

**1. Identification**

**Product identifier** Couplant B-2  
**Other means of identification** None.  
**Recommended use of the chemical and restrictions on use**  
**Recommended use** Couplant.  
**Recommended restrictions** None known.  
**Manufacturer/Importer/Supplier/Distributor information**  
**Supplier** Olympus Singapore Pte Ltd.  
**Address** 491B River Valley Road, #12-01/04 Valley Point Office Tower, 248373, Singapore  
**Telephone** +65 68-34-00-10  
**FAX** +65 67-38-09-55  
**e-mail**  
**Emergency telephone number** CHEMTREC  
 US: 1-800-424-9300, International: +1 703-527-3887

**2. Hazards identification**

**GHS classification**  
**Physical hazards** Not classified.  
**Health hazards** Specific target organ toxicity, single exposure Category 3 respiratory tract irritation  
**Environmental hazards** Not classified.

**GHS label elements, including precautionary statements**

**Pictograms**



**Signal word** Warning  
**Hazard statements** May cause respiratory irritation.  
**Precautionary statements**  
**Prevention** Avoid breathing mist or vapor. Use only outdoors or in a well-ventilated area.  
**Response** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.  
**Storage** Store in a well-ventilated place. Keep container tightly closed. Store locked up.  
**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.  
**Other hazards which do not result in classification** None known.  
**Supplemental information** None.

**3. Composition/information on ingredients**

Substance or mixture	Substance		
Chemical name	Common name and synonyms	CAS Number	Concentration (%)
Glycerin		56-81-5	100

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**4. First-aid measures**

**Inhalation** If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.  
**Skin contact** Wash off with soap and water. Get medical attention if irritation develops and persists.  
**Eye contact** Rinse with water. Get medical attention if irritation develops and persists.  
**Ingestion** Rinse mouth thoroughly. Get medical attention if symptoms occur.

<b>Most important symptoms/effects, acute and delayed</b>	Direct contact with eyes may cause temporary irritation. May cause respiratory irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Use fire-extinguishing media appropriate for surrounding materials.
<b>Unsuitable extinguishing media</b>	None known.
<b>Specific hazards arising from the chemical</b>	By heating and fire, harmful vapors/gases may be formed.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	Will burn if involved in a fire.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Ensure adequate ventilation. Avoid prolonged exposure. Keep unnecessary personnel away. In case of spills, beware of slippery floors and surfaces. Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.
<b>Methods and materials for containment and cleaning up</b>	Stop the flow of material, if this is without risk. Wipe up with absorbent material (e.g. cloth, fleece). After cleaning, flush away traces with water. For waste disposal, see Section 13 of the SDS.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Provide adequate ventilation. Avoid prolonged exposure. Avoid breathing mist or vapor. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in closed original container at temperatures between 18°C and 54°C. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

<b>Control parameters/Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Appropriate engineering control measures</b>	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	If contact is likely, safety glasses with side shields are recommended. Eye wash fountain is recommended.
<b>Skin protection</b>	
<b>Hand protection</b>	For prolonged or repeated skin contact use suitable protective gloves. Suitable gloves can be recommended by the glove supplier.
<b>Other</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Liquid.
<b>Form</b>	Viscous.
<b>Color</b>	Clear.

<b>Odor</b>	Mild.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	67.73 °F (19.85 °C)
<b>Initial boiling point and boiling range</b>	554 °F (290 °C)
<b>Flash point</b>	390.0 °F (198.9 °C) Closed Cup
<b>Evaporation rate</b>	> 1 (Ether (anhydrous) =1)
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Flammability limit - lower (%)</b>	2.6
<b>Flammability limit - upper (%)</b>	11.3
<b>Vapor pressure</b>	< 0.13 kPa
<b>Vapor density</b>	3.1 (Air = 1)
<b>Relative density</b>	1.4 - 1.6
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Soluble in water.
<b>Partition coefficient (n-octanol/water)</b>	-1.76
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other data</b>	
<b>Explosive properties</b>	Not explosive.
<b>Molecular formula</b>	C3-H8-O3
<b>Molecular weight</b>	92.09 g/mol
<b>Oxidizing properties</b>	Not oxidizing.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport. Hygroscopic.
<b>Chemical stability</b>	Material is stable under normal conditions..
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Excessive heat. Ignition sources.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Hygroscopic

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	High mist concentrations may cause irritation of respiratory tract.
<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.

**Acute toxicity** Not expected to be acutely toxic.

<b>Product</b>	<b>Species</b>	<b>Test Results</b>
Glycerin (CAS 56-81-5)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 10 g/kg
<i>Oral</i>		
LD50	Rat	12600 mg/kg

<b>Symptoms</b>	Direct contact with eyes may cause temporary irritation. May cause respiratory irritation.
<b>Skin corrosion/irritation</b>	No adverse effects due to skin contact are expected.

<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Due to lack of data the classification is not possible.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	May cause respiratory irritation.
<b>Specific target organ toxicity - repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Not available.

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product	Species	Test Results
Glycerin (CAS 56-81-5)		
<b>Aquatic</b>		
Fish	LC50 Fish	54000 mg/l, 96 hours
<b>Persistence and degradability</b>	The product is readily biodegradable.	
<b>Bioaccumulative potential</b>	The product is not bioaccumulating.	
<b>Mobility in soil</b>	No data available.	
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	

## 13. Disposal considerations

**Disposal methods/information** Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

**Special precautions** Dispose in accordance with all applicable regulations.

## 14. Transport information

**ADR**  
Not regulated as dangerous goods.

**RID**  
Not regulated as dangerous goods.

**ADN**  
Not regulated as dangerous goods.

**IATA**  
Not regulated as dangerous goods.

**IMDG**  
Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

## 15. Regulatory information

**Safety, health and environmental regulations specific for the product in question**

**Controlled Narcotic Drugs (Misuse of Drugs Act, First Schedule, Part I, II & III)**

Not regulated.

**Controlled Specified Drugs (Misuse of Drugs Act, Fourth Schedule)**

Not regulated.

**Prior Informed Consent (PIC) Substances (Environment Protection and Management Act, 2nd Schedule, Part 1, Jul. 1, 2013)**

Not regulated.

**Chemical Weapons Prohibition (Act)**

Not applicable.

**Environmental Protection and Management (Hazardous Substances) Regulations**

Not applicable.

**Environmental Public Health Act**

Not applicable.

**International regulations****Montreal Protocol**

Not applicable.

**Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Kyoto protocol**

Not applicable.

**Basel Convention**

Not applicable.

**International Inventories**

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information**

<b>References</b>	Not available.
<b>Issued by</b>	
<b>Company name</b>	Olympus
<b>Prepared by</b>	
<b>Title</b>	Olympus
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<b>Issue date</b>	11-August-2016
<b>Revision date</b>	-
<b>Key/legend</b>	Not applicable.