

ARAGON FIT

CHEMICAL RESISTANCE OF MATERERIALS



●●● **Resistant**

Negligible, reversible or no changes in mass and dimensions.

●● **Limited resistance**

Considerable dimensional changes, and possibly irreversible changes in properties after prolonged contact. Consultation advisable before use.

● **Not resistant**

May be used under certain conditions (brief contact) / soluble or attacked after brief contact

- **No test carried out/no information currently present**

Chemical resistance of the materials	Poly-carbo-nate (PC)	PMMA (PMMA)	Poly-amide (CR)**
Acetaldehyde 40% aq. soln.	-	-	●●
Acetamide 50% aq. soln.	-	-	●●●
Acetic acid 40% aq. soln.	-	-	●
Acetic acid to 30%	●●	●	-
Acetic acid 10% aq. soln.	-	-	●●
Acetic acid to 5%	●●●	●●	●●●
Acetic acid technically pure	-	-	●
Acetic anhydride technically pure	-	-	●
Acetone	●	●	●
Alcohol to 30%	●●●	●●●	-
Aliphatic hydrocarbons	●●●	●●	-
Allyl alcohol technically pure	-	-	●
Aluminium salts*, aq. soln.	-	-	●●●
Alums*, aq. soln.	-	-	●●●
Ammonia 10% aq. soln.	-	-	●●●
Ammonia 25%	●	●●●	-
Ammonia*, gaseous	-	-	●●●
Ammonium chloride 10% aq. soln.	-	-	●●●
Ammonium salts*, technically pure	-	-	●●
Amyl acetate technically pure	-	-	●●●
Amyl alcohol technically pure	-	-	●
Aniline	●	●	●
Anisole technically pure	-	-	●●●
Aqua regia technically pure	-	-	●
Aromatic hydrocarbons	●	●	-
Aspirin technically pure	-	-	●●●
Attar of roses (Rose oil) technically pure	-	-	●
Barium salts*, aq. soln.	-	-	●●●
Battery acid 36% aq. soln.	-	-	●●
Battery acids	●●●	●●●	●●
Beer	●●●	●●●	●●●
Benzaldehyde technically pure	-	-	●
Benzoic acid*, aq. soln.	-	-	●●
Benzene technically pure	-	-	●●●
Benzine (white spirit)	●●●	●●●	-
Benzol	●	●	-
Benzyl alcohol technically pure	-	-	●
Bitumen commercial grade	-	-	●●●
Blood	●●●	●●●	-
Borax*, aq. soln.	-	-	●●●

Chemical resistance of the materials	Poly-carbo-nate (PC)	PMMA (PMMA)	Poly-amide (CR)**
Boric acid 10% aq. soln.	-	-	●●
Brake Fluid (DOT 4)	-	-	●●●
Brandy	-	-	●●
Bromic acid	●	●	-
Bromine*	-	-	●
Butane technically pure	-	-	●●●
Butanol technically pure	-	-	●
Butter commercial grade	-	-	●●●
Butter milk commercial grade	-	-	●●●
Butyl acetate technically pure	-	-	●●●
Butyric acid technically pure	-	-	●●
Butylene glycol technically pure	-	-	●
Calcium chloride 10% aq. soln.	-	-	●●●
Calcium chloride 20% alcoholic soln.	-	-	●
Camphor technically pure	-	-	●●●
Carbon dioxide	●●●	●●●	-
Carbon disulphide 100%	-	-	●●●
Carbon monoxide	●●●	●●●	-
Carbon tetrachloride	●	●	●●●
Caustic soda 40% aq. soln.	-	-	●●●
Chlorinated lime*, aq. soln.	-	-	●
Chlorine technically pure	-	-	●
Chlorine gas < 5%, gaseous	-	-	●
Chlorine water < 5%, aq. soln.	-	-	●
Chloroacetic acid 10%, technically pure	-	-	●
Chlorobenzene technically pure	-	-	●●
Chlorobrommethane technically pure	-	-	●
Chloroform	●	●	●
Chlorophenole	●	●	-
Chromic acid 10% aq. soln.	-	-	●
Chromic acid 1% aq. soln.	-	-	●
Chromic/sulphuric acid*, aq. soln.	-	-	●
Chromium salts*, aq. soln.	-	-	●●
Coca-Cola commercial grade	-	-	●●●
Cocoa commercial grade	-	-	●●●
Coffee commercial grade	-	-	●●●
Copper salts 10% aq. soln.	-	-	●●
Cresol technically pure	-	-	●
Concentrated alcohol	●●●	●	-
Cyclohexane technically pure	-	-	●●●

