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Dow U.S.A.

The Dow Chemical Company
Midland, Michigan 48674

MAY 18 1992

JOHN AKIELASZEK
AGENCY OF NATURAL RESOURCES
103 S MAIN STREET
THE ANNEX
WATERBURY

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**HERE ARE THE LATEST
MATERIAL SAFETY DATA SHEETS
AND/OR SALES SPEC
FROM
THE DOW CHEMICAL COMPANY**

**PLEASE REPLACE
OUTDATED INFORMATION
WITH THE ENCLOSED**

*FOR FURTHER INFORMATION CONTACT
ANN L. WAGONER, DOW CHEMICAL U.S.A.,
CUSTOMER INFORMATION CENTER, 690 BUILDING,
MIDLAND, MI 48667, OR CALL OUR
TOLL FREE NUMBER, 1-800-258-CHEM (2436).*





Dow U.S.A.

Material Safety Data Sheet

The Dow Chemical Company
Midland, Michigan 48674
Emergency 517 · 636-4400

Product Code: 70511

Page: 1

Product Name: PROPYLENE GLYCOL INDUSTRIAL

Effective Date: 10/01/91 Date Printed: 05/11/92

MSDS:000248

1. INGREDIENTS: (% w/w, unless otherwise noted)

Propylene glycol CAS# 000057-55-6 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: 370F, 188C
VAP PRESS: 0.08 mm Hg @ 20C, 68F
VAP DENSITY: 2.62
SOL. IN WATER: Complete
SP. GRAVITY: 1.038 20/20C, 68F
APPEARANCE: Colorless liquid.
ODOR: Odorless.

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: 218F, 103C
METHOD USED: PMCC

FLAMMABLE LIMITS
LFL: 2.6%
UFL: 12.5%

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

FIRE & EXPLOSION HAZARDS: Not available.

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

(Continued on page 2)

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

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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: Propionaldehyde, carbon monoxide in the presence of limited oxygen in a fire situation.

HAZARDOUS POLYMERIZATION: Will not occur.

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ACTION TO TAKE FOR SPILLS/LEAKS: Small spills: Cover with absorbent material, soak up and sweep into a drum. Large spills: Dike around spill and pump into suitable containers.

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

6. HEALTH HAZARD DATA:

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

SKIN CONTACT: Prolonged contact is essentially nonirritating to skin. Repeated exposure may cause slight flaking, tenderness.

(Continued on page 3)

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6. HEALTH HAZARD DATA: (CONTINUED)

and softening of skin.

SKIN ABSORPTION: A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. The LD50 for skin absorption in rabbits is >10 g/kg.

INGESTION: Single dose oral toxicity is low. The oral LD50 for rats is 21-33.7 g/kg. No hazards anticipated from ingestion incidental to industrial exposure.

INHALATION: A single prolonged (hours) inhalation exposure is not likely to cause adverse effects. Mists are not likely to be hazardous.

SYSTEMIC & OTHER EFFECTS: Repeated excessive ingestion may cause central nervous system effects. Did not cause cancer in long-term animal studies. Birth defects are unlikely. Exposures having no adverse effects on the mother should have no effect on the fetus. In animal studies, has been shown not to interfere with reproduction. Results of in vitro ("test tube") mutagenicity tests have been negative. Results of mutagenicity tests in animals have been negative.

7. FIRST AID:

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

SKIN: Wash off in flowing water or shower.

INGESTION: No adverse effects anticipated by this route of exposure.

INHALATION: No adverse effects anticipated by this route of exposure incidental to proper industrial handling.

(Continued on page 4)

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7. FIRST AID: (CONTINUED)

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

8. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE(S): AIHA WEEL is 50 ppm total; 10 mg/m³ aerosol only. There is no OSHA PEL or ACGIH TLV for propylene glycol.

VENTILATION: Good general ventilation should be sufficient.

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

SKIN PROTECTION: Use impervious gloves when prolonged or frequently repeated contact could occur.

EYE PROTECTION: Use safety glasses. Where contact with liquids is likely, chemical goggles are recommended because eye contact with this material may cause pain, even though it is unlikely to cause injury.

9. ADDITIONAL INFORMATION:

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
Exercise reasonable care and caution.

MSDS STATUS: Revised section 1.

