

CHEMICAL RESISTANCE

CHEMICAL RESISTANCE IN LUMINAIRE CONSTRUCTION

This overview provides a non-exhaustive list of chemical resistance in luminaire construction, intended as a general guide for specification purposes.

Chemical/Compound	Polycarbonate	Acrylic	Aluminium	PMMA
Acetic Acid 10%	✓	✓	✓	✓
Acetone	✗	✗	✓	✗
Alcoholic Beverages	✓	✓	✓	⚠
Aluminium Sulphate	✓	✓	✓	✓
Ammonia 5%	✗	✓	✓	✓
Aniline	✗	⚠	✓	✗
Arsenic Acid 20%	✓	✓	✓	✓
Benzene	✗	✗	✓	✗
Benzyl Alcohol	✗	✗	⚠	✗
Bromine	✗	✗	✗	✗
Calcium Chloride/Nitrate	✓	✓	✓	✓
Carbon Tetrachloride	✗	✗	✓	✗
Carbonic Acid	✗	✗	✓	✗
Caustic Potash 5%	✗	✓	✗	✓
Cement	✓	✓	✓	✓
Hydrochloric Acid 1-5%	✓	✓	✗	✓
Chlorine Liquids (<i>Vapours</i>)	✗	✗	✗	✗
Chloroform	✗	✗	✓	✗
Chromic Acid	⚠	⚠	✗	⚠
Citric Acid 20%	✓	✓	✓	✓
Copper Sulphate	✓	✓	✗	✓
Diesel-Naphta Oil	⚠	✓	✓	✓
Ethyl Alcohol 30%	✓	✓	✓	⚠
Ethyl Chloride	✗	✗	⚠	✗
Ethyl Ether	✗	✗	✓	✗
Food Oils/Fats	✗	✓	✓	✓

Key: | ✓ High Resistance | ⚠ Moderate Resistance | ✗ Minimal Resistance

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Formic Acid 10%	✓	✓	✗	✓
Glycerine	✓	✓	✓	✓
Hexane	✓	✓	✓	✓
Iodine	✗	✗	⚠	✓
Iron Chloride	✓	✓	⚠	✓
Isopropyl Alcohol	⚠	⚠	✓	⚠
Lubricating Oil	✓	✓	✓	✓
Magnesium Sulphate	✓	✓	✓	✓
Methanol	✗	✗	✓	⚠
Mineral Oils	✓	✓	✓	✓
Nitric Acid 20%	⚠	⚠	✗	✓
Oxygen	✓	✓	✓	✓
Ozone	✓	✓	✓	✓
Perchloric Acid 10%	✓	✓	✗	✓
Petrol	✗	✓	✓	✓
Phenol	✗	✗	✓	✗
Potassium Bromide	✓	✓	⚠	✓
Potassium Nitrate	✓	✓	✓	✓
Potassium Permanganate	✓	✓	✓	✓
Silicon Oils	✓	⚠	✓	⚠
Soda Bleach 15%	✗	✓	⚠	✓
Sodium Chloride	✓	✓	⚠	✓
Sodium Hydroxide 5%	✗	✓	✗	✓
Sodium Sulphate	✓	✓	✓	✓
Sugar	✓	✓	✓	✓
Sulphur	✓	✓	✓	✓
Sulphuric Acid 30%	✓	✓	✗	✓
Toluene	✗	✗	✓	✗
Trichloroethylene	✗	✗	✓	✗
Zinc Sulphate	✓	✓	⚠	✓

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