

Resistance of *Wefapress* plastics to chemicals and other media!



This information is intended to provide an overview of the chemical resistance of *Wefapress* polyethylenes based on PE-UHMW (GUR®) and PE-HMW (GHR®) in the TICONA product line.

These materials have been extensively investigated for their compatibility and restrictions. The results obtained have been separated into the following classifications:

- + resistant
swelling < 3% or weight loss < 0.5%,
elongation at break not significantly changed
- / partially resistant
- not resistant
- * or boiling temperature
- ** not valid for welded joints
- V discoloration may occur

However, these specifications do not replace the tests which should be performed to demonstrate chemical compatibility (according to RM001) as a part of an overall type test. Detailed conclusions on the basis of this brochure not guaranteed.

Under certain circumstances, polyethylene absorbs moisture in both liquid and gaseous form.

Resistance to chemicals and other media

Substance	Concentration	The behaviour of GUR® and GHR® at	
		20 °C	60 °C
A			
Acetaldehyde	technical	+	/
Acetaldehyde + acetic acid	90:10	+	
Acetaldehyde, aqueous	each	+	/
Acetamide		+	+
Acetic acid	100 %	+	/V
Acetic acid, aqueous	70 %	+	+
Acetic anhydride	technical	+	/
Acetoacetic acid		+	
Acetone	technical	+	+ *
Acetophenone		+	
Acetylene		+	
Acids, aromatic		+	+
Acronal® dispersions	commercial	+	/
Acrylonitrile	technical	+	+
Adipic acid, aqueous	saturated	+	+
air	technical	+	+
Aktivin® (chloramine, aqueous, 1%)		+	+
Allyl acetate		+	+ to /
Allyl alcohol (prop-2-en-1-ol)	96 %	+	+
Allyl chloride		/	-
Alum, aqueous	each	+	+
Aluminium chloride, aqueous	each	+	+
Aluminium chloride, solid		+	+
Aluminium fluoride	conc.	+	+
Aluminium hydroxide		+	+
Aluminium metaphosphate		+	+
Aluminium potassium sulphate, aqueous	each	+	+
Aluminium sulphate, aqueous	saturated	+	+
Aluminium sulphate, solid		+	+
Amino acids		+	+
Ammonia water		+	+
Ammonia water (household ammonia)	each	+	+
Ammonia, gaseous		+	+
Ammonia, liquid		+	
Ammonium acetate, aqueous	each	+	+
Ammonium carbonate, aqueous	each	+	+
Ammonium chloride, aqueous	each	+	+
Ammonium fluoride, aqueous	saturated	+	+
Ammonium hydrogencarbonate, aqueous	saturated	+	+
Ammonium hydrosulphide, aqueous	each	+	+
Ammonium iron (III) sulphate (iron alum), aqueous	saturated	+	+

Resistance to chemicals and other media

Substance	Concentration	The behaviour of GUR® and GHR® at	
		20 °C	60 °C
Ammonium metaphosphate		+	+
Ammonium nitrate, aqueous	each	+	+
Ammonium phosphate, aqueous	each	+	+
Ammonium sulphate, aqueous	each	+	+
Ammonium sulphide, aqueous	each	+	+
Ammonium thiocyanate		+	+
Amyl acetate	technical	+	+
Amyl alcohol (C -alcohols)	technical	+	+
Amyl chloride	100 %	/	-
Amyl phthalate		+	/
Aniline	each	+	+
Aniline hydrochloride, aqueous	each	+	+
animal oil		+	/
Aniseed oil		/	-
Anisol		/	/to -
Anon (Cyclo hexanon)		+	/
Anthraquinonesulphonic acid, aqueous (susp.)		+	+
Anti-freezing agent (car)	commercial	+	+
Antimony chloride, free from water		+	+
Antimony pentachloride		+	+
Antimony trichloride		+	+
Apple wine		+	+
Aqua regia (HCl + HNO ₃)		-	
Arsenic pentaoxide		+	+
Arsenious acid, aqueous	each	+	+
Ascorbic acide		+	+
Asphalt		+	/V
Aspirin®		+	
B			
Barium hydroxide, aqueous	each	+	+
Barium salts, aqueous	each	+	+
Battery acid		+	+
Beef fat		+	+ to /
Beer		+	+
Beer liquor	commercial	+	+
Beeswax		+	/to -
Benzaldehyde in propan-2-ol	1 %	+	+
Benzaldehyde, aqueous	each	+	+ to /
Benzene	technical	/	-
Benzin/Benzene-mixture	80/20	+	/
Benzine	technical	+	/
Benzoic acid, aqueous	each	+	+

