

#### Material Safety Data Sheet

Phillipsburg, NJ 08865





24 Hour Emergency Telephone: 908-859-2151 CHEMTREC: 1-800-424-9300

National Response in Canada CANUTEC: 613-996-6666

Outside U.S. and Canada Chemtrec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

# PROPYLENE GLYCOL

# 1. Product Identification

**Synonyms:** 1,2-propanediol; 1,2-dihdroxypropane; methyl glycol; methylethylene glycol

**CAS No.:** 57-55-6

Molecular Weight: 76.09

Chemical Formula: CH3CHOHCH2OH

**Product Codes:** J.T. Baker: 9402, 9403, U510, Mallinckrodt: 1925, 6263

# 3. Hazards Identification

**Emergency Overview** 

CAUTION! MAY CAUSE IRRITATION TO SKIN AND EYES.

### **Skin Contact:**

Mild irritant and defatting agent, especially on prolonged contact.

### **Eve Contact:**

May cause transitory stinging and tearing.

# **Chronic Exposure:**

Lactic acidosis, stupor and seizures have been reported following chronic ingestion

# **Aggravation of Pre-existing Conditions:**

Kidney disorders.

# 4. First Aid Measures

#### **Skin Contact:**

Remove any contaminated clothing. Wash skin with soap and water for at least 15 minutes. Get medical attention if irritation develops or persists.

## **Eye Contact:**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Call a physician if irritation persists.

## **Note to Physician:**

In case of ingestion, monitor for acidosis and central nervous system changes. Exposed persons with previous kidney dysfunction may require special treatment.

# 16. Other Information

**NFPA Ratings:** Health: **0** Flammability: **1** Reactivity: **0** 

## **Label Hazard Warning:**

CAUTION! MAY CAUSE IRRITATION TO SKIN AND EYES.

#### **Label Precautions:**

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

#### **Label First Aid:**

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. Call a physician if irritation develops or persists.

## **Product Use:**

Laboratory Reagent.

Propylene Glycol 57-55-6

Repeated or prolonged exposure of the skin to this material may cause defatting and drying of the skin.

Prolonged or Health 0 Flammability 1 Physical Hazard 0 HMIS® NFPA® 0 0

Repeated breathing of high concentrations may cause symptoms of central nervous system depression.

Conditions Aggravated by Exposure

This material or its emissions may aggravate pre-existing eye disease.

# PROPYLENE GLYCOL

# **Information Update**

# THE SAFETY OF PROPYLENE GLYCOL USE IN COSMETIC PRODUCTS

The Cosmetic Ingredient Review (CIR) Expert Panel evaluated the use of propylene glycol in personal care products in 1993. The CIR Expert Panel is the authoritative body recognized by the FDA to approve the safety of chemicals use in cosmetics.

After describing these data, the CIR Expert Panel concluded: "Propylene glycol induced skin irritation reactions in normal subjects and in patients. In these studies test concentrations ranged from 2 to 100%. Reactions were observed at concentrations as low as 10% in predictive tests and as low as 2% in provocative tests." Given these results, the experts concluded, "A concentration limit for propylene glycol is considered necessary," and chose 50% - a concentration they concluded would be "safe" for the identified uses.

Journal of the American Academy of Dermatology Volume 24, Issue 1, January 1991, Pages 90-95

# Propylene Glycol Dermatitis

Joseph M. Catanzaro MD, and J. Graham Smith Jr. MD, Corresponding Author Augusta, Georgia, USA

#### **Abstract**

Propylene glycol is a commonly used vehicle for topical preparations. Although it is well suited for this purpose, it is capable of producing both primary irritant skin reactions and allergic sensitization. The literature on propylene glycol is reviewed, with particular attention to the nature of these adverse cutaneous effects. Guidelines for patients sensitive to propylene glycol are discussed.

# **Propylene Glycol: Irritation or Sensitization?**

R. J. Trancik 1 H. I. Maibach 2

1 Clinical Research Department, Riker Laboratories, Inc., 3M Center, St. Paul, Minnesota 55144, USA 2 Department of Dermatology (HIM), University of California, School of Medicine, San Francisco, California 94143, USA

#### **ABSTRACT**

Irritation and sensitization patch test studies were conducted using propylene glycol in an attempt to ascertain the nature of the cutaneous response to this commonly employed topical excipient. A total of 10 and 203 subjects completed standard irritation and sensitization protocols, respectively A provocative use test was conducted on subjects reacting to propylene glycol. **Results indicate, that propylene glycol is at least a minimal irritant**. Fleeting evidence suggestive of sensitization was observed during patch testing but was not substantiated upon provocative use testing. Interpretation of these results is presented; however, the nature of the cutaneous response to propylene glycol remains obscure.

Received for publication September 16, 1981

### PROPYLENE GLYCOL is used in:

- Anti-Freeze
- Brake and Hydraulic Fluid
- De-Icer
- Paints and Coatings
- Floor Wax
- Laundry Detergents
- Tobacco
- Cosmetics
- Etc.