X	X	X	X	C	X	X	A	A
Sulphur, molten	-	X	X	X	B	C	X	A	A	A
Sulphur dioxide, dry gas,40°C	-	C	X	X	A	X	B	C	A	A
Sulphur trioxide, dry gas	-	X	X	X	B	X	C	X	A	A
Sulphuric acid, < 60%	B	C	C	X	B	B	B	X	A	A
60%, 50°C	X	C	X	X	B	B	B	X	A	A
75%, 50°C	X	X	X	X	B	B	B	X	A	A
80%, 50°C	X	X	X	X	C	B	C	X	A	A
96%, 50°C	X	X	X	X	C	C	X	X	A	A
Sulphuric acid,fuming,Oleum	X	X	X	X	X	X	X	B	A	A
Sulphurous acid, 40°C	-	C	C	C	A	A	B	C	A	A
Tar, 40°C	B	X	C	B	X	C	X	X	A	A
Toluene, toluol	X	X	X	C	X	X	X	X	A	A
Transformer oil,ch1.hydrocar.	-	X	X	X	X	X	X	X	A	A
mineral based	-	X	B	A	X	C	X	X	A	A
Trichloroethylene, 40°C	-	X	X	X	X	X	X	X	A	A
Turpentine, terpene	A	X	X	A	X	X	X	X	A	A
Vegetable oils	A	X	C	A	X	B	X	X	A	A
Water, distilled	A	A	C	A	A	A	A	A	A	A
fresh	A	A	B	A	A	A	A	A	A	A
fresh ,distilled 100°C	-	C	C	B	A	B	B	C	A	A
salt	-	A	A	A	A	A	A	A	A	A
Whiskey, Wine	-	A	A	A	A	A	A	A	A	A
Xylene, xylol	X	X	X	X	X	X	X	X	A	A

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