Resistance to chemicals and other media

Substance	Concentration	The behaviour of GUR® and GHR® at	
		20 °C	60 °C
Benzoyl chloride		/	/
Benzyl alcohol		+	+
Benzyl chloride		/	-
Bismuth salts		+	+
Bisulphite liquor		+	+
Bitter salt, aqueous	each	+	+
Bitumen		+	/V
Bleaching liquor with 12,5 % active Chlorine**		/	-
Bone oil		+	+
Borax (sodium tetraborate), aqueous	saturated	+	+
Boric acid methyl ester		+	/to -
Boric acid, aqueous	each	+	+
Boron trifluoride		+	+ to /
Brake fluid		+	+
Brandy		+	
Bromchlormethane		-	
Bromic acid	conc.	-	
Bromine vapour		-	
Bromine water	cold saturated	+	
Bromine, liquid	100 %	-	
Bromomethane (methyl bromide), gaseous	technical	-	
Buta 1,3-dien, gaseous	technical	/	-
Butane, gaseous		+	
Butane-diol, aqueous	each	+	+
Butane-triol, aqueous	each	+	+
Butanol		+	+
Butanol, aqueous	each	+	+
Butanone		+	/to -
2-Butendiole-1,4	technical	+	
2-Butindiole-1,4	technical	+	
Butoxyl® (methoxybutylacetate)		+	/
Butter		+	
Butyl acetate	technical	+	/
Butyl acetate		+	/
Butyl acrylate		+	/
Butyl phenol	technical	+	+
Butyl phenone	technical	-	
Butylbenzylphthalate		+	+
Butylene glycol	technical	+	+
Butylene glycol (ethylene glycol butyl ether)	technical	+	
Butylphthalate (Di-butylphthalate)	technical	+	/
Butyric acid, aqueous	each	+	/

Resistance to chemicals and other media

Substance	Concentration	The behaviour of GUR® and GHR® at	
		20 °C	60 °C
C			
Calcium carbide		+	+
Calcium carbonate		+	+
Calcium chlorate, aqueous	saturated	+	+
Calcium chloride, aqueous	saturated	+	+
Calcium hydroxide		+	+
Calcium hypochlorite, aqueous (suspension)	each	+	+
Calcium nitrate, aqueous	50 %	+	+
Calcium oxide (powder)		+	+
Calcium phosphate		+	+
Calcium sulphate		+	+
Calcium sulphide, aqueous	P 10 %	/	/
Camphor		+	/
Camphor oil		-	
Cane sugar, aqueous	each	+	+
Carbazole		+	+
Carbolic acid (phenol)		+	+ V
Carbolineum	commercial	+	
Carbon dioxide	100 %	+	+
Carbon disulphide		/	
Carbon monoxide, gaseous	technical	+	+
Carbonic acid, aqueous	each	+	+
Carbonic acid, dry	100 %	+	+
Castor oil		+	+
Caustic potash		+	+
Caustic potash	50 %	+	+
Caustic soda		+	+
Caustic soda	each	+	+
Cellulose nitrate		+	
Cetyl alcohol (hexadecan-1-ol)		+	+
Chloral (Trichloroacetaldehyde)	technical	+	+
Chloral hydrate, aqueous	each	+	+ V
Chloramine, aqueous	saturated	+	
Chloric acid, aqueous	1 %	+	+
Chloric acid, aqueous	10 %	+	+
Chlorinated bleaching liquor with 12,5% active Chlorine**		/	-
Chlorinated lime		+	+
Chlorine water	saturated	+	/
Chlorine, aqueous solution (chlorine water)	saturated	+	/
Chlorine, gaseous, dry		/	-
Chlorine, gaseous, moist		/	-
Chlorine, liquid		-	