For information regarding state/provincial and federal regulations see (R) Indicates a Trademark of The Dow Chemical Company

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Product Name: PROPYLENE GLYCOL INDUSTRIAL

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REGULATORY INFORMATION: (Not meant to be all-inclusive--selected regulations represented.)

NOTICE: The information herein is presented in good faith and believed to be accurate as the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See MSD Sheet for health and safety information.

U.S. REGULATIONS

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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:

Not to have met any hazard category

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Express Or Implied, Is Made. Consult The Dow Chemical Company
For Further Information.

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SALES SPECIFICATION

DATE PRINTED: 11 MAY 92

PAGE: 01

PRODUCT: 70511

EFFECTIVE: 13 APR 92 SUPERSEDES: 05 MAR 90

NAME: PROPYLENE GLYCOL INDUSTRIALDESC: PROPYLENE GLYCOL INDUSTRIAL IS A COLORLESS, VISCOUS LIQUID
WITH A CHARACTERISTIC ODOR.

----- REQUIREMENTS -----

ITEM	LIMIT	UNIT	METHOD
ASSAY, AS (C ₃ H ₈ O ₂ BY WEIGHT) MIN.	99	%	BY DIFFERENCE
ACIDITY (AS ACETIC ACID) MAX.	20	PPM	70511A
CHLORIDES (AS CL), MAX.	1	PPM	LESS THAN STAND.
WATER, MAX.	0.2	%	ASTM E203
COLOR, MAX.	10	APHA	ASTM D1209; E450
IRON, MAX.	0.5	PPM	TPO-G2A

----- PHYSICAL PROPERTIES -----

ITEM	LIMIT	UNIT	METHOD
SPECIFIC GRAVITY @ 20/20 C	1.0377-1.0390		ASTM D891
SPECIFIC GRAVITY @ 25/25 C	1.0352-1.0365		ASTM D891
DISTILLATION RANGE @ 760 MM HG I.B.P.-DP	185-189	C	ASTM D1078

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ANOTHER PAGE FOLLOWS

THE DOW CHEMICAL COMPANY

QUALITY ASSURANCE OFFICE

SALES SPECIFICATION

PAGE: 02

PRODUCT: 70511 (CONTINUED)

NAME: PROPYLENE GLYCOL INDUSTRIAL

READ PRECAUTIONARY INFORMATION AND MATERIAL SAFETY SHEETS.
THIS PRODUCT IS SHIPPED IN COMPLIANCE WITH APPLICABLE LAWS AND
REGULATIONS REGARDING CLASSIFICATION, PACKAGING, SHIPPING AND LABELING.
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LAST PAGE



001367

ETHYLENE GLYCOL LOW CONDUCTVTV

Page 3

THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (THE HAZARD COMMUNICATION STANDARD)

Product Name: ETHYLENE GLYCOL LOW CONDUCTVTV
CAS NUMBER: 107-21-1

05 50 074 8811500-003

Data Sheet No: 0016405-003
Prepared: 05/31/89
Supersedes: 12/22/88

TANSITOR ELECTRONICS, INC
WEST ROAD
BENNINGTON VT 05201

PRODUCT: 3370100
INVOICE: 499091
INVOICE DATE: 11/26/90
TO: TANSITOR ELECTRONICS INC
% WILLIAM WETMORE CO
ATTN: DAVE OLSON

ATTN: PLANT MGR./SAFETY DIR.

WORURN MA 01801

SECTION I-PRODUCT IDENTIFICATION

General or Generic ID: GLYCOL

DOT Hazard Classification: NOT APPLICABLE

SECTION II-COMPONENTS

IF PRESENT, IARC, NTP AND OSHA CARCINOGENS AND CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III SECTION 313 ARE IDENTIFIED IN THIS SECTION. SEE DEFINITION PAGE FOR CLARIFICATION

INGREDIENT	% (by WT)	PEL	TLV	Note
ETHYLENE GLYCOL CAS #: 107-21-1	100	50 PPM - CEILING	50 PPM - CEILING	(1)

Notes:

(1) PEL NOT ESTABLISHED FOR THIS MATERIAL

THIS CHEMICAL IS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF SARA TITLE III.

