

## MEG (MONOETHYLENE GLYCOL)

### FORMULA

$C_2H_6O_2$

### DESCRIPTION

Monoethylene glycol (Ethylene glycol) is a colorless, virtually odorless and slightly viscous liquid. It is miscible with water, alcohols, aldehydes and many organic compounds. MEG will not dissolve rubber, cellulose acetate or heavy vegetable and petroleum oils. MEG has a low volatility and it is 50% more hygroscopic than glycerol at room temperature.

### PROPERTIES

Parameter	Unit	Quantity
Molecular weight	g/mol	62.08
Boiling point	°C	197
Freezing point	°C	-13
Viscosity	cp (at 20°C)	20
Specific heat	at 0°C (cal/gm/°C)	0.543
CAS number	107-21-1	
IUPAC name	Ethane-1, 2-diol	

### MEG Bulk shipment, Fiber grade

Parameter	Unit	Quantity	Test Method
Purity	wt%	99.9 min	ASTM E-2409
Appearance	visual	clear	ASTM E-2680
Specific gravity	at 20 °C/20 °C	1.1153-1.1156	ASTM D-4052
Distillation range	°C (at 760 mmHg)	196-199	ASTM D-1078
Water	wt%	0.05 max.	ASTM E-1064
DEG Content	wt%	0.05 max.	ASTM D-2409
Acidity (as acetic acid)	wt%	0.001 max.	ASTM D-1613
Color	APHA	5 max.	ASTM D-1209
Iron (Fe)	ppm, wt	0.10 max.	ASTM E-394

#### DISCLAIMER:

The information contained in this datasheet is to the best of our knowledge correct and up to date. Under well-defined conditions. Its accuracy or suitability under the actual conditions of any independent use is not guaranteed and must be determined by the user. All advice given about the product is given in good faith. Since as we have no control over conditions of substrate, manufacturer and seller cannot accept any liability in connection with the use of the product relative to coverage, performance, injury, or damage, unless we specify in writing to do so. The information in this data sheet is subject to change without prior notice and it is the user responsibility to ensure it is current. For further information and advice please contact RAR RESIN Technical Service Department.

Parameter	Unit	Quantity	Test Method
UN Transmittance:	-	-	-
Wave length % 220	nm	70 min.	ASTM E-2193
Wave length % 275	nm	90 min.	ASTM E-2193
Wave length % 350	nm	98 min.	ASTM E-2193
Aldehyde (as acetaldehyde)	ppm, wt	10 max.	ASTM E-2313
Chloride	ppm, wt	0.5 max.	ASTM E-2469
Ash	wt%	0.001 max.	ASTM D-482
PH	at 20°C	6.5-7.5	ASTM D-1287

### HAZARDS AND SAFETY

MEG is not considered to be a health hazard when handled under normal industry conditions. It has a relatively low degree of acute and chronic oral toxicity and the average fatal dose is 100ml for adults. It is only slightly irritating to the eyes and skin.

Parameter	Unit	Quantity
UN or ID NO.		1142

### APPLICATIONS

MEG is mainly used in the production of polyester, polyethylene terephthalate (PET) and antifreeze solutions. It is an important dehydrating agent, good humectant and industrial solvent.

### STORAGE AND HANDLING

MEG is stored and shipped in stainless steel tanks (or in ordinary steel drums/tanks with epoxy resin coating) to avoid iron contamination. Where contamination by iron is desirable, metal in contact with the glycol should be aluminum or stainless steel (type 304/316). If contamination by halides is undesirable, the packing of the valves and the gaskets should be made of asbestos or other halidefree materials. Also, an inert gas (nitrogen) blanketing should be maintained to avoid oxygen contact which is a main course of U.V. deterioration.

### PACKAGING

MEG is loaded after through cleaning and drying of tanks and nitrogen purging to ensure that it remains chloride, iron, and ash-free. Shipments are made in tanks, tankers of varying capacities and lined steel drums (220 liters). Precautionary labeling: "Ethylene Glycol. For Industrial Use Only. Harmful or Fatal if Swallowed".

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