9. CHEMICAL RESISTANCE

The following table shows the chemical resistance of the materials used for the components of the fittings in contact with the fluid. The chemical resistance refers to a temperature of 20°C and to fittings not subject to mechanical stress.

The chemical resistance is shown by the following symbols. Where not indicated, no tests were performed.

S = Satisfactory resistance:
can be used without any limitation.

L = Limited resistance:
the substance may etch the material. It is necessary to reduce the pressure and operating temperature. The operating life of the fitting may be reduced.

NS = Resistance not satisfactory:
the substance etches the material. The material cannot be used.

The concentration is expressed as mass percentage of the substance in an aqueous solution. In some cases it is indicated by the following symbols:

Dil.sol. = Diluted solution in concentrations up to 10%.

Sol. = Solution in concentrations up to 10% but not saturated.

Sat.sol. = Saturated solution.

tg = Pure substance.

tg-l = Pure substance in liquid state.

tg-g = Pure substance in gaseous state.

tg-s = Pure substance in solid state.

Work.sol. = Solution in the concentration usually used in the industry.

Susp. = Solid suspension in saturated solution.

9. RESISTÊNCIA QUÍMICA

Na tabela seguinte é indicada a resistência química dos materiais usados para os componentes das conexões em contacto com o fluido. É relativa à temperatura de 20ºC para juntas não sujeitas a tensão mecânica.

A resistência química é indicada mediante os símbolos seguintes. Onde não é indicada não são efetuados testes.

S = Resistência satisfatória:
podem ser usados sem restrições.

L = Resistência limitada:
a substância pode afetar o material. A pressão e a temperatura de operação devem ser reduzidas. A vida útil da conexão pode ser reduzida.

NS = Resistência não satisfatória:
a substância agride o material. A conexão não pode ser usada.

A concentração é expressa como porcentagem da massa da substância em solução aquosa; em alguns casos, é indicada mediante a simbologia seguinte:

Dil.sol. = Solução aquosa diluída numa concentração não superior a 10%.

Sol. = Solução aquosa numa concentração superior a 10% mas não saturada.

Sat.sol. = Solução aquosa saturada.

tg = Substância pura.

tg-l = Substância pura no estado líquido.

tg-g = Substância pura no estado gasoso.

tg-s = Substância pura no estado sólido.

Work.sol. = Solução na concentração normalmente usada na indústria.

Susp. = Suspensão de sólido em solução saturada.

9. RESISTENCIA QUÍMICA

La siguiente tabla muestra la resistencia química de los materiales utilizados para los componentes de los racores en contacto con el fluido. Se refiere a la temperatura de 20°C para los racores no sometidos a esfuerzos mecánicos.

La resistencia química está indicada por medio de los símbolos siguientes. Donde no está indicada no han sido efectuadas pruebas.

S = Resistencia satisfactoria:
pueden ser utilizados sin restricciones.

L = Resistencia limitada:
la sustancia puede atacar al material. Se debe reducir la presión y la temperatura de funcionamiento. La duración en servicio del accesorio puede reducirse.

NS = Resistencia no satisfactoria:
la sustancia perjudica al material. El accesorio no puede ser utilizado.

La concentración está expresada como porcentaje en masa de la sustancia en solución acuosa; en algunos casos está indicada por medio de los símbolos siguientes:

Dil.sol. = Solución acuosa diluida en concentración no superior al 10%.

Sol. = Solución acuosa en concentración superior al 10% pero no saturada.

Sat.sol. = Solución acuosa saturada.

tg = Sustancia pura.

tg-l = Sustancia pura en estado líquido.

tg-g = Sustancia pura en estado gaseoso.

tg-s = Sustancia pura en estado sólido.

Work.sol. = Solución en concentración usualmente utilizada en la industria.

Susp. = Suspensión de sólido en solución saturada.

