



# MATERIAL SAFETY DATA SHEET

## SECTION I – PRODUCT IDENTIFICATION

| SUPPLIER    |  |
|-------------|--|
| NAME        | The National Biofuels Group Pty Ltd  |
| ADDRESS     | 16/33 Ryde Road, Pymble, NSW 2073, Australia                                     |
| TELEPHONE   | +61 2 9499 8291  |
| PRODUCT     |  |
| NAME        | Glycerin   |
| DESCRIPTION | Alcohol C <sub>3</sub> H <sub>5</sub> (OH) <sub>3</sub>                          |
| SYNONYMS    | Glycerine, glycerol, 1,2,3-propane triol, propan-1,2,3-triol, trihydroxypropane. |
| CAS NUMBER  | 56-81-5  |

## SECTION II – INGREDIENTS AND HAZARD CLASSIFICATION

|                       |  |
|-----------------------|--|
| <b>Ingredients</b>    | Glycerin (100%)  |
| <b>TSCA status</b>    | This product is listed on TSCA.  |
| <b>SARA Title III</b> | Section 312 Extremely Hazardous Substances: None<br>Section 311/312 Hazardous Categories: Non-hazardous<br>Section 313 Toxic Chemicals: None |

Not classified as hazardous according to NOHSC criteria.

## SECTION III – HEALTH INFORMATION

### EFFECTS OF OVEREXPOSURE

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | Low toxicity. Hazard might be presented with direct eye contact, prolonged and repeated skin contact or inhalation of mist.  |
| <b>Ingestion</b>    | Low toxicity. Do not induce vomiting. Wash mouth with water. No hazards from ingestion due to industrial exposure. Seek medical attention if symptoms develop.   |
| <b>Eye contact</b>  | Low irritant. In the event of eye contact irrigate with water for 10 – 15 minutes. Exposure may result in mild irritation. Direct eye contact may result in pain, redness and lacrimation. Seek medical attention if symptoms persist. |
| <b>Skin contact</b> | Low irritant. Mild irritation may result due to prolonged exposure.  |

**Toxicological information** LD50 (dermal, rabbit) > 10 000mg/kg; LD50 (oral, rat) 12 600mg/kg; LD50 (oral, mouse) 4 090mg/kg

#### SECTION IV – OCCUPATIONAL EXPOSURE LIMITS

**PEL:** TWA: 15 mg/m<sup>3</sup> from OSHA (Total inhalation)  
**PELTLV:** TWA: 10 mg/m<sup>3</sup> from ACGIH (Total inhalation)

#### SECTION V – EMERGENCY FIRST AID PROCEDURE

##### FOLLOW STANDARD FIRST AID PROCEDURES

**Ingestion** Do not induce vomiting. Give person one or two glasses of water to drink. If gastro-intestinal symptoms develop call physician or Poison Control Centre.

**Skin contact** Wash affected area with water. Seek medical attention if irritation develops.

**Eye contact** Flush eyes with cool water for at least 15 – 20 minutes. Do not let person rub eyes. Seek medical attention if irritation develops.

**Inhalation** Remove person to fresh air. Seek medical attention if symptoms persist.

#### SECTION VI – PHYSICAL PROPERTIES

|                         |                     |                            |                          |
|-------------------------|---------------------|----------------------------|--------------------------|
| <b>Physical state</b>   | Liquid              | <b>Vapour density</b>      | 3.17 (Air = 1)           |
| <b>Appearance</b>       | Colourless to brown | <b>Evaporation rate</b>    | N/A                      |
| <b>Water solubility</b> | Soluble             | <b>Flash point</b>         | > 160°C                  |
| <b>Odour</b>            | Odourless to mild   | <b>Boiling point</b>       | 290°C                    |
| <b>Specific gravity</b> | 1.26 (Water = 1)    | <b>Melting point</b>       | 17.9°C                   |
| <b>pH value</b>         | N/A                 | <b>Flammability limits</b> | Not known                |
| <b>Vapour pressure</b>  | 0.0025 mm Hg @ 50°C | <b>Molecular Weight</b>    | 92.1 g.mol <sup>-1</sup> |

