1. INGREDIENTS:

Dipropylene glycol monomethyl ether  CAS# 034590-94-8  99%

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

2. PHYSICAL DATA:

BOILING POINT: 363F, 184 C
VAP PRESS: .55 mmHg @ 25 C
VAP DENSITY: 5.14
SOL. IN WATER: Infinitely
SP. GRAVITY: .950 @ 25/25 C
APPEARANCE: Clear, colorless liquid.
ODOR: Information not available.

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: 175 F
METHOD USED: TCC

FLAMMABLE LIMITS
LFL: 1.1 vol% @ 100 C
UFL: 14 vol% @ 150 C

EXTINGUISHING MEDIA: Water fog, alcohol resistant foam, CO2, dry chemical.

FIRE & EXPLOSION HAZARDS: Information not available.

FIRE-FIGHTING EQUIPMENT: Wear positive-pressure, self-contained

(Continued on Page 2)

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3. FIRE AND EXPLOSION HAZARD DATA: (CONTINUED)

breathing apparatus.

4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) Stable under normal storage conditions.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Oxidizing material.

HAZARDOUS DECOMPOSITION PRODUCTS: None known.

HAZARDOUS POLYMERIZATION: Will not occur.

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ACTION TO TAKE FOR SPILLS/LEAKS: Soak up with suitable non-reactive absorbent material. Collect with rubber shovel into suitable containers for disposal.

DISPOSAL METHOD: Burn in an approved incinerator in accordance with all local, state, and federal requirements.

6. HEALTH HAZARD DATA:

EYE: May cause slight transient (temporary) eye irritation. Corneal injury is unlikely.

SKIN CONTACT: Prolonged exposure not likely to cause significant skin irritation.

SKIN ABSORPTION: The LD50 for skin absorption in rabbits is >20 ml/kg. Prolonged skin contact with very large amounts of Dowanol DPM may cause drowsiness.

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MATERIAL SAFETY DATA SHEET

Dow Chemical U.S.A.* Midland, MI 48674 Emergency Phone: 517-636-4400

Product Code: 22345 Page: 3

PRODUCT NAME: DOWANOL (R) DPM GLYCOL ETHER

Effective Date: 03/20/88 Date Printed: 03/31/88 MSDS:000045

6. HEALTH HAZARD DATA: (CONTINUED)

INGESTION: Single dose oral toxicity is low. The oral LD50 for rats is 5.4 ml/kg. Amounts ingested incidental to industrial handling are not likely to cause injury; however ingestion of larger amounts may cause injury.

INHALATION: Signs and symptoms of excessive exposure may be anesthetic or narcotic effects.

SYSTEMIC & OTHER EFFECTS: Repeated excessive exposures may cause liver or possibly kidney effects. Signs and symptoms of excessive exposure may be anesthetic or narcotic effects. Results of in vitro ('test tube') mutagenicity tests have been negative.

7. FIRST AID:

EYES: Irrigate immediately with water for at least 5 minutes.

SKIN: Wash off in flowing water or shower. Wash contaminated clothing before reuse.

INGESTION: Induce vomiting if large amounts are ingested. Consult medical personnel.

INHALATION: Remove to fresh air. If not breathing, give mouth-to-mouth resuscitation. If breathing is difficult, give oxygen. Call a physician.

NOTE TO PHYSICIAN: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

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8. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE: ACGIH TLV is 100 ppm; STEL 150 ppm.

VENTILATION: Local exhaust ventilation may be necessary for some operations.

RESPIRATORY PROTECTION: When airborne exposure guidelines and/or comfort levels may be exceeded, use an approved air-purifying respirator.

SKIN PROTECTION: For brief contact, no precautions other than clean body-covering clothing should be needed. Use impervious gloves when prolonged or frequently repeated contact could occur.

EYE PROTECTION: Chemical goggles are recommended because eye contact with this material may cause pain, even though it is unlikely to cause injury.

9. ADDITIONAL INFORMATION:

REGULATORY REQUIREMENTS:

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

A delayed health hazard
A fire hazard

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Ground all equipment. Exercise reasonable care and caution in handling.

MSDS STATUS: Revised Section 9.

(Continued on Page 5)
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PRODUCT NAME: DOWANOL (R) DPM GLYCOL ETHER

Effective Date: 03/20/88 Date Printed: 03/31/88 MSDS:000045

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The Information Herein Is Given In Good Faith, But No Warranty, Express Or Implied, Is Made. Consult The Dow Chemical Company For Further Information.

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MATERIAL SAFETY DATA SHEET

PRODUCT #: 24082-6
NAME: METHYL SALICYLATE, 99+% GOLD LABEL
CAS #: 119-36-8
MF: C8H8O3
SYNONYMS:
ACIDE MÉThYL-0-BENZOIQUE (FRENCH) * ACIDE METHYL-O-BENZOIQUE (FRENCH) * O-
ANISIC ACID * BENZOIC ACID, 2-METHOXY- * BETULA * BETULA OIL *
GAULTHERIA OIL, ARTIFICIAL * GUALTERIA OIL * O-HYDROXYBENZOIC ACID; * METHYL ESTER * 2-HYDROXYBENZOIC ACID METHYL ESTER * O-METHOXYBENZOIC
ACID * METHYL ESTER KYSELNYL SALICYLOVE (CZECH) * METHYL O-
HYDROXYBENZUATE * METHYL SALICYLATE * NATURAL WINTERGREEN OIL * OIL
OF WINTERGREEN * SWEET BIRCH OIL * SYNTHETIC WINTERGREEN OIL *
TEABERRY OIL * WINTERGREEN OIL * WINTERGREEN OIL, SYNTHETIC *

