

# Chemical Comparisons

## Chemical Resistance

It is well documented that Clipsal's standard grey products are ideal for most applications. For those environments where harsh chemicals are used that require special chemical resistant properties, Clipsal offers as an option of two product ranges:

- 1) Chemical Resistant Orange (RO)/  
Chemical Resistant White (RW) and
- 2) Chemical Resistant Grey (CG)

These two ranges have been developed by leading plastic material manufacturers and offer greater resistance to chemical attack than common plastic materials with minimal reduction in impact strength.

To make selection of the correct product easy, we provide the following information and table as a guide on page 11.

Chemical Resistant Orange (RO)/Chemical Resistant White (RW) offers resistance to a wide range of chemical types. It is ideal for corrosive and industrial chemicals, animal fats, oils, solvents and lubricants.

This material has excellent UV resistance for use outside.

Chemical Resistant Grey (CG) is ideal in food processing and medical areas exposed to strong cleaning Alkalis (Sodium Hydroxide or Caustic Soda) are used. It should be noted that the material used in this product is not recommended for outside use due to low UV resistance.



## Temperature Resistance

The temperature range of the 56 Series products are limited by two aspects;

- 1) the material used in mouldings and
- 2) the operating temperature of the electrical components.

The material type limits the use of the standard product to -25°C to +75°C.

For temperatures outside of these limits, and for information on the heat generated by the electrical components, please contact your Clipsal rep.



56C310,RW



56C310,CG

## Plastic Comparison Chart

Applications	Standard Grey & Electric Orange	Resistant Orange & White	Resistant Dark Grey
Outdoor use - mechanical properties	A	A	D
Outdoor use - colour properties	B	B	D
Indoor use	A	A	A
Saltwater environments	A	A	D
Thermal properties	A	A	B
Lightweight	A	A	A
High rigidity	B	B	C
Impact resistant	A	B	C

This table should be used as a guide only. Any end user should test to evaluate the suitability of any chemical with any plastic.  
 A - EXCELLENT Recommended; no adverse effects after extended exposure.  
 B - GOOD Acceptable, minimal loss of mechanical properties after long periods of exposure.  
 C - FAIR Marginal acceptability; loss of mechanical properties after long periods of exposure.  
 D - POOR Not recommended for use.



56C432,RO

# Chemical Comparisons

Product Type (colour)	All Mounting Enclosures (ie Back Box)	Grey Transparent Covers and Plugs	Resistant Orange (RO) Resistant White (RW) Covers and Plugs	Dark Grey (CG) Covers Limited Range
<b>Acids</b>				
<b>Weak Solutions</b>				
Hydrochloric 10%	A	A	A	A
Nitric 10%	A	A	A	B
Concentrate				
Sulphuric 100%	A	D	D	D
<b>Alkalis</b>				
<b>Weak Solutions</b>				
Sodium Hydroxide 10% (Caustic Soda)	A	D	B	A
<b>Concentrate</b>				
Potassium Hydroxide 100%	A-B	D	D	A
<b>Automotive</b>				
Petroleum	A	D	A	D
Lubricating Oils		D	A	C
Hydraulic Oil		D	A	C
<b>Solvents</b>				
<b>Aliphatic Hydrocarbons (Alkanes)</b>				
Methane	B	A	A	
Propane	A	A	A	
<b>Alcohols</b>				
Ethylene Glycol	A	A	A	
Glycerol (Glycerin)	A	C	B	A
Methyl Alcohol (Methanol)	A	D	B	D
Ethyl Alcohol (Ethanol)	A	A	A	D
<b>Amines</b>				
Aniline	D	D	D	
<b>Aromatic Hydrocarbons</b>				
Methyl Benzene	D	D	B	D
Xylene	D	D	B	D
<b>Ethers</b>				
Dimethyl Ethyl	A	A	A	
<b>Ketones</b>				
Acetone	A	D	C	D
Acetophenone	D	D	C	D
Ethyl Methyl Ketone	D	D	C	D
<b>Miscellaneous</b>				
Detergent	A	A	A	D
<b>Inorganic Salts</b>				
Magnesium Sulphate	A	A	A	
<b>Oxidising Agents</b>				
<b>Weak Solution</b>				
Sodium Hypochlorite 5%	A	A	A	A
<b>Strong Solution</b>				
Hydrogen Peroxide 30%	A	A	A	A
<b>Water</b>				
Ambient	A	A	A	A
Hot >60°C	C	A	B	C
Steam	D	D	D	D

This table should be used as a guide only. Any end user should test to evaluate the suitability of any chemical with any plastic.

A - EXCELLENT Recommended; no adverse effects after extended exposure.  
C - FAIR Marginal acceptability; loss of mechanical properties after long periods of exposure.

B - GOOD Acceptable; minimal loss of mechanical properties after long periods of exposure.  
D - POOR Not recommended for use.