#### SECTION VII – FIRE AND EXPLOSION HAZARDS

|                                    |  |
|------------------------------------|--|
| <b>Flash point and method used</b> | > 160°C (ASTM93)                                   |
| <b>Auto-ignition temperature</b>   | 393°C  |
| <b>Flammability</b>                | Not flammable                                      |
| <b>Flammability limits</b>         | Not known  |
| <b>HMIS rating</b>                 | HEALTH: 1; FIRE: 1; REACTIVITY: 0                  |
| <b>Extinguishing media</b>         | Foam, dry chemical, carbon dioxide and water spray |

**Special fire fighting procedures and precautions:** Combustible. Suitable extinguishing agents are dry agent, carbon dioxide and foam. Fire fighters should use self-contained breathing apparatus to avoid exposure to smoke and fumes.

**Unusual fire & explosion hazards:** Toxic gases such as hydrocarbons and carbon oxides may evolve when heated.

## SECTION VIII – REACTIVITY

|   |  |
|---|--|
| <b>Stability</b>                        | Stable   |
| <b>Hazardous polymerization</b>         | Will not occur   |
| <b>Materials to avoid</b>               | Strong oxidizing agents and moisture. Material is hygroscopic. |
| <b>Hazardous decomposition products</b> | Combustion produces CO <sub>2</sub> , CO and thick smoke.      |
| <b>Conditions to avoid</b>              | None known   |

## SECTION IX – PERSONAL PROTECTION/EXPOSURE CONTROL

|                               |   |
|-------------------------------|---|
| <b>Respiratory protection</b> | Always ensure that workplace has adequate ventilation. In case of mist formation, wear appropriate respiratory protective equipment as determined by expert opinion.  |
| <b>Skin protection</b>        | Chemically resistant gloves made from materials such as PVC should be worn to prevent skin contact. Remove contaminated clothing and wash with soap and water before re-using. Chemically resistant aprons can be worn to avoid contact with clothes. |
| <b>Eye protection</b>         | Always wear approved safety glasses when working. Full face protective shields can be worn to avoid contact with face. Eye wash stations should be provided and regularly inspected.  |
| <b>Footwear</b>               | Wear chemically resistant footwear as specified by workplace regulations.   |
| <b>Additional measures</b>    | Practice good personal hygiene by washing exposed skin regularly with soap and water. Wash hand before consuming any food or drink.   |

## SECTION X – ENVIRONMENTAL PROTECTION

|                                  |   |
|----------------------------------|---|
| <b>Environmental precautions</b> | Glycerol may react with photochemically produced hydroxyl radicals in the atmosphere. Glycerol is expected to degrade at a moderate rate and can be toxic to aquatic organisms at high concentrations. Not expected to bioconcentrate in fish or other aquatic organisms. |
|----------------------------------|---|

|                                  |   |
|----------------------------------|---|
| <b>Spill or leak precautions</b> | Contain spilled material using appropriate measures. Transfer to secure containers. Where necessary, collect material using absorbent media. Slippery when spilt. |
| <b>Waste disposal</b>            | Dispose spilled or contaminated material according to federal, state and/or local requirements. Do not release into drains.                                       |

### SECTION XI – TRANSPORT INFORMATION

|                                |   |
|--------------------------------|---|
| <b>Transport information</b>   | Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. |
| <b>U.N. Hazard class</b>       | Not applicable.   |
| <b>Shipping classification</b> | Not regulated   |
| <b>Shipping name</b>           | Not applicable  |
| <b>Identification number</b>   | Not applicable  |

### SECTION XII – HANDLING, STORAGE AND USAGE

|                            |  |
|----------------------------|--|
| <b>Storage temperature</b> | 5°C – 30°C   |
| <b>General</b>             | Store away from excessive heat, ignition sources (sparks and flames) and strong oxidising agents. Store in a cool, dry and well-ventilated environment. Do not store in direct sunlight. Close containers when not in use. Where appropriate protective clothing when emptying containers. |

### SECTION XIII – DISCLAIMER

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. The stated MSDS is reliable to the best of the company's knowledge and believed accurate as of the date indicated. However, no representation, warranty or guarantee of any kind, express or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.

(18 March 2008)

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