RTECS #: VO47250000
SALICYLIC ACID, METHYL ESTER

IRRITATION DATA
SKN-RBT 500 MG/24H MOD
EYE-RBT 500 MG/24H MOD
SKN-GPG 100% SEV
EYE-GPG 100% SEV

TOXICITY DATA
ORL-MAN LDLO: 101 MG/KG
ORL-CHO LDLO: 228 MG/KG
ORL-CHD LDLO: 700 MG/KG
ORL-WMN LDLO: 355 MG/KG
ORL-INF LDLO: 1480 MG/KG
ORL-HMN LDLO: 506 MG/KG
UNR-MAN LDLO: 522 MG/KG
ORL-RAT LDLO: 808 MG/KG
ORL-MUS LD50: 1110 MG/KG
ORL-Dog LD50: 2100 MG/KG
ORL-RAT LD50: 1300 MG/KG
ORL-GPG LD50: 1060 MG/KG

REVIEWS, STANDARDS, AND REGULATIONS
EPA TSCA CHEMICAL INVENTORY, 1986
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JUNE 1988
NRC CRITERIA FOR PROPOSED OSHA MEDICAL RECORDS RULE FEREAC 47,30420,

TARGET ORGAN DATA
PERIPHERAL NERVE AND SENSATION (FLACCID PARALYSIS WITHOUT ANESTHESIA)
BEHAVIORAL (GENERAL ANESTHETIC)
BEHAVIORAL (SOMNOLENCE)
BEHAVIORAL (CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD)
BEHAVIORAL (COMA)
LUNGS, THORAX OR RESPIRATION (DYSPNEA)
LUNGS, THORAX OR RESPIRATION (RESPIRATORY STIMULATION)
GASTROINTESTINAL (GASTRITIS)
GASTROINTESTINAL (NAUSEA OR VOMITING)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (CENTRAL NERVOUS SYSTEM)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (EYE, EAR)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (CRANIOFACIAL)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (BODY WALL)
MATERIAL SAFETY DATA SHEET

CATALOG #: 24082-6
NAME: METHYL SALICYLATE, 99+% RED LABEL

SPECIFIC DEVELOPMENTAL ABNORMALITIES (MUSCULOSKELETAL SYSTEM)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (HEPATOBIOLARY SYSTEM)

ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES ( RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION.

------------------ HEALTH HAZARD DATA ------------------

ACUTE EFFECTS
HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.
VAPOR OR MIST IS IRRITATING TO THE EYES, MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.
CAUSES SKIN IRRITATION.

FIRST AID
IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES.
IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS AMOUNTS OF WATER.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
CALL A PHYSICIAN.
WASH CONTAMINATED CLOTHING BEFORE REUSE.

------------------ PHYSICAL DATA ------------------

MELTING POINT: -8°C TO -7°C
BOILING POINT: 222°C
SPECIFIC GRAVITY: 1.174
VAPOR DENSITY: 5.26
VAPOR PRESSURE: 1.0 MM @ 54°C

------------------ FIRE AND EXPLOSION HAZARD DATA ------------------

AUTO IGNITION TEMPS: 847°F
FLASH POINT: >230°F

EXTINGUISHING MEDIA
WATER SPRAY, CARBON DIOXIDE, DRY CHEMICAL POWDER, ALCOHOL OR POLYMER FOAM.

SPECIAL FIRE FIGHTING PROCEDURES
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

UNUSUAL FIRE AND EXPLOSION HAZARDS
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

------------------ REACTIVITY DATA ------------------

INCOMPATIBILITIES
STRONG OXIDIZING AGENTS, STRONG BASES.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
TOXIC FUMES OF:
CARBON MONOXIDE, CARBON DIOXIDE

------------------ SPILL OR LEAK PROCEDURES ------------------
STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY
RUBBER GLOVES.
COVER WITH DRY LIME OR SODA ASH, PICK UP, KEEP IN A CLOSED CONTAINER
AND HOLD FOR WASTE DISPOSAL.
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.
WASTE DISPOSAL METHOD
DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A
CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.

OBSERVE ALL FEDERAL, STATE & LOCAL LAWS.

--- PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE ---

CHEMICAL SAFETY GOGGLES.
RUBBER GLOVES.
NIOSH/MSHA-APPROVED RESPIRATOR.
SAFETY SHOWER AND EYE BATH.
USE ONLY IN A CHEMICAL FUME HOOD.
DO NOT BREATHE VAPOR.
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
WASH THOROUGHLY AFTER HANDLING.
TOXIC.
KEEP TIGHTLY CLOSED.
STORE IN A COOL DRY PLACE.

---------- AUDITONAL PRECAUTIONS AND COMMENTS ----------

NOT APPLICABLE

---------------- REGULATORY INFORMATION ----------------

NOT APPLICABLE

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT
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NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM
CONTACT WITH THE ABOVE PRODUCT. SEE REVERSE SIDE OF INVOICE OR PACKING
SLIP FOR ADDITIONAL TERMS AND CONDITIONS OF SALE.