ARAGON FIT CHEMICAL RESISTANCE

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Cyclohexanol technically pure	-	-	●	Hydrogen sulphide	●●●	●●●	-
Cyclohexanone technically pure	-	-	●●●	Ink commercial grade	-	-	●●●
Decalin technically pure	-	-	●●●	Iodine tincture*, alcoholic soln.	-	-	●
Descaling agent (amido sulphuric acid)	-	-	●●●	Iron salts 20% aq. soln. neut.	-	-	●●
Dibutyl phthalate technically pure	-	-	-	Iron salts 20% aq. soln. acid.	-	-	●
Diesel oil, crude oil	●●	●●●	●●●	Isooctane technically pure	-	-	●●●
Diethyl ether technically pure	-	-	●●●	Isopropyl alcohol technically pure	-	-	●
Dimethyl formamide technically pure	-	-	●	Lysol	●	●	-
Diocetyl phthalate technically pure	-	-	●●●	Ketones	●	●	-
Dioxane	●	●	●●	Lactic acid 90% aq. soln.	-	-	●
Edible fats and oils commercial grade	-	-	●●●	Lactic acid 50% aq. soln.	-	-	●●
Ethanol technically pure	-	-	●	Lactic acid 5% aq. soln.	-	-	●●●
Ether	●	●	●●●	Lanolin commercial grade	-	-	●●●
Ethyl acetate (ester)	●	●	●●●	Lead salts technically pure	-	-	●●●
Ethylene chloride technically pure	-	-	●	Lemon juice*, commercial grade	-	-	●●●
Ethylene glycol / water 1:1 (coolant)	-	-	●●●	Linseed oil commercial grade	-	-	●●●
FAM B technically pure	-	-	●	Liqueurs commercial grade	-	-	●●
Formaldehyde (Formalin) 40% aq. soln.	-	-	●●	Lubrications oils, greases, soaps commercial grade	-	-	●●●
Formamide technically pure	-	-	●●	Magnesium hydroxide 10% aq. soln.	-	-	●●●
Formic Acid	-	-	●●	Magnesium salts 10% aq. soln.	-	-	●●●
Formic Acid 10% aq. soln.	-	-	●●	Mercury technically pure	-	-	●●●
Formic Acid 40% aq. soln.	-	-	●	Mercury salts*, aq. soln., neutral	-	-	●●
Formic Acid 85% aq. soln.	-	-	●	Methanol	●	●	●
Freon partially halogenized commercial grade	-	-	●	Lime milk	●●	●●●	-
Freon fully halogenized commercial grade	-	-	●●●	Metallic salts and there aqueous solutions	●●●	●●●	-
Freon 12 technically pure	-	-	●●●	Methylene chloride	●	●	●
Freon 22 technically pure	-	-	●	Methylethyl ketone technically pure	-	-	●
Fruit juices commercial grade	-	-	●●●	Milk commercial grade	-	-	●●●
Fuel C free from lead technically pure	-	-	●●●	Mineral oils commercial grade	-	-	●●●
Fuel oil technically pure	-	-	●●●	Mineral Oil (IRM903)	-	-	●●●
Furfural technically pure	-	-	●●	Motor fuels commercial grade	-	-	●●●
Glycerine	●●	●●●	●●●	Naphthalene technically pure	-	-	●●●
Glycol	●●●	●●●	●●●	Nickel salts*, aq. soln.	-	-	●●●
Glisanthin	●●●	●●●	-	Nitric acid to 10%	-	●●●	●
Grease (mineral oil based & silicon oil based)	-	-	●●●	Nitric acid 10 to 20%	●●	●●	●
Grease (synthetic)	-	-	●●●	Nitric acid from 20%	●	●	●
Heptane technically pure	-	-	●●●	Nitrobenzene technically pure	-	-	●●
Hexane technically pure	-	-	●●●	Nitromethane technically pure	-	-	●●●
Hydraulic fluid commercial grade	-	-	●●●	N-Hexane	-	-	●●●
Hydrochloric acid 1% aq. soln.	-	-	●●●	Octane technically pure	-	-	●●●
Hydrochloric acid 10% aq. soln.	-	-	●●	Oil (No. 3 ASTM) commercial grade	-	-	●●●
Hydrochloric acid to 20%	●●●	●●●	●●●	Oil of lavender commercial grade	-	-	●
Hydrochloric acid from 20%	●●	●●●	-	Oil of pine needle technically pure	-	-	●●●
Hydrogen fluoride 40% aq. soln.	-	-	●	Oil of turpentine technically pure	-	-	●●●
Hydrogen peroxide 2% aq. soln.	-	-	●●	Oleic acid technically pure	-	-	●●●
Hydrogen peroxide 10% aq. soln.	-	-	●●	Oleum technically pure	-	-	●
Hydrogen peroxide 30% aq. soln.	-	-	●	Olive oil commercial grade	-	-	●●●
Hydrogen peroxide to 40%	●●	●	-	Oxalic acid 10% aq. soln.	-	-	●●●
Hydrogen peroxide above 40%	●●	●●	-	Ozone*, gaseous	-	-	●
Hydrogen sulphide <5%, gaseous	-	-	●●●	Ozone < 1ppm, gaseous	-	-	●●●