Resistance to chemicals and other media

Substance	Concentration	The behaviour of GUR® and GHR® at	
		20 °C	60 °C
Chloroacetic acid (mono), aqueous	each	+	+
Chloroacetic acid, aqueous	P 85 %	+	+
Chlorobenzene		/	-
Chloroethane (ethyl chloride)	technical	/	
Chloroethanol (ethylene chlorhydrin)	technical	+	+ V
Chloroform	technical	/to -	-
Chloroformic acid ester		+	/
Chloromethane (methyl chloride), gaseous	technical	/	
Chlorosulphuric acid	technical	-	
Chlorpicrin		+ to /	-
Chromanode sludge		+	+
Chrome alum (chrome potash alum), aqueous	saturated	+	+
Chromic acid, aqueous**	50 %	/	- V
Chromic-sulphuric acid mixture		-	
Chromium salts, aqueous	each	+	+
Chromium trioxide, aqueous**	50 %	/	- V
Cider		+	+
Citric acid, aqueous	saturated	+	+
Citric juices		+	+
Citrus juices		+	+
Clophen® A50 and A 60		+	/to -
Coal-tar oil		+ V	/V
Coconut oil		+	
Coconut oil alcohol	technical	+	/
Cod-liver oil		+	/
Cognac		+	
Cola concentrate		+	+
Common salt, aqueous	each	+	+
Copper chloride, aqueous	saturated	+	+
Copper fluoride, aqueous	saturated	+	+
Copper nitrate, aqueous	30 %	+	+
Copper salts, aqueous	cold saturated	+	+
Copper sulphate, aqueous	each	+	+
Copper(I)cyanide, aqueous	saturated	+	
Cotton-seed oil	technical	+	+
Creosol	100 %	+	/V
Creosol, aqueous	diluted	+	+ V
Creosote		+	+ V
Crotonaldehyde	technical	+	/
Cumaron resin		+	+
Cyclanon (Fatty alcohol sulphonate)	commercial	+	+
Cyclohexane		+	+

Resistance to chemicals and other media

Substance	Concentration	The behaviour of GUR® and GHR® at	
		20 °C	60 °C
Cyclohexanol		+	+
Cyclohexanone (anone)		+	/
D			
Deca hydronaphthaline (Dekalin®)	technical	+	/
Defoaming agent		+	+ to /
Detergentien		+	+
Detergents	usual	+	+
Developer (photographic)		+ V	+ V
Dextrin (starch gum), aqueous	18 %	+	+
Dextrose		+	+
1,2-Diaminoethane (ethylenediamine)	technical	+	+
1,2-Dibromethane		/	-
Di-butylphthalate (Butylphthalate)	technical	+	/
Dibutyl ether		+ to /	-
Dibutyl sebacate		+	/
Dichloroacetic acid	50 %	+	+
Dichloroacetic acid	technical	+	/V
Dichloroacetic acid methyl ester		+	+
Dichlorobenzene		/	-
Dichlorodiphenyltrichloroethane (DDT, powder)		+	+
Dichloroethane		/	/
1,1-dichlorethylene (vinylidene chloride)	technical	-	
Dichloropropane		/	-
Dichloropropene		/	-
Diesel fuel		+	/
Diethanolamine	technical	+	
Diethyl ether		+ to /	/*
2-Di-ethylhexylphthalate (DOP)		+	/
Diethyl ketone		+	/
Diethylene glycol		+	+
Diglycolic acid, aqueous	30 %	+	+
Diisobutyl ketone	technical	+	/to -
Diisooctyl phthalate	technical	+	/
Diisopropyl ether		+ to /	-
Dimethyl formamide	technical	+	+ to /
Dimethyl sulphoxide		+	+
Dimethylamine		+	/
Dinonyl phthalate (DNP)	technical	+	/
Dioctyl phthalate		+	/
Dioxane		+	+
Diphenyl ether		+	/
Diphenylamine		+	/

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Substance	Concentration	The behaviour of GUR® and GHR® at	
		20 °C	60 °C
Disodium phosphate		+	+
Disodium sulphate		+	+
Do-decyl benzole sulphonic acid		+	/
Drilling medium from "Hoechst"		/	/
Drinking water, also chlorinated		+	+
Dutch glue (Gluten glue)	commercial	+	+
Dye		+ V	+ V
E			
Eau de Javelle		+ to /	-
Eau de Labarraque		+ to /	
Elektrolytic bath for galvanotechnics		+ to /	/
Emulsifying agents		+	+
Emulsions (photographic)		+	+
Emulsions (photographic)	commercial	+	
Ephetin®, aqueous	10 %	+	+
Epichlorhydrine		+	+
Ester of adipic acid		+	/
Ester, aliphatic	technical	+	+ to /
Ethane		+	+
Ethanol	96 %	+	+
Ethanol amine (2-aminoethanol)	technical	+	
Ethanol, denaturated with toluene	96 % (vol.)	+	
Ether		+ to /	/*
etherial oils		/	-
Ethyl acetate		+	/
Ethyl acetate	technical	+	/
Ethyl alcohol	96 %	+	+
Ethyl alcohol + acetic acid (fermentation mixture)	usual in the works	+	+
Ethyl benzene	technical	/	
Ethyl chloride (chloroethane)	technical	/*	
Ethyl ether	technical	+ to /	/*
2-Ethyl hexanol		+	/
Ethylene		+	+
Ethylene chlorohydrin (chlorethanol)	technical	+	+
Ethylene dibromide		/	-
Ethylene dichloride (dichloroethane)		/	-
Ethylene glycol		+	+
Ethylene glycol butyl ether (Butylene glycol)	technical	+	
Ethylene oxide, gaseous	technical	+	+
Ethylenediamine (1,2-diaminoethane)	technical	+	+
Ethylenediamine tetraacetic acid		+	+
Euron® B		/	/

