

# CHEMICAL RESISTANCE OF LUMINAIRE MATERIALS

07/11/2003

Chemical	Butyl Rubber	Aluminium LM6	Glass-mat Reinforced Polyester	Acrylic	Polycarbonate	Stainless Steel 304	Stainless Steel 316	Glass	Vitreous Enamel / M.S.
Accumulator Acid	ND							ND	
Acetic Acid up to 10%									
Acetic Acid Anhydride									
Acetone									
Alcohol up to 30%									
Alcohol concentrate									
Ammonia Anhydrous									
Ammonia Aqueous									
Aniline									
Benzine / Benzole									
Calcium Chloride		ND	ND	ND				ND	ND
Carbon Dioxide								ND	ND
Carbon Monoxide	ND							ND	ND
Carbon Tetrachloride									
Caustic Soda 2%									
Caustic Soda 10%									
Chlorine dry									
Chlorine wet									
Chromic Acid									
Chloroform									
Common salt / Sodium Chloride									
Crude Oil	ND								
Diesel Oil	ND								
Dioxane	ND								
Ether									
Ethyl Acetate	ND							ND	ND
* Fluorine dry	ND								
* Fluorine wet	ND					ND	ND		
* Glycerine									
Glycol									
Hydrobromic Acid 50%							G		
Hydrochloric Acid 10%									
Hydrochloric Acid 30%									
Hydrochloric Acid 96%									
Hydrogen Peroxide 30%									
Hydrogen Peroxide over 80%									
* Hydrogen Sulphide							6		
* Hydrogen Acid 40%									
* Hydrogen Acid 70%									
Lysol	ND								
Maleic Acid									
Metal Salts (Iron-, Zinc Oxide) and their aqueous solutions									
Methanol	60								
Methanol Aqueous	ND*	*							
Methanol Chloride									
Milk of Lime								ND	ND
Nitric Acid 10%	23								
Nitric Acid 50%		1							
Nitric Acid concentrate		1							
Nitric Acid fuming									
Ketones	ND								
Phosphoric Acid 20%									
Phosphoric Acid 50%									
Phosphoric Acid concentrate									
Paraffins									

Chemical	Butyl Rubber	Aluminium LM6	Glass-mat Reinforced Polyester	Acrylic	Polycarbonate	Stainless Steel 304	Stainless Steel 316	Glass	Vitreous Enamel / M.S.
Petrol									
Petroleum Ether									
Phenol up to 50%	80*								
Pyridine	*								
Sea Water 80%									
Soap Suds									
Soda Ash / Sodium Carbonate									
Sulphuric Acid 10% - <50									
Sulphuric Acid 50%									
Sulphuric Acid concentrate									
Sulphuric Acid fuming									
Sulphur Dioxide Dry / Wet		2				2			
Sulphurous Acid 5%								ND	ND
Synthetic Detergent	ND								
Tolliene	ND	ND				ND	ND		
Trichloethylene	*								
Turpentine	ND								
Water up to 70%									
Xylene	ND								

Ambient temperature 60°C

## NOTES:

Aqueous - with water content in %  
 Anhydrous - free of water  
 Anhydride - crystallised

## Chloride Hydrocarbons

Carbon Tetrachloride  
 Trichloethylene  
 Methylene Chloride

## Hydrocarbons

Paraffins  
 Ethyl Acetate  
 Pyridine

## Aromatic Hydrocarbons

Aniline  
 Benzene  
 Benzene derivates (extractions)

□ Mild attack - aqueous 1% & 5% at ambient temperature

□ Water - accelerates corrosion

□ At 40°C - Butyl Rubber is resistant

□ At 70°C - Butyl Rubber is not resistant

\* Coat glass with "Clear Shield"

## ND No Data

1. Varies with agitation and presence of Nitrogen Oxide

2. Alum/SS304: Not resistant when Sulphur Dioxide is wet

Industrial luminaires are manufactured in a variety of materials, each specifically selected as being the most resistant to chemical corrosion & other related elements. The resistance tables give a general overview regarding the resistance to chemical attack on luminaire materials and is applicable for ambient temperatures of up to 60%.

<span style="color: red;">■</span>	Resistant
<span style="color: yellow;">■</span>	Resistant with limits
<span style="color: green;">■</span>	Not resistant
<span style="color: blue;">■</span>	Resistant when saturated, resistant within limits when unsaturated