SECTION III-PHYSICAL DATA

Boiling Point	for PRODUCT	387.00 Deg F (197.22 Deg C) @ 760.00 mm Hg
Vapor Pressure	for PRODUCT	> 0.10 mm Hg @ 68.00 Deg F (20.00 Deg C)
Specific Vapor Density	AIR = 1	2.1
Specific Gravity		1.115 @ 68.00 Deg F (20.00 Deg C)
Percent Volatiles	NOT APPLICABLE	
Evaporation Rate	(BU AC = 1)	1.00

SECTION IV-FIRE AND EXPLOSION INFORMATION

FLASH POINT 240.0 Deg F (115.6 Deg C)
EXPLOSIVE LIMIT (PRODUCT) LOWER - 3.2%
EXTINGUISHING MEDIA: ALCOHOL FOAM OR CARBON DIOXIDE OR DRY CHEMICAL
HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS: CARBON DIOXIDE AND CARBON MONOXIDE, VARIOUS HYDROCARBONS
FIREFIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN THE POSITIVE PRESSURE DEMAND MODE WHEN FIGHTING FIRES.
SPECIAL FIRE & EXPLOSION HAZARDS: NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

SECTION V-HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL 50 PPM - CEILING
THRESHOLD LIMIT VALUE 50 PPM - CEILING

EFFECTS OF ACUTE OVEREXPOSURE:

EYES - CAN CAUSE IRRITATION.
SKIN - CAN CAUSE SLIGHT IRRITATION.
BREATHING - EXCESSIVE INHALATION OF VAPORS CAN CAUSE NASAL AND RESPIRATORY IRRITATION.
SWALLOWING - CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND DIARRHEA.

FIRST AID:

IF ON SKIN: THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. LAUNDRY CONTAMINATED CLOTHING BEFORE RE-USE.

IF IN EYES: FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY. GET MEDICAL ATTENTION.

001367

ETHYLENE GLYCOL LOW CONDUCTIVITY

13 Page: 2

SECTION V-HEALTH HAZARD DATA (Continued)

IF SWALLOWED: IMMEDIATELY DRINK TWO GLASSES OF WATER AND INDUCE VOMITING BY EITHER GIVING IPECAC SYRUP OR BY PLACING FINGER AT BACK OF THROAT. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION IMMEDIATELY.

IF BREATHED: IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED, GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, QUIET, AND GET MEDICAL ATTENTION.

PRIMARY ROUTE(S) OF ENTRY:

INHALATION, SKIN CONTACT

EFFECTS OF CHRONIC OVEREXPOSURE:

ETHYLENE GLYCOL HAS BEEN SHOWN TO PRODUCE DOSE-RELATED TERATOGENIC EFFECTS IN RATS AND MICE WHEN GIVEN BY GAVAGE OR IN DRINKING WATER AT HIGH CONCENTRATIONS. WHILE THERE IS NO CURRENTLY AVAILABLE INFORMATION TO SUGGEST THAT ETHYLENE GLYCOL HAS CAUSED BIRTH DEFECTS IN HUMANS IT IS RECOMMENDED THAT EVERY EFFORT SHOULD BE MADE TO PREVENT THE INGESTION OF ANY ETHYLENE GLYCOL AND TO KEEP PERSONNEL EXPOSURE BELOW THE ACGIH TLV.

OVEREXPOSURE TO THIS MATERIAL (OR ITS COMPONENTS) HAS APPARENTLY BEEN FOUND TO CAUSE THE FOLLOWING EFFECTS IN LABORATORY ANIMALS: LIVER ABNORMALITIES, KIDNEY DAMAGE

OVEREXPOSURE TO THIS MATERIAL (OR ITS COMPONENTS) HAS BEEN SUGGESTED AS A CAUSE OF THE FOLLOWING EFFECTS IN HUMANS: LIVER ABNORMALITIES, KIDNEY DAMAGE, CENTRAL NERVOUS SYSTEM EFFECTS

SECTION VI-REACTIVITY DATA

HAZARDOUS POLYMERIZATION: CANNOT OCCUR

STABILITY: STABLE

INCOMPATIBILITY: AVOID CONTACT WITH: STRONG OXIDIZING AGENTS.

SECTION VII-SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

SMALL SPILL: ABSORB LIQUID ON PAPER, VERMICULITE, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND TRANSFER TO HOOD.

LARGE SPILL: ELIMINATE ALL IGNITION SOURCES (FLARES, FLAMES INCLUDING PILOT LIGHTS, ELECTRICAL SPARKS). PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE, DIKE AREA OF SPILL TO PREVENT SPREADING, PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID MAY BE TAKEN UP ON SAND, CLAY, EARTH, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND SHOVELED INTO CONTAINERS.