Resistance to chemicals and other media

Substance	Concentration	The behaviour of GUR® and GHR® at	
		20 °C	60 °C
Euron® G		+	+
F			
Fatty acids (> C6)		+	+ to /
Fatty alcohol		+	/
Fatty amide		+	/
Fermentation mash	commercial	+	+
Ferric cyan potassium and Ferro-Z, aqueous	each	+	+
Fertilizing salts, aqueous	each	+	+
Fixing bath (photographic)	commercial	+	
Fixing salt, aqueous	each	+	+
Fixing salt, solid		+	+
Fluorine, gaseous		-	
Fluoroboric acid, aqueous		+	/
Fluorosilicic acid	each	+	+
Fluorosilicic acid, aqueous	each	+	+
Formaldehyde, aqueous	up to 40 %	+	+
Formamide		+	+
Formic acid, aqueous	85 %	+	+
Formic acid, aqueous	10 %	+	+
Frigen® 12 (Freon® 12)	100 %	/	-
Fructose (fruit sugar), aqueous	each	+	+
Fruit juices	each	+	+
Fruit juices, fermented		+	+
Fruit juices, unfermented	each	+	+
Fruit pulp		+	+
Fruit tree carbolineum, aqueous		+ V	/V
Furfural		+	/
Furfuryl alcohol		+	+ V
G			
Gelatine		+	+
Genantin®		+	+
Gin		+	
Glacial acetic acid (100 % acetic acid)	technical	+	/V
Glauber salt, aqueous	each	+	+
Glucose, aqueous	each	+	+
Glucose, aqueous	each	+	+
Glue		+	+
Glycerol chlorohydrin		+	+
Glycerol, aqueous	each	+	+
Glycocoll		+	+
Glycol acid butyl ester		+	+
Glycol, aqueous	commercial	+	+

Resistance to chemicals and other media

Substance	Concentration	The behaviour of GUR® and GHR® at	
		20 °C	60 °C
Glycolic acid, aqueous	up to 70 %	+	+
Glysantine		+	+
Grisiron® 8302		/	/
Grisiron® 8702		+	+
H			
Halothan®		/	/to -
Heating oil		+	/
Heptane		+	/
Hexafluorosilicic acid, aqueous	40 %	+	+
Hexane		+	/
Hexantriol		+	+
Honey		+	+
Household ammonia (ammonia water)	each	+	+
Hydraulic fluid		+	/
Hydrazine hydrate		+	+
Hydrobromic acid, aqueous	50 %	+	+
Hydrochloric acid		+	/
Hydrochloric acid, aqueous	each	+	+
Hydrofluoric acid, aqueous	40 % - 85 %	+	/
Hydrogen		+	+
Hydrogen Bromide, gaseous	technical	+	+
Hydrogen chloride gas, dry and moist		+	+
Hydrogen peroxide, aqueous	10 %	/	-
Hydrogen peroxide, aqueous	30 %	/	-
Hydrogen sulphide, aqueous	saturated	+	+
Hydrogen sulphide, gaseous		+	+
Hydrogenic cyanide		+	+
Hydroquinone		+ V	+ V
Hydrosulphite, aqueous	up to 10 %	+	+
Hydroxylammonium sulfaphate, aqueous	12 %	+	+
I			
Illuminating gas	commercial	+	
Ink		+	+
Instant coffee		+	+
Iodine-potassium iodine	3 % iodine	+	+
Iron alum (ammonium iron (III) sulphate), aqueous	saturated	+	+
Iron potassium cyanide, aqueous	each	+	+
Iron (II) chloride, aqueous	saturated	+	+
Iron (II) sulphate, aqueous	saturated	+	+
Iron (III) chloride, aqueous	each	+	+
Iron (III) chloride, aqueous	saturated	+	+
Iron (III) nitrate, aqueous	saturated	+	+