CHEMICAL	FORMULA	CONCENTRATION %	PP-B	NBR	PEHD	EPDM 20°C
Acetaldehyde	CH_3-CHO	40%	L	NS	S	-
Acetaldehyde	CH_3-CHO	100%	-	-	-	S
Acetanilide	$CH_3CONHC_6H_5$	-	-	-	-	-
Acetic acid	CH_3COOH	10%	S	S	S	S
Acetic acid	CH_3COOH	60%	-	-	-	-
Acetic acid anhydride	CH_3-CO-O-CO-CH_3	tg-l	S	NS	S	-
Acetic acid, glacial	CH_3COOH	>96%	-	-	-	L
Acetic Anhydride	CH_3-CO-O-CO-CH_3	100%	-	-	-	L
Acetone	CH_3-CO-CH_3	tg-l	S	NS	L	-
Acetone	CH_3-CO-CH_3	100%	-	-	-	S
Acrylonitrile	CH_2=CH-CN	tg-l	S	NS	S	-
Acrylonitrile	CH_2=CH-CN	100%	-	-	-	S
Adipic acid	HOOC-$(CH_2)_4$-COOH	Sat.sol.	S	S	S	S
After shave lotion		-	-	-	-	-
Alcoholic spirits		40% ethyl alcohol	S	S	S	-
Aliphatic hydrocarbons		-	-	-	-	-
Allyl acetate	$C_5H_8O_2$	-	-	-	-	-
Allyl alcohol	H_2C=CH-CH_2-OH	tg-l	S	S	S	-
Allyl alcohol	H_2C=CH-CH_2-OH	96%	-	-	-	L
Allyl chloride	CH_2=$CHCH_2Cl$	-	-	-	-	NS
Alum (Aluminium potassium sulphate)			-	-	-	-
Alum (Aluminium potassium sulphate)	$Al_2(SO_4)_3K_2SO_4 4H_2O$	Sol.	-	-	-	S
Aluminium potassium sulphate	K_2SO_4-$Al_2(SO_4)_3 12H_2O$	50%	S	S	S	-
Aluminium chloride	$AlCl_3$	Sat.sol.	S	S	S	S
Aluminium fluoride	AlF_3	Sat.sol.	-	-	-	-
Aluminium hydroxide	$Al(OH)_3$	Sat.sol.	-	-	-	S
Aluminium nitrate	$Al(NO_3)_3$	Sat.sol.	-	-	-	S
Aluminium oxychloride	AlClO	Sat.sol.	-	-	-	-
Aluminium sulphate	$Al_2(SO_4)_3$	Sat.sol.	S	S	S	S
Ammonia	NH_3	tg-g	S	S	S	-
Ammonia, gas	NH_3	100%	-	-	-	S
Ammonia, liquid	NH_3	100%	-	-	-	S
Ammonium acetate	CH_3COONH_4	Sat.sol.	S	S	S	-
Ammonium acetate	CH_3COONH_4	-	-	-	-	S
Ammonium carbonate	$(NH_4)_2CO_3$	50%	S	S	S	-
Ammonium carbonate	$(NH_4)_2CO_3$	Sat.sol.	-	-	-	S
Ammonium chloride	NH_4Cl	Sat.sol.	S	S	S	S
Ammonium exafluorosilicate	$H_8F_6N_2Si$	Sat.sol.	-	-	-	-
Ammonium fluoride	NH_4F	Sol.	-	-	-	S
Ammonium hydrogen carbonate	$(NH_4)HCO_3$	Sat.sol.	-	-	-	-
Ammonium hydroxide	NH_4OH	Susp.	S	S	S	-
Ammonium hydroxide	NH_4OH	30%	-	-	-	S
Ammonium metaphosphate	$(NH_4)_4P_4O_{12}$	Sat.sol.	-	-	-	S
Ammonium nitrate	NH_4NO_3	Sat.sol.	S	S	S	S
Ammonium oxalate	$(NH_4)_2C_2O_4 \cdot H_2O$	Sat.Sol.	-	-	-	-
Ammonium persulfate	$(NH_4)_2S_2O8$	Sat.Sol.	-	-	-	S
Ammonium phosphate	$NH_4H_2PO_4$	Sat.sol.	S	S	S	S
Ammonium sulphate	$(NH_4)_2SO_4$	Sat.sol.	S	S	S	S
Ammonium sulphide	$(NH_4)_2S$	Sat.sol.	S	S	S	S
Ammonium thiocyanate	NH_4SCN	Sat.sol.	-	-	-	-
Amyl acetate	CH_3 $(CH_2)_4$-OOCCH_3	100%	-	-	-	L
Amyl alcohol	$CH_3(CH_2)_3$-CH_2-OH	100%	-	-	-	S
Amyl chloride	$CH_3(CH_2)_4Cl$	100%	-	-	-	NS
Aniline	$C_6H_5NH_2$	100%	-	-	-	NS
Antimony trichloride	$SbCl_3$	Sat.sol.	S	NS	S	-
Antimony trichloride	$SbCl_3$	Sol.	-	-	-	S
Apple juice		-	-	-	-	-
Aqua regia	HNO_3+HCl		NS	NS	NS	-
Aqua regia	HNO_3+$_3$HCl	-	-	-	-	NS
Aromatic hydrocarbons		-	-	-	-	NS
Arsenic acid	H_3AsO_4	80%	S	S	-	-
Arsenic acid	H_3AsO_4	Sat.sol.	-	-	S	S

