

**CARBITOL™ Solvent, Low Gravity****Synonyms** Diethylene glycol monoethyl ether.**Sustainability Attribute:****Chemical Formula** $C_2H_5(OCH_2CH_2)_2OH$ **Product Description**

CARBITOL™ Solvent is an important solvent in nongrain-raising wood stains and serves as a component of industrial cleaners. Textile printing and dyeing processes utilize CARBITOL™ Solvent to facilitate penetration into fibers and to promote the production of intense, bright shades. These characteristics, as well as its high boiling point and low vapor pressure, make it useful for twist setting and yarn and cloth conditioning. Mineral oil-soap and mineral oil-sulfonated oil mixtures require fast-acting mutual solvents. Small quantities of CARBITOL™ Solvent in these mixtures form translucent-to-clear dispersions, in contrast to the usual turbid dispersion that indicates incomplete solubility.

Uses / Applications

- Solvent for non-grain-raising wood stains and coatings.
- Carrier solvent for textile dyeing and printing.
- Coupling agent and solvent in household and industrial cleaners.

Typical Physical Properties

Property	Unit	Value
Molecular weight	g/mol	134.1
Boiling point @ 760 mmHg, 1.01 ar	°C (°F)	196 (385)
Flash point (Setaflash Closed Cup)	°C (°F)	91 (195.8)
Freezing point	°C (°F)	-54 (-65)
Vapor pressure @ 25°C	mmHg (Pa)	0.127 (17)
Specific gravity (20/20°C)		0.990
Liquid density @ 20°C	g/cm ³	0.99
@ 25°C	g/cm ³	0.97
Vapor density (air = 1)		No test data available
Viscosity (@ 25°C)	cP or mPa•s	4.4
Surface tension (@ 20°C)	dynes/cm or mN/m	70

Typical Physical Properties:

This data provided for those properties are typical values, and should not be construed as sales specifications.

Typical Physical Properties (Cont.)

Property	Unit	Value
Specific heat (@ 25°C)	J/g°C	2.193
Heat of vaporization at normal boiling point	J/g	350
Net heat of combustion — predicted @ 25°C	kJ/g	25.5
Autoignition temperature	°C (°F)	204 (399)
Evaporation rate (n-butyl acetate = 1.0)		0.01
Solubility, g/100 g @ 25°C Solvent in water	%	100
Hansen solubility parameters (J/cm ³) ^{1/2}		
_d (Dispersion)		16.1
_p (Polar)		9.2
_h (Hydrogen bonding)		12.2
Partition Coefficient, n-octanol/water (log Pow)		-0.54
Flammable limits	vol.% in air	
Lower		1.2
Upper		23.5

Classification/ Registry Numbers/Country Inventory¹.

CAS#	111-90-0
AICS (Australia)	111-90-0
DSL (Canada)	111-90-0
IECSC (China)	111-90-0
ECI (Korea)	111-90-0
EINECS (EU)	203-919-7
MITI (Japan)	111-90-0
ENCS/ISHL (Japan)	2-422
NZIoC (New Zealand)	111-90-0
PICCS (Philippines)	111-90-0
TSCA (U.S.)	111-90-0

¹NOTE: Classifications apply only to this glycol ether product. It is the responsibility of the formulator to ensure that the final finished product complies with the regulations of a given country prior to its sale or distribution in that country.

How Supplied

REGION	PACKAGING	TRANSPORT MODE
Europe/Africa	Bulk/Drum	Tank Truck
Latin America	Drum	Not Applicable
North America	Bulk/Drum	Tank Truck/Tank Car
Pacific	Bulk/Drum	Tank Truck

Product Stewardship

Dow encourages its customers and potential users to review their applications from the standpoint of human health and environmental aspects. To help ensure that Dow products are not used in ways for which they are not intended or tested, Dow personnel will assist customers in dealing with environmental and product safety considerations. Dow literature, including Material Safety Data Sheets, should be consulted prior to the use.

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