

Technical information

Compatibility table

This compatibility table is for information only and without responsibility. The data presented are guidelines and recommendations based on common practice. The resistance of the materials might be affected through specific, on the location prevailing operating conditions as pressure, temperature, static or dynamic strain, but also through modified concentrations of the media exposed to the material.

+ = resistant o = conditionally resistant - = not resistant

Medium	Chem. formula	Comment	Steel	1.4571	Hastelloy	Ms	Alu	POM	PEEK	PTFE	PVDF	NBR	EPDM	FKM	FFKM
A															
acetone	CH ₃ COCH ₃	Propanone	o	+	+	+	+	+	+	+	o	-	+	-	+
acetylene	C ₂ H ₂		o	+	+	-	+	+	+	+	+	+	+	+	+
acetic acid	CH ₃ COOH		-	+	+	-	o	-	+	+	o	-	-	-	+
air	-		+	+	+	+	+	+	+	+	+	+	+	+	+
aluminium chloride	AlCl ₃		-	-	+	-	-	o	+	+	+	+	+	+	+
ammonia	NH ₃		+	+	+	-	-	+	o	+	+	o	+	-	+
argon	Ar	noble gas	+	+	+	+	+	+	+	+	+	+	+	+	+
asphalt, bitumen	-		+	+	+	o	-	-	+	+	+	-	-	-	+
B															
benzene	C ₆ H ₆		o	+	+	o	+	o	+	+	o	-	-	+	+
boric acid	H ₃ BO ₃		-	+	+	-	o	o	+	+	+	+	+	+	+
brake fluid	-		+	+	+	+	-	+	+	+	+	-	+	-	+
bromine	Br ₂		-	-	-	-	-	-	-	+	+	-	-	o	+
butane	C ₄ H ₁₀		+	+	+	+	+	+	+	+	+	+	-	+	+
C															
calcium chloride	CaCl ₂		-	o	+	-	-	+	+	+	+	+	+	+	+
calcium hydroxide	Ca(OH) ₂		+	+	+	-	-	+	+	+	+	+	+	-	+
carbon disulfide	CS ₂		+	+	+	o	+	+	+	+	+	-	-	+	+
carbondioxide	CO ₂		+	+	+	+	+	+	+	+	+	+	+	+	+
chlorine	Cl ₂		-	o	o	-	-	-	-	+	+	-	-	o	+
chloroforme	CHCl ₃	trichloromethane	o	+	+	o	-	-	+	+	+	-	+	+	+
copper(II)chloride	CuCl ₂		-	-	o	-	-	o	+	+	+	+	+	+	+
copper sulfate	CuSO ₄		-	+	+	-	-	o	+	+	+	+	+	+	+
chromic acid	H ₂ CrO ₄		-	o	o	-	-	-	o	+	o	-	-	o	+
D															
diesel fuel	-		+	+	+	+	+	+	+	+	+	+	-	+	+
E															
ethane	C ₂ H ₆		o	+	+	+	+	+	+	+	o	+	-	+	+
ethenol	C ₂ H ₅ OH	ethylalcohol	o	+	+	o	o	+	+	+	+	+	+	-	+
ethylene	C ₂ H ₄		o	+	+	o	o	+	+	+	+	+	-	+	+
ethyleneglycol	C ₂ H ₆ O ₂	ethanediol	o	+	+	o	+	o	+	+	+	+	+	+	+
ethylenetrichloride	C ₂ HCl ₃	trichloroethene	o	+	+	o	o	o	+	+	+	-	-	+	+
F															
fatty acid	C ₁₇ H ₃₃ COOH		-	+	+	-	-	+	+	+	+	o	-	+	+
fluorine	F ₂	dry	-	-	-	-	-	-	-	-	-	-	-	-	-
formic acid	HCO ₂ H		-	o	+	-	-	-	+	+	+	-	+	-	+
fuel oil	-	light	o	+	+	o	+	-	+	+	+	+	-	+	+
fuel oil	-	heavy	o	+	+	o	+	-	+	+	+	-	-	+	+
G															
glucose	C ₆ H ₁₂ O ₆		o	+	+	+	+	+	+	+	+	+	+	+	+
glycerine	C ₃ H ₈ O ₃		o	+	+	-	+	+	+	+	+	+	+	+	+
H															
heavy oil	-	IF600	+	+	+	o	o	+	+	+	+	-	-	-	+
HEES hydraulic fluid	-	synthetic ester	o	+	+	o	-	+	+	+	+	+	-	+	-
HEPG hydraulic fluid	-	polyglycols	o	+	+	o	-	+	+	+	+	+	-	+	-
HETG hydraulic fluid	-	rape oil	o	+	+	o	-	+	+	+	+	+	-	+	-