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CHEMICAL	FORMULA	CONCENTRATION %	PP-B	NBR	PEHD	EPDM 20°C
Barium bromide	$BaBr_2$	Sat. Sol.	-	-	-	S
Barium carbonate	$BaCO_3$	Sat. Sol.	-	-	-	S
Barium chloride	$BaCl_2$	Sat. Sol.	-	-	-	S
Barium hydroxide	$Ba(OH)_2$	Sat.sol.	S	S	S	S
Barium salts		Sat.sol.	S	S	S	-
Barium sulphate	$BaSO_4$	Sat. Sol.	-	-	-	S
Barium sulphide	BaS	Sat. Sol.	-	-	-	S
Battery acid	H_2SO_4	40%	S	L	S	-
Beef tallow emulsion, sulphonated		Work.sol.	S	S	S	-
Beer		Work.sol.	S	S	S	-
Beer		-	-	-	-	S
Benzaldehyde	C_6H_5-COH	Sat.sol.	-	L	S	-
Benzaldehyde	C_6H_5-COH	100%	-	-	-	S
Benzene	C_6H_6	tg-l	L	L	L	-
Benzene	C_6H_6	100%	-	-	-	NS
Benzine	C_5H_{12} to $C_{12}H_{26}$	Work.sol.	L	S	NS	-
Benzoic acid	C_6H_5-COOH	Sat.sol.	S	S	S	NS
Benzoyl chloride	C_6H_5COCl	-	-	-	-	-
Benzyl alcohol	C_6H_6-CH_2OH	tg-l	S	NS	S	-
Benzyl alcohol	C_6H_6-CH_2OH	-	-	-	-	NS
Bitumen		-	-	-	-	-
Bleach lye		10%	-	-	-	S
Borax	Na_2B_4O7	Sol.	S	S	S	-
Borax	Na_2B_4O7	Sat. Sol.	-	-	-	S
Boric acid	H_3BO_3	Sat.sol.	S	S	S	S
Brine		-	-	-	-	-
Brine, see water			S	S	S	-
Bromine, gas	Br_2	tg-g	NS	NS	NS	-
Bromine, gas	Br_2	100%	-	-	-	NS
Bromine, liquid	Br_2	tg-l	NS	NS	NS	-
Bromine, liquid	Br_2	100%	-	-	-	NS
Bromine, water		Sat.sol.	NS	NS	NS	-
Bromoform	$CHBr_3$	100%	-	-	-	-
Butadiene	CH_2=CH-CH=CH_2	-	-	-	-	NS
Butadiene, gas	H_2C=CH-CH=CH_2	tg-g	S	NS	S	-
Butandiol	HO-$(CH_2)_4$-OH	100%	-	-	-	-
Butane, gas	C_4H_{10}	tg-g	S	S	S	-
Butanediol	HO-$(CH_2)_4$-OH	10%	S	S	S	-
Butanol	C_4H_9OH	tg-l	S	S	S	-
Butter		-	-	-	-	-
Butyl acetate	$CH_3COOCH_2CH_2CH_2CH_3$	tg-l	L	NS	S	-
Butyl acetate	$CH_3COOCH_2CH_2CH_2CH_3$	100%	-	-	-	L
Butyl alcohol	$CH_3(CH_2)_3OH$	100%	-	-	-	S
Butylene glycol	HO-CH_2-CH=CH-CH_2-OH	tg-l	S	NS	S	-
Butylene glycol	HO-CH_2-CH=CH-CH_2-OH	100%	-	-	-	S
Butyric acid	$CH_3CH_2CH_2COOH$	100%	-	-	-	L
Calcium arsenate	$Ca_3(AsO_4)_2$	-	-	-	-	-
Calcium bisulphite	$Ca(HSO_3)_2$	Sat.sol.	-	NS	-	-
Calcium bromide	$CaBr_2$	Sat. Sol.	-	-	-	-
Calcium carbonate	$CaCO_3$	Sat. Sol.	-	-	-	S
Calcium chlorate	$Ca(ClO_3)_2$	Sat. Sol.	-	-	-	S
Calcium chloride	$CaCl_2$	Sat.sol.	S	S	S	S
Calcium cyanide	$Ca(CN)_2$	-	-	-	-	-
Calcium hydroxide	$Ca(OH)_2$	Sat.sol.	S	S	S	S
Calcium hypochlorite	$Ca(OCl)_2$	Sol.	S	S	S	S
Calcium nitrate	$Ca(NO_3)_2$	Sol.	S	S	S	-
Calcium nitrate	$Ca(NO_3)_2$	Sat. Sol.	-	-	-	S
Calcium oxide	CaO	Sat. Sol.	-	-	-	-
Calcium sulphate	$CaSO_4$	Sat. Sol.	-	-	-	S
Calcium sulphide	CaS	Dil. Sol.	-	-	-	S
Camphor oil		-	-	-	-	NS
Carbon dioxide	CO_2	100%	-	-	-	S

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CHEMICAL	FORMULA	CONCENTRATION %	PP-B	NBR	PEHD	EPDM 20°C
Carbon dioxide, aqueous sol.	CO_2	Sat.sol.	S	S	S	-
Carbon dioxide, gas	CO_2	tg-g	S	S	S	-
Carbon disulphide	CS_2	tg-l	S	NS	L	-
Carbon disulphide	CS_2	100%	-	-	-	NS
Carbon monoxide	CO	100%	-	-	-	S
Carbon monoxide, gas	CO	tg-g	S	-	S	-
Carbon tetrachloride	CCl_4	tg-l	NS	NS	L	-
Carbon tetrachloride	CCl_4	100%	-	-	-	NS
Carbonic acid	H_2CO_3	-	-	-	-	S
Carrot juice		-	-	-	-	-
Castor oil		Sol.	-	-	-	L
Caustic potash solution	KOH	50%	S	L	S	-
Caustic soda solution	NaOH	40%	S	S	S	-
Caustic soda solution	NaOH	50%	S	L	S	-
Chlorine, acqueous	Cl_2	Sat. Sol.	-	-	-	L
Chlorine, gas	Cl_2	tg-l	NS	NS	-	-
Chlorine, gas	Cl_2	tg-g	-	-	L	-
Chlorine, water	Cl_2	Sat.sol.	S	NS	L	-
Chlorine, water	Cl_2	Sat.sol.	-	-	-	-
Chloroacetic acid, mono	$ClCH_2COOH$	Sol.	S	NS	S	-
Chlorobenzene	C_6H_5Cl	100%	-	-	-	NS
Chloroform	$CHCl_3$	tg-l	L	NS	NS	-
Chloroform	$CHCl_3$	100%	-	-	-	NS
Chloromethane, gas	CH_3Cl	100%	-	-	-	L
Chlorosulphonic acid	$ClSO_3H$	tg-s	NS	NS	NS	
Chlorosulphonic acid	$ClHO_3S$	100%	-	-	-	NS
Cholrine, dry gas	Cl_2	100%	-	-	-	NS
Chrome alum (chromium potassium sulphate)	$HCr(SO_4)_2$	Sol.	S	S	S	-
Chromic acid	CrO_3+H_2O	20%	-	-	-	L
Chromic acid	CrO_3+H_2O	50%	-	-	-	NS
Cider			S	S	S	S
Citric acid	$C_6H_8O_7$	10%	S	S	-	-
Citric acid	$C_6H_8O_7$	Sat.sol.	-	-	S	-
Citric acid	$C_3H_4(OH)(COOH)_3$	Sat. Sol.	-	-	-	-
Citric acid	$C_3H_4(OH)(COOH)_3$	10%	-	-	-	S
Citric acid	$C_3H_4(OH)(COOH)_3$	25%	-	-	-	S
Coal gas, benzene free			S	S	S	-
Coconut fat alcohol		Work.sol.	S	S	S	-
Coconut oil		Work.sol.	S	S	S	-
Coffee		-	-	-	-	-
Compressed air containing oil			L	S	S	-
Cooking salt	see Sodium chloride		-	-	-	-
Copper chloride	$CuCl_2$	Sat. Sol.	-	-	-	S
Copper cyanide	$Cu(CN)_2$	Sat. Sol.	-	-	-	S
Copper fluoride	CuF_2	Sat. Sol.	-	-	-	S
Copper nitrate	$Cu(NO_3)_2$	Sat. Sol.	-	-	-	S
Copper salts		Sat.sol.	S	S	S	-
Copper sulphate	$CuSO_4$	Sat. Sol.	-	-	-	S
Corn oil		Work.sol.	S	S	S	-
Corn oil		-	-	-	-	L
Cottonseed oil		-	-	-	-	NS
Cresol	$HO-C_6H_4-CH_3$	tg-l	S	L	S	-
Cresylic acid	$CH_3C_6H_4COOH$	Sat. Sol.	-	-	-	-
Crotonic aldehyde	$CH_3-CH=CH-CHO$	Sat.sol.	S	S	S	-
Cyclohexane	C_6H_{10}	tg-l	S	S	S	-
Cyclohexane	C_6H_{12}	-	-	-	-	NS
Cyclohexanol	$C_6H_{10}=OH$	Sat.sol.	S	L	S	-
Cyclohexanol	$C_6H_{11}OH$	100%	-	-	-	NS
Cyclohexanone	$C_6H_{10}=O$	tg-l	L	NS	S	-
Cyclohexanone	$C_6H_{10}=O$	100%	-	-	-	L
Decalin	$C_{10}H_{18}$	100%	-	-	-	NS