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Paraffin oil technically pure	-	-	●●●	Sodium nitrate 10% aq. soln.	-	-	●●●
Peanut oil commercial grade	-	-	●●●	Sodium nitrite 5% aq. soln.	-	-	●
Peppermint oil technically pure	-	-	●●	Sodium perborate 5% aq. soln.	-	-	●●
Perchloroethylene technically pure	-	-	●●●	Sodium phosphate 10% aq. soln.	-	-	●●●
Petrol (unleaded, Esso) commercial grade	-	-	●●●	Sodium sulphate 10% aq. soln.	-	-	●●●
Petroleum technically pure	-	-	●●●	Sodium sulphide 10% aq. soln.	-	-	●●●
Petroleum ether	●●	●●●	●●●	Sodium sulphite 10% aq. soln.	-	-	●●●
Phenol	●	●	●	Sodium thiosulphite 10% aq. soln.	-	-	●●●
Phenylethyl alcohol technically pure	-	-	●	Soya oil commercial grade	-	-	●●●
Phosphoric acid 10% aq. soln.	-	-	●●	Starch*, aq. soln.	-	-	●●●
Phosphoric acid 50% aq. soln.	-	-	●	Styrene technically pure	-	-	●●●
Plasticizers (phthalates, phosphates) commercial grade	-	-	●●●	Sugar*, aq. soln.	-	-	●●●
Potash*, aq. soln.	-	-	●●●	Sulphur technically pure	-	-	●●●
Potassium bromide 10% aq. soln.	-	-	●●●	Sulphur dioxide <5 %	-	-	●●
Potassium chlorate 7% aq. soln.	-	-	●●	Sulphuric acid 2% aq. soln.	-	-	●●●
Potassium Hydroxide (50%)	-	-	●●●	Sulphuric acid 10% aq. soln.	-	-	●●
Potassium iodide 10% aq. soln.	-	-	●●●	Sulphuric acid 36% aq. soln.	-	-	●●
Potassium nitrate 10% aq. soln.	-	-	●●●	Sulphuric acid to 50%	●●	●●●	-
Potassium permanganate 1% aq. soln.	-	-	●	Sulphuric acid to 70%	●●	●●	-
Potassium sulphate 10% aq. soln.	-	-	●●●	Sulphuric acid from 70%	●	●	-
Propane technically pure	-	-	●●●	Sulphuric acid technically pure	-	-	●
Propanol technically pure	-	-	●	Sulphurous acid to 5%	●	●●	-
Pyridine	●	●	●●	Synthetic washing solution	●●	●●●	-
Pyrocatechol 6% aq. soln.	-	-	●	Table salt*, aq. soln.	-	-	●●●
Resorcinol technically pure	-	-	●	Tallow commercial grade	-	-	●●●
Resorcinol*, alcoholic soln.	-	-	●	Tar technically pure	-	-	●●●
Rum commercial grade	-	-	●●	Tartaric acid technically pure	-	-	●●●
Salicylic acid technically pure	-	-	●●●	Tea commercial grade	-	-	●●●
Saline solution	●●●	●●●	-	Tetrahydrofuran technically pure	-	-	●●
Seawater	●●●	●●●	-	Tetralin technically pure	-	-	●●●
Silicone oils technically pure	-	-	●●●	Thionyl chloride technically pure	-	-	●
Silver salts*, aq. soln.	-	-	●●●	Toluene technically pure	-	-	●●●
Soap solution 10% aq. soln.	-	-	●●●	Trichloroethylene technically pure	-	-	●●
Soap solution 10% aq. soln.	●●●	●●●	-	Turpentine oil	●●	●●	-
Soda	●●●	●●●	-	Urea 20% aq. soln.	-	-	●●
Sodium bicarbonate*, aq. soln.	-	-	●●●	Vaseline commercial grade	-	-	●●●
Sodium bisulphite 10% aq. soln.	-	-	●●●	Vinegar commercial grade	-	-	●●●
Sodium bromide 10% aq. soln.	-	-	●●●	Water to 60°	●●●	●●●	●●●
Sodium carbonate 10% aq. soln.	-	-	●●●	Water glass*, aq. soln.	-	-	●●●
Sodium chloride*, aq. soln.	-	-	●●●	Wax commercial grade	-	-	●●●
Sodium chlorite 5% aq. soln.	-	-	●	Wine commercial grade	-	-	●●●
Sodium hydroxide 10%	●	●●●	-	Xylene technically pure	-	-	●●●
Sodium hydroxide 2%	●	●●●	-	Xylol	●	●	-
Sodium hydroxide 40% aq. soln.	-	-	●●●	Zinc chloride 10% aq. soln.	-	-	●●●
Sodium hypochlorite 5% aq. soln.	-	-	●				