Medium	Chem. formula	Comment	Steel 1.4571	Hastelloy	Ms	Alu	POM	PEEK	PTFE	PVDF	NBR	EPDM	FKM	FFKM
H														
helium	He	noble gas	+	+	+	+	+	+	+	+	+	+	+	+
heptane	C ₇ H ₁₆		0	+	+	+	+	+	+	+	+	-	+	+
hexane	C ₆ H ₁₄		0	0	+	0	+	+	+	+	+	-	+	+
HFA hydraulic fluid	-	oil-in-water emulsion	+	+	+	+	+	+	+	+	+	-	+	+
HFB hydraulic fluid	-	water-in-oil emulsion	+	+	+	+	+	+	+	+	-	+	+	
HFC hydraulic fluid	-	waterglycole	0	+	+	0	+	+	+	+	+	+	0	+
HFD-R hydraulic fluid	-	phosphonates	0	+	+	0	-	+	+	+	-	+	+	+
HFD-S hydraulic fluid	-	chlorineteol hydrocarbons	0	+	+	0	-	+	+	+	-	+	+	+
HFD-U hydraulic fluid	-	organic ester	0	+	+	0	-	+	+	+	-	+	+	+
hydraulic oils	-	mineral-oil basis	+	+	+	+	+	+	+	+	+	-	+	+
hydrochloric acid	HCl		-	-	0	-	-	+	+	+	-	+	+	+
hydrogensulfide	H ₂ S	hydrogen sulfide	-	+	+	-	-	+	+	+	-	+	-	+
hydrogen	H ₂		0	+	+	+	+	+	+	+	+	+	+	+
hydrogen peroxid	H ₂ O ₂		0	+	+	0	0	+	+	+	+	-	+	+
I														
ink	-		-	+	+	-	-	+	+	+	+	+	+	+
insulating oil	-		+	+	+	+	+	+	+	+	0	-	+	+
iron(II)-chloride	FeCl ₂		-	-	0	0	-	+	+	+	+	+	+	+
iron(II)-sulfate	FeSO ₄		+	0	0	0	-	+	+	+	-	+	+	+
isobutyl alcohole	C ₄ H ₁₀ O	isobutanol	0	0	+	-	-	+	+	0	-	+	+	+
isocyanate	-		+	+	+	0	0	+	+	0	-	-	+	0
isooctane	C ₈ H ₁₈		+	+	+	+	+	+	+	+	+	-	+	+
isopropylalcohol	C ₃ H ₈ O	isopropanol	0	0	0	0	0	0	+	+	0	+	+	+
J														
jet petrol	-		0	+	+	-	+	+	+	+	0	-	+	+
K														
kerosene	-		+	+	+	+	+	+	+	+	+	-	+	+
L														
lacquers	-		0	+	+	-	+	+	+	+	0	-	0	+
lighting gas	-	coke oven gas	0	+	+	+	+	+	+	+	-	-	+	+
M														
magnesium chloride	MgCl ₂		-	0	+	-	-	+	+	+	+	+	+	+
magnesium hydroxide	Mg(OH) ₂		+	+	+	-	-	+	+	+	0	+	+	+
magnesium sulfate	MgSO ₄		-	+	0	0	0	+	+	+	0	+	+	+
mercury	Hg		+	+	+	-	-	+	+	+	+	+	+	+
mercury(I)chloride	Hg ₂ Cl ₂	calomel	-	-	-	-	-	+	+	+	+	+	+	+
metalworking hebricants	-		0	+	+	+	+	+	+	+	+	-	+	+
methanale	CH ₂ O	formaldehyde	-	+	0	0	-	+	+	+	-	0	-	+
methane	CH ₄	mine gas	0	0	+	+	+	+	+	+	+	-	+	+
methanol	CH ₃ OH	methyl alcohol	0	0	+	0	0	0	+	+	+	+	-	+
methyl acetate	CH ₃ CO ₂ CH ₃		0	+	+	-	+	+	+	+	-	0	-	0
methyl amine	CH ₃ NH ₂		0	+	+	-	+	-	+	+	0	-	-	0
methyl chloride	CH ₃ Cl	chloromethane	0	+	+	-	-	-	+	+	+	-	+	+
methylene chloride	CH ₂ Cl ₂	dichloromethane	-	+	0	-	+	-	+	+	0	-	0	+
mine water	-		0	+	+	+	-	+	+	+	+	+	+	+