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CHEMICAL	FORMULA	CONCENTRATION %	PP-B	NBR	PEHD	EPDM 20°C
Decane	$C_{10}H_{22}$	-	-	-	-	-
Detergents		-	-	-	-	S
Detergents (washing powder)		Work.sol.	S	S	S	-
Dextrina		Sol.	-	-	-	S
Dextrine (starch gum)		Work.sol.	S	S	S	-
Dextrose	see Glucose		-	-	-	-
Diacetone alcohol	$(CH_3)_2COHCH_2COCH_3$	-	-	-	-	S
Dibuhtyl ether	$[CH_3(CH_2)_3]_2O$	-	-	-	-	NS
Dibutyl amine	$(C_4H_9)_2NH$	-	-	-	-	NS
Dibutylphthalate	$C_6H_4(COOC_4H_9)_2$	-	-	-	-	L
Dichlorobenzene	$C_6H_4Cl_2$	-	-	-	-	NS
Dichloroethylene	CHCl=CHCl	-	-	-	-	NS
Diesel oil			L	S	S	NS
Diethyl ether	$C_2H_5OC_2H_5$	100%	-	-	-	NS
Diethyl ketone	$(C_2H_5)_2CO$	-	-	-	-	-
Diethylene glycol	$C4H_{10}O_3$	-	-	-	-	-
Diglycolic acid	$HOOCCH_2OCH_2COOH$	-	-	-	-	S
Diisobutylketone	$(CH_3)_2CHCH_2COCH_2CH(CH_3)_2$	100%	-	-	-	L
Dimethyl formamid	$HCON(CH_3)_2$	-	-	-	-	L
Dioctyl phthalate	$C_6H_4(COOC_8H_{17})_2$	100%	-	-	-	L
Dioxane	$(CH_2)_4O_2$	100%	-	-	-	S
Ethyl acetate	$CH_3COOCH_2CH_3$	100%	-	-	-	L
Ethyl acrylate	CH_2=$CHCOOCH_2CH_3$	100%	-	-	-	L
Ethyl alcohol	CH_3-CH_2-OH	tg-l	S	S	S	-
Ethyl alcohol	CH_3-CH_2-OH	100%	-	-	-	S
Ethyl alcohol + acetic acid (fermentation mixture)		Work.sol.	S	L	S	-
Ethyl benzene	C_6H_6-CH_2-CH_3	tg-l	L	NS	-	-
Ethyl benzene	$C_6H_5C_2H_5$	-	-	-	-	NS
Ethyl chloride	CH_3-CH_2Cl	tg-g	L	NS	L	-
Ethyl chloride	CH_3-CH_2Cl	100%	-	-	-	NS
Ethyl eter	CH_3CH_2-O-CH_2CH_3	tg-l	S	NS	L	-
Ethyl ether	CH_3-CH_2-O-CH_2-CH_3	-	-	-	-	NS
Ethylene chloride	$ClCH_2$-CH_2Cl	tg-l	L	L	L	-
Ethylene chlorohydrin	$ClCH_2CH_2OH$	100%	-	-	-	NS
Ethylene diamine	$NH_2CH_2CH_2NH_2$	100%	-	-	-	S
Ethylene glycol	HO-CH_2-CH_2-OH	tg-l	S	S	S	-
Ethylene glycol	HO-CH_2-CH_2-OH	100%	-	-	-	S
Ferric chloride	$FeCl_3$	Sat. Sol.	-	-	-	S
Ferric nitrate	$Fe(NO_3)_3$	Sat. Sol.	-	-	-	S
Ferric sulphate	$Fe_2(SO_4)_3$	Sat. Sol.	-	-	-	S
Ferrous chloride	$FeCl_2$	Sat. Sol.	-	-	-	S
Ferrous sulphate	$FeSO_4$	Sat. Sol.	-	-	-	S
Fertilizer salts		Work.sol.	S	S	S	-
Fluorine	F_2	tg-g	NS	NS	NS	-
Fluorine, gas dry	F_2	100%	-	-	-	NS
Fluoroboric acid	HBF_4	-	-	-	-	S
Fluorosilicic acid	H_2SiF_6	32%	S	L	S	L
Formaldehyde	HCHO	40%	S	S	S	-
Formaldehyde	CH_2O	10-30%	-	-	-	S
Formaldehyde	CH_2O	30-40%	-	-	-	S
Formamide	$HCONH_2$	tg-l	S	S	S	-
Formic acid	HCOOH	50%	S	NS	S	-
Formic acid	HCOOH	40%	-	-	-	S
Formic acid	HCOOH	100%	-	-	-	S
Frigen 12 (Freon 12)	CF_2Cl_2	Work.sol.	NS	L	NS	-
Fructose	$C_6H_{12}O_6$	Sat. Sol.	-	-	-	S
Fruit juice		Work.sol.	S	S	S	-
Fruit pulp		Work.sol.	S	S	S	-
Fuel oil (Gasoline)		Work.sol.	L	S	L	-
Furfural	$C_5H_4O_2$	100%	-	-	-	S
Furfuryl alcohol	$C_5H_6O_2$	100%	-	-	-	L
Gallic acid	$(OH)_3C_6H_2COOH$	Sat. Sol.	-	-	-	S