* signifies data valid for all concentrations

** The chemical resistance was established by exposing test samples, to each of the chemicals for a period of 12 months at room temperature.

ARAGON FIT

CHEMICAL RESISTANCE

●●● Resistant

Negligible, reversible or no changes in mass and dimensions.

●● Limited resistance

Considerable dimensional changes, and possibly irreversible changes in properties after prolonged contact. Consultation advisable before use.

● Not resistant

May be used under certain conditions (brief contact) / soluble or attacked after brief contact

Cleaning agents, disinfectants and coolants	Polycarbonate (PC TX)	PMMA (PMMA TX)	Polyamide (CR TX)
ACMOSIL 37-5504	●	●●●	●●●
Coolants QUAKERCOOL 7200 HBF	●	●●	●●●
Coolants QUAKERCOOL 7200 BFF	●	●●	●●●
Coolants QUAKERCOOL 7100 HD	●	●●	●●●
GORAPUR LI 2920-40 E	●	●	●●●
MV Quartacid plus from Schülke	●●●	●●●	●●●
MV Quartasept plus from Schülke o		●●●	●●●
MV perform classic alcohol IPA from Schülke	●●●	●●●	●●●
P3-topactive OKT0 (disinfectant; acid solution with peroxide) from ECOLAB		●●●	●●●
P3-topax 66 (cleaner/disinfectant; alkaline with chlorine) from ECOLAB	●	●●●	●●●
P3-topactive 200 (cleaner, alkaline with tenside) from ECOLAB	●●	●●●	●●●
P3-topactive 500 (cleaner, acid solution with tenside) from ECOLAB	●●	●●●	●●●
P3-topax 990 (neutral disinfectant; basis alkylaminacetat) from ECOLAB	●●	●●●	●●●
PU-5408H, PU-1706M, PU-5421H, PU-4111M from Chem-Trend	●	●	●●●
PU-HS-Antiblock 6291/21, A-PU-Antiblock 6/428-5 from Bomix	●	●	●●●

Suitable materials and temperature ranges	Polycarbonate (PC)	PMMA (PMMA)	Polyamide (CR)
Resistance to ageing of the material	very good	good	good
Flammability according to UL94 (ISO 60695)	not applicable	not applicable	not applicable
Food industry suitability via luminaire series certification (HACCP, IFS Version 6 and/or BRC Global Standard Food Version 7 certified)	yes	yes	yes
Chemical resistance (ECOLAB certificate)	no	no	no
Glow wire test	850°C	650°C	850°C
Halogen-free	yes	yes	yes
Suitability for use in agriculture (livestock farming – DLG cert.)	no	suitable, not certified yet	suitable, not certified yet
Impact resistance (IK rating)	IK08	IK03	IK07
Silicone-free	yes*	yes*	yes*

Disclaimer: The above overview does not include all available variants, e.g. including through-wiring or emergency lighting options available. Detailed information can therefore be found in the respective product data sheet.

General material statements

Polycarbonate (PC)	PMMA (PMMA)	Polyamide (CR)
The most mechanically robust luminaire in the portfolio	Highly transparent	Highly transparent
UV-stable and high impact resistant	Resistant against impacts, weather and UV-radiation weather and UV-radiation	High impact resistance and durability UV stable
Chemical resistant against alcohol, ethanol or hydrogen peroxide	Minimised risk of tension cracking	No tension cracks
	Chemical resistant against a variety of acids, alkalis, halogens, mineral oils, fats and oils	Highly translucent luminaire is also able to cope with alkalis, inorganic salts, solvents, fuels, fats and oils

Disclaimer: This information sheet is intended for general guidance and not as an agreement on quality or assurance of properties or warranties. Information from our material suppliers, our conscientious examination of publicly available documents and our experience in various industrial applications form the basis of the information available here regarding the chemical resistance of materials. The concentration of individual materials, temperature, interaction of various chemicals and other environmental factors can further impair the resistance of elastomers, plastics and metals. Testing the suitability of the selected luminaire solution for a specific application requires individual case consideration and further observation and is therefore the responsibility of the customer.