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+ = resistant o = conditionally resistant - = not resistant

Medium	Chem. formula	Comment	Steel	1.4571	Hastelloy	Ms	Alu	POM	PEEK	PTFE	PVDF	NBR	EPDM	FKM	FFKM
N															
naphtalene	C ₁₀ H ₈		o	o	o	-	o	+	+	+	+	-	-	+	+
natural gas	-		o	+	+	+	+	+	+	+	+	+	-	+	+
neon	Ne	noble gas	+	+	+	+	+	+	+	+	+	+	+	+	+
nickel chloride	NiCl ₂		-	o	+	-	-	o	+	+	+	+	+	+	+
nickel sulfate	NiSO ₄		-	+	+	-	-	o	+	+	+	+	+	+	+
nitrobenzene	C ₆ H ₅ NO ₂		-	+	+	-	-	-	-	+	-	-	-	-	+
nitric acid	HNO ₃		-	+	-	-	-	-	+	+	+	-	-	o	+
nitrogen	N ₂		+	+	+	+	+	+	+	+	+	+	+	+	+
O															
octane	C ₈ H ₁₈		-	+	+	o	o	+	+	+	+	o	-	+	+
oxalic acid	HO ₂ CCO ₂ H		-	-	+	-	o	-	+	+	+	o	+	+	+
oxygen	O ₂		o	+	+	+	o	+	+	+	+	o	+	o	+
ozone	O ₃		-	+	+	o	o	-	+	+	+	-	+	+	+
P															
palmitic acid	CH ₃ (CH ₂) ₁₄ CO ₂ H	hexadecanoic acid	o	+	+	-	o	+	+	+	+	o	-	+	+
paraffin	-		+	+	+	+	+	+	+	+	+	+	-	+	+
pentane	C ₅ H ₁₂		o	+	+	+	+	o	+	+	+	+	-	+	+
pentanol	CH ₃ (CH ₂) ₄ OH		+	+	+	o	o	-	o	+	+	o	+	o	+
petrol	-		+	+	+	+	+	+	+	+	+	+	-	+	+
petroleum	-		o	+	+	+	+	+	+	+	+	+	-	+	+
phenol	C ₆ H ₅ OH	carbolic acid	o	+	+	o	o	-	o	+	+	-	-	+	+
phosphoric acid	H ₃ PO ₄		-	o	o	-	-	-	+	+	+	-	o	+	+
picric acid	(O ₂ N) ₃ C ₆ H ₂ OH		-	+	+	-	+	-	+	+	+	-	o	-	-
potassium carbonate	K ₂ CO ₃	potash	-	o	o	-	-	+	+	+	+	+	+	+	+
potassium chloride	KCl		-	-	-	-	-	+	+	+	+	+	+	+	+
potassium hydroxide	KOH	caustic potash	o	+	o	-	-	+	+	+	+	-	+	-	+
potassium nitrate	KNO ₃	salpeter	o	+	o	o	o	+	+	+	+	+	+	+	+
potassium sulfate	K ₂ SO ₄		o	+	+	o	+	+	+	+	+	+	+	+	+
propane	C ₃ H ₈		+	+	+	o	+	+	+	+	+	+	-	+	+
propandiol	CH ₃ CH(OH)CH ₂ OH	propylene glycole	o	o	+	o	+	-	+	+	+	o	+	+	+
propylene	C ₃ H ₆	propene	+	+	+	o	o	+	+	+	+	-	-	+	+
S															
salicylic acid	HOC ₆ H ₄ CO ₂ H		-	+	o	-	-	-	-	+	+	o	+	+	+
seawater	-	seawater	-	o	+	o	-	+	+	+	+	+	+	+	+
Skydrol®	-	hydraulic fluid	+	+	+	-	-	+	+	+	o	-	+	-	+
silicon oil	-		-	+	-	-	o	+	+	+	+	+	+	+	+
silver nitrate	AgNO ₃	lunar caustic	-	+	o	-	-	+	+	+	+	o	+	+	+
sodium carbonate	Na ₂ CO ₃	soda	o	o	+	-	-	+	+	+	+	+	+	+	+
sodium chloride	NaCl	cooking salt	o	o	+	-	-	+	+	+	+	+	+	+	+
sodium hydrogencarbonate	NaHCO ₃		o	o	o	-	-	+	+	+	+	+	+	+	+
sodium hydrogensulfate	NaHSO ₄		-	+	o	-	-	+	+	+	+	+	+	+	+
sodium hydroxide	NaOH	caustic soda solution	-	+	o	-	-	+	+	+	+	o	-	+	+
sodium nitrate	NaNO ₃	soda niter	-	+	-	o	+	+	+	+	+	o	+	+	+
sodium sulfate	Na ₂ SO ₄		-	+	+	o	-	+	+	+	+	o	+	+	+
sodium tetraborate	Na ₂ B ₄ O ₇	borax	o	+	+	+	-	+	+	+	+	o	+	+	+
solvents	-		o	+	+	-	+	o	+	+	+	-	-	+	+
steam	H ₂ O	100° C	+	+	+	+	+	-	+	+	+	o	-	+	+
sulfur	S		-	o	+	-	+	+	+	+	+	-	+	+	+
sulfurdioxide	SO ₂		-	o	o	-	o	-	+	+	+	-	+	-	+
sulfuric acid	H ₂ SO ₄		-	+	+	-	-	-	o	+	+	-	-	+	+
sulfur trioxide	SO ₃		o	+	+	o	+	-	+	+	-	-	o	+	+

