



LABORATORY CHEMICALS AND CONSUMABLES

# MATERIAL SAFETY DATA SHEET

## DIETHYLENE GLYCOL

### 1. Chemical Product and Company information.

**Product name:** Diethylene glycol

**Contact Information:**

Radchem cc  
PO Box 166982  
Brackendowns  
Alberton 1454  
Telephone : **011 867 3726 / 2864**

### 2. Hazard Identification

Hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.

### 3. Composition / information on ingredients

**CAS #:** 111-46-6

**Synonym:** Carbitol

**Chemical Name:** 2,2'-Oxydiethanol

**Chemical Formula:** C<sub>4</sub>H<sub>10</sub>O<sub>3</sub>

### 4. First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

**Skin Contact:** After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

**Inhalation:** Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

**Serious Inhalation:** Not available



**Ingestion:** Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

**Serious Ingestion:** Not available.

## **5. Fire-fighting measures**

**Flammability of the Product:** May be combustible at high temperature

**Fire Hazards in Presence of Various Substances:** Slightly flammable to flammable in presence of open flames and sparks, of heat.

**Explosion Hazards in Presence of Various Substances:** Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:** SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards:** When heated to decomposition, it emits acrid smoke and irritating fumes.

**Special Remarks on Explosion Hazards:** Not available

## **6. Accidental release measures**

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements

**Large Spill:** Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

## **7. Handling and storage**

**Precautions:** Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/spray. Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes

**Storage:** Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

## **8. Exposure controls/personal protection**

**Engineering Controls:** Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

**Personal Protection:** Splash goggles. Lab coat. Vapour respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:** Splash goggles. Full suit. Vapour respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.



## **9. Physical and chemical properties**

**Physical state and appearance:** Liquid (Clear viscous liquid)

**Odour:** Odourless

**Taste:** Sweet

**Colour:** Colourless

**Boiling Point:** 245.8°C

**Melting Point:** -8°C

**Critical Temperature:** Not available

**Specific Gravity:** 1.12 (Water = 1)

**Vapour Density:** 3.66 (Air = 1)

**Volatility:** Not available

**Odour Threshold:** Not available

**Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water, methanol, and diethyl ether.

**Solubility:** See solubility in water, methanol, and diethyl ether.

## **10. Stability and reactivity**

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Not available

**Incompatibility with various substances:** Slightly reactive to reactive with oxidizing agents

**Corrosivity:** Not considered to be corrosive for metals and glass.

**Special Remarks on Reactivity:** Hygroscopic; keep container tightly closed.

**Special Remarks on Corrosivity:** Not available

**Polymerization:** Will not occur.

## **11. Toxicological information**

**Routes of Entry:** Dermal contact. Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:** Acute oral toxicity (LD50): 12565 mg/kg [Hamster.]. Acute dermal toxicity (LD50): 11890 mg/kg [Hamster.].

**Chronic Effects on Humans:** The substance is toxic to blood, kidneys, the nervous system, liver.

**Other Toxic Effects on Humans:** Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.

**Special Remarks on Toxicity to Animals:** Not available

**Special Remarks on Chronic Effects on Humans:** Not available



**Special Remarks on other Toxic Effects on Humans:** Experimentally tumorigen by inhalation. Exposure can cause nausea, headache and vomiting.

### **12. Ecological information**

**Ecotoxicity:** Not available

**BOD5 and COD:** Not available

**Products of Biodegradation:** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are more toxic.

**Special Remarks on the Products of Biodegradation:** Not available

### **13. Disposal considerations**

**Waste Disposal:** Consult with Local and Regional (State) authorities (waste regulators). Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### **14. Transport information**

**DOT Classification:** Not a DOT controlled material

**Identification:** : Not applicable

**Special Provisions for Transport:** Not available

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