WASTE DISPOSAL METHOD:

SMALL SPILL: ALLOW VOLATILE PORTION TO EVAPORATE IN HOOD. ALLOW SUFFICIENT TIME FOR VAPORS TO COMPLETELY CLEAR HOOD DUCT WORK. DISPOSE OF REMAINING MATERIAL IN ACCORDANCE WITH APPLICABLE REGULATIONS.

LARGE SPILL: DESTROY BY LIQUID INCINERATION IN ACCORDANCE WITH APPLICABLE REGULATIONS.

CONTAMINATED ABSORBENT MAY BE DEPOSITED IN A LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

SECTION VIII-PROTECTIVE EQUIPMENT TO BE USED

RESPIRATORY PROTECTION: IF WORKPLACE EXPOSURE LIMIT(S) OF PRODUCT OR ANY COMPONENT IS EXCEEDED (SEE SECTION II), A NIOSH/MSHA APPROVED AIR SUPPLIED RESPIRATOR IS ADVISED IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS (NEGATIVE PRESSURE TYPE) UNDER SPECIFIED CONDITIONS (SEE YOUR SAFETY EQUIPMENT SUPPLIER). ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED TO REDUCE EXPOSURE.

VENTILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES: WEAR RESISTANT GLOVES SUCH AS: NITRILE RUBBER

EYE PROTECTION: CHEMICAL SPLASH GOGGLES IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED; HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. (CONSULT YOUR SAFETY EQUIPMENT SUPPLIER)

OTHER PROTECTIVE EQUIPMENT: NORMAL WORK CLOTHING COVERING ARMS AND LEGS.

SECTION IX-SPECIAL PRECAUTIONS OR OTHER COMMENTS

CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THIS DATASHEET MUST BE OBSERVED.

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE WHETHER ORIGINATING WITH THE COMPANY OR NOT. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.



Industrial Chemicals Division

MATERIAL SAFETY DATA SHEET

EFFECTIVE DATE 12/10/91



Union Carbide urges each customer or recipient of this MSDS to study it carefully to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology, and fire prevention, as necessary or appropriate to use and understand the data contained in this MSDS.

To promote safe handling, each customer or recipient should: (1) notify its employees, agents, contractors and others whom it knows or believes will use this material of the information in this MSDS and any other information regarding hazards or safety; (2) furnish this same information to each of its customers for the product; and (3) request its customers to notify their employees, customers, and other users of the product of this information.

I. IDENTIFICATION

PRODUCT NAME: CARBOWAX SENTRY POLYETHYLENE GLYCOL 400

CHEMICAL NAME: Polyethylene Glycol

CHEMICAL FAMILY: Oxyalkylene Polymer

FORMULA: HO-(CH₂CH₂O)_n-H

MOLECULAR WEIGHT: 380 - 420

SYNONYMS: Polyoxyethylene 400

CAS # AND NAME: 25322-68-3
Poly(oxy-1,2-ethanediyl),a-hydro-w-hydroxy-

II. PHYSICAL DATA (Determined on Typical Material)

BOILING POINT, 760 mm Hg: >200C (>392F) (Decomposes)

SPECIFIC GRAVITY(H₂O = 1): 1.128 at 20/20 C

FREEZING POINT: 4 C to 8 C (39 F to 46 F)

VAPOR PRESSURE AT 20°C: <0.01 mm Hg

VAPOR DENSITY (AIR = 1): >1

EVAPORATION RATE (Butyl Acetate = 1): <0.01 (Nil)

SOLUBILITY IN WATER by wt: 100%

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CARBOWAX & SENTRY are Trademarks of Union Carbide Chemicals & Plastics
EMERGENCY PHONE NUMBERS: 1-800-UCC-HELP (NUMBER AVAILABLE AT ALL TIMES) OR (304) 744-3487

UNION CARBIDE CHEMICALS AND PLASTICS COMPANY INC
Industrial Chemicals Division
39 Old Ridgebury Road, Danbury, CT 06817-0001

PRODUCT NAME: CARBOWAX SENTRY POLYETHYLENE GLYCOL 400

APPEARANCE AND ODOR: Clear colorless liquid; mild and characteristic odor.