Resistance to chemicals and other media

Substance	Concentration	The behaviour of GUR® and GHR® at	
		20 °C	60 °C
Iron (III) sulphate, aqueous	saturated	+	+
Isoamyl alcohol	technical	+	/
Isobutyl alcohol		+	+
isobutyric acid	technical	+	/
Isooctane		+	/
Isopropyl acetate	100 %	+	/
Isopropyl ether	technical	+ to /	-
J			
Jam		+	+
K			
Kerosene		+	/
Kerosine		+	/
Ketone		+ to /	/to -
L			
Lactic acid, aqueous	each	+	+
Lactose (milk sugar)		+	+
Lanoline (wool grease)		+	+
Latex		+	+
Lead acetate, aqueous	each	+	+
Lime		+	+
Lime water		+	+
Linseed oil	technical	+	+
Liqueur		+	
Liquid manure		+	+
Liquid soaps		+	+
Lithium bromide		+	+
Lubricating oils	technical	+	+ to /
Lysol®		+	/
M			
Machine oil		+	/
Magnesium carbonate		+	+
Magnesium chloride, aqueous	each	+	+
Magnesium fluorosilicate		+	+
Magnesium hydroxide		+	+
Magnesium iodide		+	+
Magnesium salts, aqueous	each	+	+
Magnesium sulphate, aqueous	each	+	+
Maize oil		+	/
Maleic acid, aqueous	up to 100 %	+	+
Malic acid, aqueous	50 %	+	+
Mangan sulphate		+	+
Margarine		+	+

Resistance to chemicals and other media

Substance	Concentration	The behaviour of GUR® and GHR® at	
		20 °C	60 °C
Mash		+	+
Mayonnaise		+	
Menthol		+	/
Mercury		+	+
Mercury chloride		+	+
Mercury salts		+	+
Metallic mordant		+	
Metallic soaps		+	+
Methanol	technical	+	+
Methoxybutanol		+	/
Methoxybutylacetat (Butoxyl®)		+	/
Methyl acetate	technical	+	
Methyl acrylate		+	+
Methyl alcohol		+	+
Methyl benzene		/	-
Methyl bromide (Bromomethane), gaseous	technical	-	
Methyl chloride (Chloromethane), gaseous	technical	/	
Methyl ethyl ketone	technical	+	/
Methyl methacrylate		+	+
Methyl propyl ketone		+	/
Methyl salicylate		+	/
Methyl sulphuric acid	50 %	+	+
Methylacrylic acid		+	+
Methylamine, aqueous	32 %	+	
Methylbenzoic acid (toluic acid)	saturated	/	
2-Methylbutan-2-ol	technical	+	/
Methylcyclohexane		/	/to -
Methylene dichloride** (dichloromethane)		/	/*
Methylglycol		+	+
Methylisobutylketone		+	/to -
4-Methylpentanol-2		+	+ to / V
Milk		+	+
Mineral oil	without additives	+	+ to /
Mineral water		+	+
Molasses		+	+
Molasses seasoning		+	+
Monochloro benzene		/	-
Monochloroacetic acid		+	+
Monochloroacetic acid ethyl ester		+	+
Monochloroacetic acid methyl ester		+	+
Morpholine		+	+
Motor oil (HD-oil)		+	+ to /

Resistance to chemicals and other media

Substance	Concentration	The behaviour of GUR® and GHR® at	
		20 °C	60 °C
Mowilith®-dispersions		+	+
Mustard		+	+
N			
N-methyl pyrrolidone		+	+
n-propanol (n-propylalcohol)		+	+
Nail lacquer remover		+	/
Naphtha		+	/
Naphthalene		+	/
Natural gas	technical	+	
Nickel chloride		+	+
Nickel nitrate		+	+
Nickel salts, aqueous		+	+
Nickel sulphate, aqueous	each	+	+
Nicotine		+	+
Nicotonic acid	P 10 %	+	
Nitric acid**	25 %	+	+
Nitric acid**	50 %	/	-
2,2',2"-Nitrilo triethanol (Triethanol amine), aqueous	each	+	/
Nitrobenzene		+	/
Nonyl alcohol (nonanol)		+	+
Nut oil		+	
O			
o-Nitrotoluol		+	/
Octylcresol	technical	/	-
Odorous oils		/	-
Oils etherial		/	-
Oils, vegetable and animal		+	+ to /
Oleic acid		+	/
Oleum (H ₂ SO ₄ + SO ₃)	each	-	
Olive oil		+	+
Optical brightening agent		+	+
Orange juice		+	+
Oxalic acid, aqueous	each	+	+
Oxygen		+	+
Ozone	50 pphm	/	-
P			
Palm kernel oil		+	
Palmitic acid		+	+
Palmityl alcohol		+	+
Paraffin oil		+	+
Paraformaldehyde		+	+
Peanut oil	technical	+	

