

**Chemical
Resistance
List
IM 3000**

Revision-Nr: 11

Date of issue : 05.01.1998

Last change: 26.07.2005

Changes are emphasized by italic type.

This issue supersedes the one dated: 16.05.2002

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Inorganic Compounds

Judgement

<i>Ammonia solution 25%</i>	2
<i>Ammonia solution 5%</i>	1
<i>Bilge water</i>	1
<i>Bromine</i>	3
<i>Distilled water</i>	1
<i>Hydrogen peroxide 30%</i>	1
<i>Ink</i>	1
<i>Iodine solution</i>	1
<i>Nickel acetate</i>	1
<i>Paper pulp</i>	1
<i>Sea water</i>	1
<i>Soap</i>	1
<i>Sodium bromide</i>	1
<i>Sodium hydroxide solution 33%</i>	2
<i>Sodium hypochlorite</i>	3
<i>Sodium silicate</i>	1
<i>Sodium thiocyanate</i>	1
<i>Water</i>	1

Acids

Judgement

<i>Chromosulphuric acid, conc.</i>	3
<i>Formic acid from 10%</i>	3
<i>Formic acid up to 10%</i>	2
<i>Glutamic acid</i>	1
<i>Hydrochloric acid 10%</i>	1
<i>Hydrochloric acid, smoking, 36%</i>	2
<i>Nitric acid above 10%</i>	3
<i>Nitric acid up to 10%</i>	2
<i>Perchloric acid 60%</i>	3
<i>Phosphoric acid above 10%</i>	3
<i>Phosphoric acid up to 10%</i>	2
<i>Propionic acid</i>	1
<i>Saline solution</i>	1
<i>Sulphonitric Acid</i>	3

Foods

Judgement

Acids

Judgement

<i>Acetic acid above 10%</i>	3
<i>Acetic acid anhydrite</i>	3
<i>Acetic acid up to 10%</i>	1
<i>Acrylic acid</i>	2
<i>Boric Acid</i>	1
<i>Butyric acid</i>	1

<i>Butter milk</i>	1
<i>Coca cola</i>	1
<i>Fruit juice</i>	1
<i>Grape juice</i>	1
<i>Juice</i>	1
<i>Lemon juice</i>	1
<i>Milk</i>	1
<i>Orange juice</i>	1
<i>Rum</i>	1
<i>Sorbitol</i>	1

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Foods		Organic Compounds	
	Judgement		Judgement
Tomato juice	1	Melamin resin	1
Tooth paste	1	Methane	1
Vitamins	1	Methylene chloride	2
Whey	1	<i>Methylisobutylketon</i>	1
Whisky	1	Panoline	1
<i>Wine</i>	1	PCB-substitutes	1
		Penta-erythritol-ester	1
		<i>Perfume</i>	1
		Phenol	1
		Phosphate esters	1
		Polyester resins	1
		Propanol	2
		Propylene glycols	2
		Screw saving glue	1
		Styrene	1
		<i>Tar</i>	1
		tert.-Butyl-2-hexanoat	1
		tert.-Butylmethylether	1
		Tetrachlorethylene	1
		<i>Tetrahydrofurane</i>	3
		<i>Toluene</i>	1
		Tributylphosphate 79%, 2,9%	1
		Cycloaliphatic Epoxydes, 21% Additives	1
		Trichlorethylene	1
		Trichloroethane	1
		Triethyleneglycol	2
		Triphenylphosphate	1
		Xylene	1
Organic Compounds		Gasoline / Oil / Wax	
	Judgement		Judgement
2-Ethylhexyldiphenylphosphate	1	ATF Dexron III	1
1,1,1,2 Tetrafluorethane	1	Biologic fuel	1
Acetone	1	<i>Carnauba wax</i>	1
<i>Adhesive</i>	1	Chevron Hyjet IV-A	1
Antifreeze type D	2	Diesel	1
Benzaldehyde	1	<i>Edible Oil</i>	1
<i>Benzene</i>	1	<i>Essential oils</i>	1
Benzoic acid	1	Fuel oil	1
Brake fluid ATE SL DOT4	2	Gear oil	1
Butanol	1		
Chlorinated hydrocarbons	1		
Color paint	1		
Coolant 25 R	1		
Cyclohexane	1		
Di-2-ethylhexylphenylphosphate	1		
Diallylphthalic	1		
Dimethyl formamide	3		
Dioxane	2		
<i>Disinfectant</i>	1		
Ethanol	2		
Ethyl acetate	1		
Fat alcohols	1		
Formaldehyde	1		
<i>Gas condensate</i>	1		
Glue	1		
Glycerine	1		
Heptane	1		
Hexane	1		
Isooctane	1		
Isopropanol	1		
Latex	1		