Medium	Chem. formula	Comment	Steel 1.4571	Hastelloy	Ms	Alu	POM	PEEK	PTFE	PVDF	NBR	EPDM	FKM	FFKM
T														
tannic acid	-		-	+	+	o	o	o	+	+	+	+	+	+
tetrachloromethane	CCl_4		-	+	+	-	-	-	+	+	+	-	-	+
thermo-oil	-	250° C	+	+	+	-	-	-	+	-	-	-	o	+
tin(II)chloride	SnCl_2		-	-	o	-	-	+	+	+	+	+	+	+
top gas	-	blast furnace gas	o	+	+	-	-	-	+	+	+	-	-	+
transmission lubricant	-		+	+	+	+	+	+	+	+	+	+	-	+
turpentine	-		o	+	+	o	+	+	+	+	+	o	-	+
U														
urea	H_2NCONH_2	carbanide	-	o	+	o	o	+	+	+	+	+	+	+
V														
vaseline	-		o	+	+	o	+	+	+	+	+	+	-	+
vinyl chloride	$\text{C}_2\text{H}_3\text{Cl}$		o	+	+	-	-	+	+	+	+	-	o	+
W														
water	H_2O		o	+	+	+	+	+	+	+	+	+	+	+
X														
xylene	C_8H_{10}		o	+	+	+	+	+	+	+	+	-	-	+
Z														
zinc chloride	ZnCl_2		-	-	o	-	-	+	+	+	+	+	+	+
zinc sulfate	ZnSO_4		-	+	o	-	-	+	+	+	+	+	+	+