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CHEMICAL	FORMULA	CONCENTRATION %	PP-B	NBR	PEHD	EPDM 20°C
Gasoline		-	-	-	-	NS
Gelatine		Sol.	S	S	S	-
Glucose	$C_6H_{12}O_6$	Sol.	S	S	S	-
Glucose	$C_6H_{12}O_6$	Sat. Sol.	-	-	-	S
Glycerine	$C_3H_8O_3$	tg-l	S	S	S	-
Glycerine	$C_3H_5(OH)_3$	Sat. Sol.	-	-	-	S
Glycocoll	NH_2-CH_2-COOH	10%	S	S	S	-
Glycol	see Ethylene glycol		-	-	S	-
Glycolic acid	NO-CH_2-COOH	37%	S	S	-	-
Glycolic acid	NO-CH_2-COOH	Sol.	-	-	-	S
Grape juice		-	-	-	-	-
Heptane	C_7H_{16}	tg-l	S	S	S	-
Heptane	C_7H_{16}	100%	-	-	-	NS
Hexane	C_6H_{14}	tg-l	S	S	S	-
Hexane	C_6H_{14}	-	-	-	-	NS
Hydrobromic acid	HBr	50%	S	L	S	S
Hydrobromic acid	HBr	100%	-	-	-	-
Hydrochloric acid	HCl	10%	S	L	S	S
Hydrochloric acid	HCl	20%	-	-	-	S
Hydrochloric acid	HCl	30%	-	-	-	S
Hydrochloric acid	HCl	36%	-	-	-	S
Hydrocyanic acid	HCN	tg-l	S	L	S	-
Hydrocyanic acid	HCN	Sat. Sol.	-	-	-	L
Hydrofluoric acid	HF	40%	S	NS	S	NS
Hydrofluroric acid	HF	60%	-	-	-	NS
Hydrogen	H	tg-g	S	S	S	-
Hydrogen	H_2	100%	-	-	-	S
Hydrogen chloride	HCl	tg-g	S	L	S	-
Hydrogen peroxide	H_2O_2	10%	S	L	S	-
Hydrogen peroxide	H_2O_2	30%	-	-	-	L
Hydrogen peroxide	H_2O_2	90%	-	-	-	L
Hydrogen sulphide	H_2S	Sat.sol.	S	L	S	-
Hydrogen sulphide, gas	H_2S	100%	-	-	-	S
Hydroquinone	$C_6H_4O_2$	Sat. Sol.	-	-	-	S
Hydroxylamine sulphate	$(H_2NOH)_2H_2SO_4$	Sat.sol.	S	S	S	-
Ink		-	-	-	-	-
Iodine (in alcohol)	I_2	-	-	-	-	-
Iodine (in potassium solution)	I_2	-	-	-	-	-
Iodine solution		6.5% iodine in ethanol	S	S	S	-
Iron salts		Sat.sol.	S	S	S	-
Iso-octane	$(CH_3)_3$-C-CH_2-CH-$(CH_3)_2$	tg-l	L	S	S	-
Iso-octane	C_8H_{18}	100%	-	-	-	NS
Iso-pentane	C_5H_{12}	-	-	-	-	-
Isopropanol	$CH_3CH(OH)CH_3$	-	-	-	-	-
Isopropyl alcohol	$(CH_3)_2CHOH$	tg-l	S	S	S	-
Isopropyl ether	$(CH_3)_2$-CH-O-CH-$(CH_3)_2$	tg-l	L	NS	L	-
Isopropyl ether	$(CH_3)_2$-CH-O-CH-$(CH_3)_2$	100%	-	-	-	NS
Kerosene		-	-	-	-	NS
Lactic acid	$CH_3CHOHCOOH$	10%	S	NS	S	L
Lactic acid	$CH_3CHOHCOOH$	100%	-	-	-	-
Lanolin		Work.sol.	S	S	S	-
Lead acetate	$Pb(CH_3COO)_2$	Sat.sol.	S	S	S	S
Linseed oil		Work.sol.	S	S	S	-
Liqueurs			S	S	S	-
Lubricating oils			L	S	S	-
Lubricating oils free of aromatic compounds			S	S	S	-
Magnesium carbonate	$MgCO_3$	Sat. Sol.	-	-	-	S
Magnesium chloride	$MgCl_2$	Sat. Sol.	-	-	-	S
Magnesium hydroxide	$Mg(OH)_2$	Sat. Sol.	-	-	-	S
Magnesium nitrate	$Mg(NO_3)_2$	Sat. Sol.	-	-	-	S
Magnesium salts	$MgCl_2$	Sat.sol.	S	S	S	-
Magnesium sulphate	$MgSO_4$	Sat. Sol.	-	-	-	S