Resistance to chemicals and other media

Substance	Concentration	The behaviour of GUR® and GHR® at	
		20 °C	60 °C
Pentanol		+	
Peppermint oil		+	
Perchlorethylene		/	-
Perchloric acid, aqueous	20 %	+	+
Perchloric acid, aqueous	50 %	+	/
Perchloric acid, aqueous	70 %	+	-
Pesticides, aqueous	usual in practice	+	+
Petroleum ether		+	/
Phenol (carbolic acid)		+	+ V
Phenolic moulding compound		+	+
Phenyl-sulphonic acid		+	+
Phenylethylalcohol		+	+
Phenylhydrazine	technical	/	/to -
Phenylhydrazine hydrochloride		+	-
Phenylsulphonate (sodium dodecyl benzol sulphonate)		+	+
Phosgene, gaseous		/	
Phosgene, liquid	100 %	-	
Phosphate, aqueous	each	+	+
Phosphoric acid, aqueous	50 %	+	+
Phosphoric acid, aqueous	80 % - 95 %	+	/V
Phosphorus pentaoxide	100 %	+	+
Phosphorus trichloride		+	/
Phosphoryl chloride		+	/
Photographic developer		+ V	+ V
Phthalic acid, aqueous	50 %	+	+
Phthalic acid dibutyl ester (Dibutyl phthalate)	technical	+	/
Phthalic ester		+	+ to /
Picric acid, aqueous	1 %	+	
Pine-needle oil		+	
Pineapple juice		+	+
Polyacrylic acid emulsions		+	+
Polyester resin		/	-
Polyester softener		+	+ to /
Polyglycol		+	+
Polysolvan® O (glycol acid butyl ester)		+	+
Potassium bicarbonate (Potassium hydrogencarbonate), aqueous	saturated	+	+
Potassium bichromate, aqueous	each	+	+
Potassium bisulphate (Potassium hydrogensulphate), aqueous	saturated	+	+
Potassium bisulphite (Potassium hydrogensulphite), aqueous	saturated	+	+
Potassium borate, aqueous	1 %	+	+
Potassium bromate, aqueous	up to 10 %	+	+
Potassium bromide, aqueous	each	+	+

Resistance to chemicals and other media

Substance	Concentration	The behaviour of GUR® and GHR® at	
		20 °C	60 °C
Potassium carbonate, aqueous	each	+	+
Potassium chlorate, aqueous	each	+	+
Potassium chloride, aqueous	each	+	+
Potassium chromate, aqueous	40 %	+	+
Potassium chrome-(III)-sulphate (chrome alum), aqueous	saturated	+	+
Potassium cyanide, aqueous	each	+	+
Potassium cyanide, aqueous	each	+	+
Potassium dichromate, aqueous	saturated	+	+
Potassium fluoride, aqueous	each	+	+
Potassium hexacyanocuprate, aqueous	saturated	+	+
Potassium hexacyanoferrate, aqueous	each	+	+
Potassium hydrogencarbonate (potassium bicarbonate), aqueous	saturated	+	+
Potassium hydrogensulphate (potassium bisulphate), aqueous	saturated	+	+
Potassium hydrogensulphite (potassium bisulphite), aqueous	saturated	+	+
Potassium hydroxide, aqueous	each	+	+
Potassium hypochlorite, aqueous	saturated	/	-
Potassium iodide	each	+	+
Potassium nitrate, aqueous	each	+	+
Potassium perborate		+	+
Potassium perchlorate, aqueous	up to 10 %	+	/
Potassium perchlorate, aqueous	1 %	+	
Potassium permanganate		+	+
Potassium permanganate, aqueous	up to 6 %	+	+ V
Potassium persulphate, aqueous	each	+	+
Potassium phosphate, aqueous	saturated	+	+
Potassium sulphate, aqueous	each	+	+
Potassium sulphide, aqueous	saturated	+	+
Potassium sulphite, aqueous	saturated	+	+
Potassium thiosulphate, aqueous	saturated	+	+
Precipitation naphtha DIN 51635		+	/
Propan-2-ol	technical	+	+
Propan-2-ol		+	+
Propane, gaseous	technical	+	
Propanol (propylalcohol)		+	+
Propagyl alcohol, aqueous	7 %	+	+
Propionic acid, aqueous	each	+	+
Propylene dichloride	100 %	-	
Propylene glycol		+	+
Propylene oxide		+	+
Pseudo-cumene		/	/
Pyridine		+	/