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Gasoline / Oil / Wax		Judgement	Refrigerants		Judgement
Hydraulic oil		1	R124	1-Chloro-1,2,2,2-tetrafluoroethane	1
<i>Kern oil</i>		1	R125	Pentafluoroethane	1
<i>Milk fats</i>		1	R116	Hexafluoroethane	1
Mineral oil		1	R133A	1-Chloro-2,2,2-trifluoroethane	1
Normal benzene unleaded EN228		1	R134A	Tetrafluoroethane	1
Oil		1	R142B	1-Chloro-1,1-difluoroethane	1
<i>Oil of bitter almond</i>		1	R143A	1,1,1-Trifluoroethane	1
<i>Palm Oil</i>		1	R152A	1,1-Difluoroethane	1
Paraffin oil		1	R161	Ethylfluoride	1
Rapeoilmethylester		1	R170	C ₂ H ₆	1
Skydrol MCS-2361		1	R218	Octafluoropropane	1
Skyrol B500-4		1	R227	Heptafluoropropane	1
<i>Spirits of turpentine</i>		1	R290	Propane	1
Super benzene leaded DIN 51600		1	RC318	Octafluorocyclobutane	1
Super benzene unleaded EN228		1	R401A	CHClF ₃ 53%	1
Wax		1		C ₂ H ₄ F ₄ 13%	1
			R402A	CHClF ₂ (R22) 38%	1
				C ₂ HF ₅ (R125) 60%	1
				C ₃ H ₈ (R290) 2%	1
			R403B	Mixture	1
			R404A	C ₂ HF ₅ 44%	1
				F ₂ CH-CF ₃ 4%	1
				H ₃ C-CF ₃ 52%	1
			R407C	CH ₂ F ₂ (R32) 23%	1
				F ₂ HC-CF ₃ (R125) 25%	1
				FH ₂ C-CF ₃ 53%	1
			R408A	CH ₂ F ₂ 45-49%	1
				C ₂ HF ₅ 5-9%	1
				H ₃ C-CF ₃ 45-47%	1
			R409A	CH ₂ F ₂ 58-62%	1
				CHClF-CF ₃ 23-27%	1
				H ₃ C-CClF ₂ 14-16%	1
			R410A	Mixture	1
			R413A	Mixture	1
			R500	Dichlorodifluoromethane and 1,1-Difluoroethane, azeotropes Mixture with ≈ 74 % Dichlorodifluoromethane	1
R11	Trichlorofluoromethane	1			
R12	Dichlorodifluoromethane	1			
R12B1	Bromchlorodifluoromethane	1			
R13	Trifluorochloromethane	1			
R13B1	Bromtrifluoromethane	1			
R14	Tetrafluoromethane	1			
R21	Dichloromonofluoromethane	1			
R22	Chlorodifluoromethane	1			
R23	Trifluoromethane	1			
R32	Difluoromethane	1			
R40	Chloromethane	1			
R40B1	Bromomethane	1			
R41	Methylfluoride	2			
R114	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1			
R115	Chloropentafluoroethane	1			
R116	Hexafluoroethane	1			
R123	C ₂ HCl ₂ F ₃	1			

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Refrigerants		Judgement	Resistance to gas		Judgement
R502	Chlorodifluoromethane and Chloropentafluoroethane, Mixture with a constant evaporation point, with \approx 49 % Chlorodifluoromethane	1	Hydrogen		1
			Hydrogen bromide		2
			Hydrogen chloride		3
			<i>Hydrogen sulfide</i>		1
			Methane		1
R503	Chlorotrifluoromethane and Trifluoromethane, azeotropic Mixture, with \approx 60 % Chlorotrifluoromethane	1	Natural gas		1
			Nitrogen		1
			Ozone (150g/m ³)		1
R507	C ₂ HF ₅ 50% CH ₃ -CF ₃ 50%	1	Propane		1
			Propylene		1
R600	n-Butane	1	Sulphur dioxide		1
R600A	Iso-Butane	1	Water steam		1
R717	Ammonia	1			
R1132A	1,1-Difluoroethylene	1			
R1150	C ₂ H ₄	1			
R1216	Hexafluoropropylene	1			
R1270	C ₃ H ₆	1			
R1318	Octafluorobut-2-ene	1			
HFC245	1,1,1,3,3 Pentafluoropropan	1			

Resistance to gas

	Judgement
Acetylene	1
Air	1
Argon	1
Butane	1
Carbon dioxide	1
<i>Carbon monoxide</i>	1
Chlorine	3
Ethane	1
Ethylene	1
Helium	1

Judgement criteria

- 1 very good resistance
- 2 good to satisfying resistance
- 3 bad resistance