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CHEMICAL	FORMULA	CONCENTRATION %	PP-B	NBR	PEHD	EPDM 20°C
Maleic acid	HOOC-CH=CH-COOH	Sat. Sol.	-	-	-	L
Marmelade			S	S	S	-
Mercuric chloride	$HgCl_2$	Sat. Sol.	-	-	-	S
Mercuric cyanide	$Hg(CN)_2$	Sat. Sol.	-	-	-	S
Mercurous nitrate	$HgNO_3$	Sol.	-	-	-	S
Mercury	Hg	tg-l	S	S	S	-
Mercury	Hg	100%	-	-	-	S
Mercury salts		Sat.sol.	S	L	S	-
Methane (natural gas)	CH_4	tg-g	S	S	S	-
Methanol (methyl alcohol)	CH_3OH	tg-l	S	S	S	-
Methyl acetate	CH_3COOCH_3	tg-l	S	NS	S	-
Methyl alcohol	CH_3OH	100%	-	-	-	S
Methyl amine	CH_3NH_2	32%	S	NS	S	-
Methyl bromide	CH_3Br		NS	NS	-	-
Methyl bromide	CH_3Br	Tg	-	-	L	-
Methyl bromide	CH_3Br	100%	-	-	-	NS
Methyl chloride	CH_3Cl	tg-g	NS	NS	L	-
Methyl chloride	CH_3Cl	100%	-	-	-	L
Methyl ethyl ketone	$CH_3COC_2H_5$	tg-l	S	NS	S	-
Methyl ethyl ketone	$CH_3COC_2H_5$	100%	-	-	-	S
Methylene chloride	CH_2Cl_2	-	-	-	-	NS
Milk			S	S	-	S
Milk		work. sol.	-	-	S	-
Mineral oil		-	-	-	-	NS
Mineral water			S	S	S	-
Molasses			S	S	S	S
Molasses wort			S	S	S	-
Mowilith D		Work.sol.	S	S	S	-
Naphtha		-	-	-	-	NS
Naphthalene		tg-l	S	S	S	-
Naphthalene	$C_{10}H_8$	-	-	-	-	NS
Nickel chloride	$NiCl_2$	Sat. Sol.	-	-	-	S
Nickel nitrate	$Ni(NO_3)_2$	Sat. Sol.	-	-	-	S
Nickel salts		Sat.sol.	S	S	S	-
Nickel sulphate	$NiSO_4$	Sat. Sol.	-	-	-	S
Nicotine	$C_{10}H_{14}N_2$	Dil. Sol.	-	-	-	-
Nicotinic acid	C_5H_4NCOOH	Dil. Sol.	-	-	-	S
Nitric acid	HNO_3	25%	-	-	-	S
Nitric acid	HNO_3	50%	-	-	-	-
Nitric acid	HNO_3	70%	-	-	-	NS
Nitric acid	HNO_3	95%	-	-	-	-
Nitric acid	HNO_3	100%	-	-	-	NS
Nitric acid	NHO_3	6.3%	S	NS	-	-
Nitric acid	NHO_3	25%	-	-	S	-
Nitrobenzene	$C_6H_5NO_2$	100%	-	-	-	NS
Nitrotoluene	$CH_3C_6H_4NO_2$	-	-	-	-	NS
Oleic acid	$C_{17}H_{33}COOH$	tg-l	S	L	S	-
Oleic acid	$C_{17}H_{33}COOH$	100%	-	-	-	NS
Oleum	$H_2SO_4+SO_3$		NS	NS	-	-
Oleum	$H_2SO_4+SO_3$	10 SO3	-	-	NS	-
Oleum	$H_2SO_4+10\%SO_3$	-	-	-	-	NS
Oleum	$H_2SO_4+50\%SO_3$	-	-	-	-	NS
Olive oil			S	S	S	NS
Oxalic acid	$C_2H_2O_4$	Sat.sol.	S	L	S	-
Oxalic acid	HOOCCOOH	Sat. Sol.	-	-	-	L
Oxigen	O_2	tg-g	S	NS	S	-
Oxigen	O_2	100%	-	-	-	S
Ozone	O_3	tg-g	-	NS	L	-
Ozone	O_3	100%	-	-	-	S
Palm oil, palm nut oil			S	S	S	-
Paraffin emulsion		Work.sol.	S	S	S	-