Resistance to chemicals and other media

Substance	Concentration	The behaviour of GUR® and GHR® at	
		20 °C	60 °C
Q			
Quinine		+	+
R			
Release agent		+	+
Roasting gas, dry	each	+	+
Rock oil		+	/
Rubber dispersions (latex)		+	+
S			
Sagrotan®		+	/
Salicylic acid		+	+
Salt brine	saturated	+	+
Saturated steam condensate		+	+
Sauerkraut		+	+
Sea-Water		+	+
Silicic acid, aqueous	each	+	+
Silicone emulsion	commercial	+	+
Silicone oil	technical	+	+
Silver nitrate		+	+
Silver nitrate, aqueous	each	+	+
Silver salts, aqueous	cold saturated	+	+
Soap solution, aqueous	each	+	+
Soda (sodium carbonate), aqueous	each	+	+
Sodium acetate, aqueous	each	+	+
Sodium benzoate		+	+
Sodium benzoate, aqueous	36 %	+	+
Sodium benzoate, aqueous	each	+	+
Sodium bicarbonate (Sodium hydrogencarbonate), aqueous	saturated	+	+
Sodium bisulphate (sodium hydrogensulphate), aqueous	saturated	+	+
Sodium bisulphite (sodium hydrogensulphite), aqueous	saturated	+	+
Sodium borate		+	+
Sodium bromide		+	+
Sodium carbonate, aqueous	each	+	+
Sodium chlorate, aqueous	saturated	+	+
Sodium cyanide		+	+
Sodium dichromate		+	+
Sodium dodecyl benzol sulphonate		+	+
Sodium ferrous cyanide		+	+
Sodium fluoride		+	+
Sodium hexacyanoferrate (II)		+	+
Sodium hexacyanoferrate (III) (Sodium ferrous cyanide), aqueous	saturated	+	+
Sodium hexametaphosphate, aqueous	saturated	+	
Sodium hydrogencarbonate (Sodium bicarbonate), aqueous	saturated	+	+

Resistance to chemicals and other media

Substance	Concentration	The behaviour of GUR® and GHR® at	
		20 °C	60 °C
Sodium hydrogensulphate (Sodium bisulphate), aqueous	saturated	+	+
Sodium hydrogensulphite (sodium bisulphite), aqueous	saturated	+	+
Sodium hydroxide, aqueous	each	+	+
Sodium hydroxide, solid		+	+
Sodium hypochlorite, aqueous		/	-
Sodium nitrate, aqueous	each	+	+
Sodium nitrite, aqueous	each	+	+
Sodium perborate, aqueous	each	+	/
Sodium perchlorate, aqueous	each	+	+
Sodium peroxide, aqueous	10 %	+	+
Sodium peroxide, aqueous	saturated	/	
Sodium phosphate		+	+
Sodium phosphate, aqueous	saturated	+	+
Sodium silicate, aqueous	each	+	+
Sodium sulphate, aqueous	cold saturated	+	+
Sodium sulphide, aqueous	saturated	+	+
Sodium sulphide, aqueous	each	+	+
Sodium tetraborate (Borax), aqueous	saturated	+	+
Sodium thiosulphate, aqueous	saturated	+	+
Soft soap		+	+
Softener		+	/
Solvent naphtha	technical	+	/
Soy oil		+	+
Spermaceti wax		+	/
Spindle oil		+ to /	/
Spirit		+	+
Spirit of wine		+	
Spirits		+	
Stain	Used concentration	+	+ to /
Stain remover		+ to /	/
Starch gum (Dextrin), aqueous	18 %	+	+
Starch syrup		+	+
Starch, aqueous	each	+	+
Stearic acid		+	/
Styrene		/	-
Succinic acid, aqueous	50 %	+	+
Sugar syrup		+	+
Sugar-beet juice		+	+
Sulfonyl chloride (sulfonyl chloride)		-	
Sulphates, aqueous solutions	each	+	+
Sulphur		+	+
Sulphur dioxide, aqueous	each	+	+