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CHEMICAL	FORMULA	CONCENTRATION %	PP-B	NBR	PEHD	EPDM 20°C
Paraffin oil		Work.sol.	S	S	S	-
Paraffin oil		-	-	-	-	NS
Pentane	C_5H_{12}	-	-	-	-	-
Perchloric acid	$HClO_4$	20%	-	-	-	-
Perchloric acid	$HClO_4$	50%	-	-	-	-
Perchloric acid	$HClO_4$	70%	-	-	-	S
Petroleum		Work.sol.	S	S	S	-
Petroleum ether		Work.sol.	L	L	S	-
Petroleum jelly		Work.sol.	S	S	L	-
Phenol	C_6H_5-OH	10%	S	NS	-	-
Phenol	C_6H_5-OH	Sol.	-	-	S	L
Phenylhydrazine	C_6H_5-NH-NH_2	tg-l	L	NS	L	-
Phenylhydrazine hydrochloride	C_6H_5-NH-NH_3+Cl-	Dil.sol.	S	L	-	-
Phenylhydrazine hydrochloride	C_6H_5-NH-NH_3+Cl-	Dil.sol.	-	-	-	-
Phosgene	$COCl_2$	tg-l	L	L	-	-
Phosphoric acid	$COCL_2$	50%	S	L	S	-
Phosphoric acid	H_3PO_4	25%	-	-	-	S
Phosphoric acid	H_3PO_4	50%	-	-	-	S
Phosphorous pentoxide	P_2O_5	100%	-	-	-	S
Phosphorous trichloride	PCl_3	100%	-	-	-	S
Phosphorus chlorides	PCl_3	tg-l	S	NS	S	-
Phosphorus pentoxide	P_2O_5	tg-l	S	L	S	-
Photographic developer		Work.sol.	S	L	S	-
Photographic emulsion			S	L	S	-
Photographic fixer		Work.sol.	S	S	S	-
Photography solutions		-	-	-	-	S
Phtalic acid	COOH-C_6H_6-COOH	Sat.sol.	S	NS	S	-
Phthalic acid	$C_6H_4(COOH)_2$	50%	-	-	-	S
Potash (potassium carbonate)	K_2CO_3	Sat.sol.	S	S	S	-
Potassium aluminium sulphate	K_2SO_4-$Al_2(SO_4)_3$12H_2O	50%	S	S	-	-
Potassium aluminium sulphate	K_2SO_4-$Al_2(SO_4)_3$12H_2O	Sat.sol.	-	-	S	-
Potassium bicarbonate	$KHCO_3$	Sat. Sol.	-	-	-	S
Potassium bichromate	$K_2Cr_2O_7$	Sat.sol.	S	S	S	-
Potassium borate	K_3BO_3	10%	S	S	-	-
Potassium borate	K_3BO_3	Sat.sol.	-	-	S	S
Potassium bromate	$KBrO_3$	Sat.sol.	S	S	S	S
Potassium bromide	KBr	Sat.sol.	S	S	S	S
Potassium carbonate	K_2CO_3	Sat.sol.	S	S	S	S
Potassium chlorate	$KClO_3$	Sat.sol.	S	S	S	S
Potassium chloride	KCl	Sat.sol.	S	S	S	S
Potassium chromate	K_2CrO_4	Sat.sol.	S	S	S	S
Potassium cyanide	KCN	Sat.sol.	S	S	-	-
Potassium cyanide	KCN	Sol.	-	-	S	-
Potassium hydroxide	KOH	50%	S	L	S	-
Potassium Hydroxide	KOH	10%	-	-	-	S
Potassium Hydroxide	KOH	Sol.	-	-	-	S
Potassium iodide	KJ	Sat.sol.	S	S	S	-
Potassium nitrate	KNO_3	50%	S	S	S	-
Potassium perchlorate	$KClO_4$	Sat.sol.	S	S	S	S
Potassium permanganate	$KMnO_4$	Sat.sol.	S	L	S	-
Potassium permanganate	$KMnO_4$	20%	-	-	-	S
Potassium persulphate	$K_2S_2O_8$	Sat.sol.	S	NS	S	S
Potassium phosphates	KH_2PO_4 ; K_2HPO_4	Sat.sol.	S	S	S	-
Potassium sulphate	K_2SO_4	Sat.sol.	S	S	S	S
Propane	C_3H_8	tg-l ; tg-g	S	S	S	-
Propanol, n- and iso-	C_3H_7OH	tg-l	S	L	S	-
Proparcyl alcohol	CH≡C-CH_2-OH	7%	S	S	S	-
Propionic acid	CH_3CH_2COOH	50%	S	NS	S	S
Propionic acid	CH_3CH_2COOH	100%	-	-	-	S
Propyl alcohol	C_3H_7OH	-	-	-	-	S
Propylene glycol	$C_3H_8O_2$	tg-l	S	S	S	-
Propylene glycol	$CH_3CHOHCH_2OH$	-	-	-	-	S

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CHEMICAL	FORMULA	CONCENTRATION %	PP-B	NBR	PEHD	EPDM 20°C
Pyridine	C_5H_5N	tg-l	L	NS	S	-
Pyridine	C_5H_5N	100%	-	-	-	NS
Salpetre	KNO_3	50%	S	S	S	-
Sea water		-	-	-	-	S
Silicon oil		-	S	S	S	L
Silver nitrate	$AgNO_3$	Sat.sol.	-	-	-	S
Silver salts	$AgNO_3$	Sat.sol.	S	S	S	-
Soap		Sol.	S	S	S	-
Soda	Na_2CO_3	Sat.sol.	S	S	S	-
Sodium Hydroxide	NaOH	Sol.	-	-	-	S
Sodium Hydroxide	NaOH	40%	-	-	-	S
Sodium acetate	CH_3COONa	Sat.sol.	S	S	S	S
Sodium benzoate	C_6H_6-COONa	Sat.sol.	S	S	S	S
Sodium bicarbonate	$NaHCO_3$	Sat.sol.	S	S	S	S
Sodium bisulphate	$NaHSO_4$	10%	S	S	S	-
Sodium bisulphate	$NaHSO_4$	Sat. Sol.	-	-	-	S
Sodium bisulphite	$NaHSO_3$	Sat.sol.	S	L	S	S
Sodium borate	$Na_2B_4O_7$	-	-	-	-	S
Sodium bromate	$NaBrO_3$	Sat.sol.	S	S	S	-
Sodium bromide	NaBr	Sat.sol.	S	S	S	-
Sodium carbonate	Na_2CO_3	Sat.sol.	S	S	S	S
Sodium chlorate	$NaClO_3$	Sat.sol.	S	S	S	S
Sodium chloride	NaCl	Sat. Sol.	-	-	-	S
Sodium chloride (cooking salt)	NaCl	Sat.sol.	S	S	S	-
Sodium chlorite	$NaClO_2$	Dil.sol.	S	NS	S	-
Sodium chromate	Na_2CrO_4	Dil.sol.	S	S	S	-
Sodium cyanide	NaCN	Sat. Sol.	-	-	-	S
Sodium disulphite	$Na_2S_2O_5$	Sat.sol.	S	L	S	-
Sodium dithionite (hyposulphite)	$Na_2S_2O_4$	10%	S	S	S	-
Sodium fluoride	NaF	Sat. Sol.	S	S	S	S
Sodium hydroxide	NaOH	40%	S	S	-	-
Sodium hydroxide	NaOH	40% Cl	-	-	S	-
Sodium hypochlorite	NaOCl	12.5%	L	NS	-	-
Sodium hypochlorite	NaOCl	12.5% Cl	-	-	S	-
Sodium hypochlorite	NaOCl	12,50%	-	-	-	L
Sodium iodide	NaI	Sat.sol.	S	S	S	-
Sodium nitrate	$NaNO_3$	Sat.sol.	S	S	S	S
Sodium nitrite	$NaNO_2$	Sat.sol.	S	S	S	S
Sodium oxalate	$Na_2C_2O_4$	Sat.sol.	S	S	S	-
Sodium persulphate	$Na_2S_2O_8$	Sat.sol.	S	NS	S	-
Sodium phosphate	Na_3PO_4	Sat.sol.	S	S	S	S
Sodium silicate	Na_2SiO_3	Sat.sol.	S	S	S	-
Sodium silicate	Na_2SiO_3	Sol.	-	-	-	S
Sodium sulphate	Na_2SO_4	Sat.sol.	S	S	S	-
Sodium sulphide	Na_2S	Sat.sol.	S	S	S	S
Sodium sulphite	Na_2SO_3	Sat.sol.	S	S	S	-
Sodium thiosulphate	Na_2SvO_3	Sat.sol.	S	S	S	-
Spindle oil			S	S	L	-
Spirits		Work.sol.	S	S	S	-
Stannic chloride	$SnCl_4$	Sat. Sol.	-	-	-	S
Stannous chloride	$SnCl_2$	Sat.sol.	S	S	S	S
Starch solution		Work.sol.	S	S	S	-
Starch syrup		Work.sol.	S	S	S	-
Stearic acid	$C_{17}H_{35}COOH$	tg-l	S	S	S	-
Stearic acid	$C_{17}H_{35}COOH$	Sat. Sol.	-	-	-	NS
Succinic acid	HOOC-CH_2-CH_2-COOH	Sat.sol.	S	S	S	-
Sugar syrup		Work.sol.	S	S	S	-
Sulphur dioxide	SO_2	tg-g	S	NS	S	-
Sulphur dioxide, dry gas	SO_2	100%	-	-	-	S
Sulphur trioxide	SO_3	tg-g	NS	NS	NS	-
Sulphur trioxide	SO_3	100%	-	-	-	NS

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CHEMICAL	FORMULA	CONCENTRATION %	PP-B	NBR	PEHD	EPDM 20°C
Sulphuric acid	H_2SO_4	10%	-	-	-	S
Sulphuric acid	H_2SO_4	40%	S	L	S	-
Sulphuric acid	H_2SO_4	50%	-	-	-	S
Sulphuric acid	H_2SO_4	70%	-	-	-	S
Sulphuric acid	H_2SO_4	80%	-	-	-	S
Sulphuric acid	H_2SO_4	98%	-	-	-	NS
Sulphuric acid	H_2SO_4	Fumante	-	-	-	-
Sulphurous acid	H_2SO_3	Sat.sol.	S	NS	-	-
Sulphurous acid	H_2SO_3	30%	-	-	S	-
Sulphurous acid	H_2SO_3	Sol.	-	-	-	S
Sulphuryl chloride	SO_2Cl_2	tg-l	NS	NS	NS	-
Tallow		tg-l	S	S	S	-
Tannic acid	$C_{14}H_{10}O_9$	Sol.	S	S	S	S
Tanning extracts from plants		Work.sol.	S	S	S	-
Tartaric acid	$C_4H_6O_6$	Sat.sol.	S	S	S	-
Tartaric acid	$COOH(CHOH)_2COOH$	Sat. Sol.	-	-	-	S
Tetrachloroethane	$Cl_2CH\text{-}CHCl_2$	tg-l	L	NS	L	-
Tetrachloroethylene	$Cl_2C{=}CCl_2$	100%	-	-	-	NS
Tetraethyl lead	$(C_2H_5)_4Pb$	tg-l	S	S	S	-
Tetrahydrofurane	$(CH_2)_4O$	-	-	-	-	NS
Thionyl chloride	$SOCl_2$	100%	-	-	-	NS
Toluene	$C_6H_5\text{-}CH_3$	tg-l	L	NS	L	-
Toluene	$C_6H_5CH_3$	100%	-	-	-	NS
Trichloroethane	$Cl_3\text{-}C\text{-}CH_3$	tg-l	L	NS	L	-
Trichloroethylene	$ClCH{=}CCl_2$	100%	-	-	-	NS
Trichloromethane	$CHCl_3$	tg-l	L	NS	NS	-
Triethanolamine	$N(CH_2\text{-}CH_2\text{-}OH)_3$	Sol.	S	L	S	NS
Trioctyl phosphate	$(C8H_{17})_3PO_4$		S	L	L	-
Turpentine		-	-	-	-	NS
Turpentine oil			NS	S	-	-
Turpentine oil	Tg-l	Tg-l	-	-	-	-
Urea	$H_2N\text{-}CO\text{-}NH_2$	30%	S	S	-	S
Urea	$H_2N\text{-}CO\text{-}NH_2$	Sol.	-	-	S	-
Urine			S	S	S	S
Vaseline		-	-	-	-	-
Vegetable oils and fats			S	S	-	-
Vinegar		Work.sol.	S	NS	S	-
Vinyl acetate	$CH_2{=}CHOOCCH_3$	tg-l	S	S	-	-
Water	H_2O		S	S	S	-
Water, waste water without organic solvent and surfactants			S	S	S	-
Wax alcohol	$C_{31}H_{63}OH$	tg-l	L	S	L	-
Wetting agents		5%	S	S	S	-
Wine vinegar		Work.sol.	S	NS	S	S
Wines		Work.sol.	S	S	S	S
Xylene	$C_6H_4(CH_3)_2$	tg-l	NS	NS	L	-
Xylene	$C_6H_4(CH_3)_2$	100%	-	-	-	NS
Yeast		Susp.	S	S	S	-
Yeast		Sol.	-	-	-	S
Zinc chloride	$ZnCl_2$	Sat. Sol.	-	-	-	S
Zinc salts	$ZnCl_2$	Sol.	S	S	S	-
Zinc sulphate	$ZnSO_4$	Sat. Sol.	-	-	-	S