Resistance to chemicals and other media

Substance	Concentration	The behaviour of GUR® and GHR® at	
		20 °C	60 °C
Sulphur dioxide, gaseous		+	+
Sulphur ether (diethyl ether)		+ to /	/*
Sulphuric Acid Dichromate	conc.	-	
Sulphuric acid, aqueous	up to 50 %	+	+
Sulphuric acid, aqueous	70 %	+	+
Sulphuric acid, aqueous	80 %	+	+
Sulphuric acid, aqueous	98 %	/	-
Sulphuric trioxide		-	
Sulphurous acid		+	+
T			
Tallow	technical	+	+
Tannic acid, aqueous	10 %	+	+
Tanning extracts, vegetable	commercial	+	
Tartaric acid, aqueous	each	+	+
Tetrabromomethane		/ to -	-
Tetrachloroethane		/ to -	-
Tetrachloroethylene		/ to -	-
Tetrachloromethane (carbon tetrachloride)	technical	/	-
Tetraethyl lead		+	
Tetrahydrofuran	technical	/ to -	-
Tetrahydronaphthaline (Tetralin®)	technical	+	-
Thioglycollic acid		+	+
Thionyl chloride		-	
Thiophene		/	-
Tin (II) chloride, aqueous	each	+	+
Tin (IV) chloride, aqueous	saturated	+	+
Tincture of iodine	commercial	+	/V
Toluene	technical	/	-
Toluic acid (methylbenzoic acid)	saturated	/	
Tomato juice		+	+
Transformer oil (insulating oil)	technical	+	/
Tri-β-chlorethyl phosphate		+	+
Tributylphosphate		+	+
Trichloroacetaldehyde (Chloral)	technical	+	+
Trichloroacetic acid	technical	+	/to -
Trichloroacetic acid, aqueous	50 %	+	+
Trichlorobenzene		-	-
Trichloroethylene	technical	+ to /	-
Tricresyl phosphate		+	+
Triethanolamine		+	+ V
Triethanolamine (2,2',2"-nitrilo triethanol), aqueous	saturated	+	/
Triethylene glycol		+	+

Resistance to chemicals and other media

Substance	Concentration	The behaviour of GUR® and GHR® at	
		20 °C	60 °C
Trilon®		+	+
Trimethyl borate		+	/to -
Trimethylolpropane, aqueous		+	+
Trioctylphosphate		+	/
Turpentine	technical	+ to /	/
Tutogen® U		+	+
Tween® 20 and 80		+	-
Two-cycle oil		+	/
U			
Under chlorous acid		+ to /	/
Urea, aqueous	up to 33 %	+	+
Uric acid		+	+
Urine		+	+
V			
Vaseline	technical	+ to /	/
Vinegar (grape vinegar)	commercial	+	+
Vinyl acetate		+	+
Vinylidene chloride (1,1-dichloroethylene)	technical	-	
Viscose spinning solution		+	+
Vitamin C		+	
Vitamin preparations, dry (powder)		+	
W			
Walnut oil		+	/
Washing powder, synthetic	Used concentration	+	+
Waste gases containing carbon dioxide	each	+	+
Waste gases containing carbon monoxide	each	+	+
Waste gases containing carbonic acid	each	+	+
Waste gases containing hydrochloric acid	each	+	+
Waste gases containing hydrofluoric acid	traces	+	+
Waste gases containing nitrogen oxide	traces	+	+
Waste gases containing SO	low	+	+
Waste gases containing sulphur trioxide (oleum)	traces	-	
Waste gases containing sulphuric acid (moist)	each	+	+
Water glass		+	+
Water, distilled		+	+
Wax		+	+ to /
Wax emulsions	commercial	+	/
Waxy alcohol	technical	/	/
Whey		+	+
Whisky		+	
White oil	technical	+ to /	/
Wine		+	

Resistance to chemicals and other media

Substance	Concentration	The behaviour of GUR® and GHR® at	
		20 °C	60 °C
Wine vinegar (table vinegar)	commercial	+	+
X			
Xylol		/	-
Y			
Yeast		+	+
Z			
Zinc carbonate		+	+
Zinc chloride, aqueous	each	+	+
Zinc oxide		+	+
Zinc salts, aqueous	each	+	+
Zinc sludge		+	+
Zinc stearate		+	+
Zinc sulphate, aqueous	each	+	+

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