III. INGREDIENTS

<u>MATERIAL</u>	<u>%</u>	<u>TLV(UNITS)</u>	<u>HAZARD</u>
Polyethylene Glycol (CAS # 25322-68-3)	100	None established	See Section V

IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT(test method(s)): >350 F, Pensky-Martens closed cup ASTM D 93
>435 F, Cleveland open cup ASTM D 92

FLAMMABLE LIMITS IN AIR LOWER: Not determined
% by volume: UPPER: Not determined

SPECIAL FIRE FIGHTING PROCEDURES: Do not direct a solid stream of water or foam into hot, burning pools; this may cause frothing and increase fire intensity. Use self-contained breathing apparatus and protective clothing.

EXTINGUISHING MEDIA: Apply alcohol-type or all-purpose-type foams by manufacturers' recommended techniques for large fires. Use CO2 or dry chemical media for small fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

V. HEALTH HAZARD DATA

EXPOSURE LIMIT(S): None established by ACGIH or OSHA.

EFFECTS OF SINGLE OVEREXPOSURE:

SWALLOWING: No evidence of adverse effects from available information.

SKIN ABSORPTION: No evidence of adverse health effects for available information.

INHALATION: No evidence of adverse effects from available information.

SKIN CONTACT: No evidence of adverse effects from available information.

EYE CONTACT: No evidence of adverse effects from available information.

EFFECTS OF REPEATED OVEREXPOSURE:

Although this material is not a skin irritant, submersion by workers of unprotected skin in highly concentrated solutions of this material for prolonged periods of time could result in skin dehydration.

PRODUCT NAME: CARBOWAX SENTRY POLYETHYLENE GLYCOL 400

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:
SRENNONE** DOES NOT EXIST **

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH HAZARD EVALUATION:
5LDNNONE** DOES NOT EXIST **

OTHER EFFECTS OF OVEREXPOSURE:

Overexposure to vapor generated at high temperatures may result in eye and respiratory tract irritation, dizziness, nausea and the inhalation of harmful amounts of material.

EMERGENCY AND FIRST AID PROCEDURES:

SWALLOWING: No harmful effects expected.

SKIN: Wash with soap and water.

INHALATION: No emergency care anticipated.

EYES: Flush with water.

NOTES TO PHYSICIAN: Toxicology studies have shown this material to be of very low acute toxicity and non-irritating. There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition.

VI. REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: None

INCOMPATIBILITY (materials to avoid):

Normally unreactive; however, avoid strong bases at high temperatures, strong acids, strong oxidizing agents and materials reactive with hydroxyl compounds.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:

Burning can produce carbon monoxide and/or carbon dioxide.

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID: None

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Small spills should be flushed with large quantities of water. Larger spills should be collected for disposal.

WASTE DISPOSAL METHOD:

Incinerate in a furnace where permitted under appropriate Federal, State, and local regulations. See Section IX.

VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type):

PRODUCT NAME: CARBOWAX SENTRY POLYETHYLENE GLYCOL 400

None should normally be necessary. If personnel experience respiratory discomfort or irritation, NIOSH approved half-mask respirator equipped with organic vapor cartridge and dust/mist pre-filter recommended.

VENTILATION: General (mechanical) room ventilation is expected to be satisfactory.

PROTECTIVE GLOVES: PVC - coated

EYE PROTECTION: Safety glasses

OTHER PROTECTIVE EQUIPMENT:
Eye bath and safety shower.

IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

ATTENTION! Use product promptly after opening.
Avoid prolonged exposure to heat and air.

OTHER PRECAUTIONS: **DISPOSAL** - Laboratory studies show that, at very low concentrations in water, this material can be biodegraded in a biological wastewater treatment system.

This product may contain trace amounts of ethylene oxide (CAS No. 75-21-8), a condition which creates the potential for accumulation of ethylene oxide in the head space of shipping and storage containers and in enclosed areas where the product is being handled or used. Ethylene oxide is considered by OSHA, IARC, and NTP as a potential carcinogen for humans. OSHA considers that, at excess levels, ethylene oxide may present reproductive, mutagenic, genotoxic, neurologic and sensitization hazards in humans. If this product is handled with adequate ventilation, the presence of these trace amounts is not expected to result in any short or long term hazard.

This product may not be exempt from OSHA's ethylene oxide standard, 29CFR 1910.1047. Users should comply with all applicable provisions. Personnel should be monitored to determine levels of exposure to ethylene oxide. If necessary, protective measures should be taken. The OSHA permissible exposure limit for ethylene oxide is 1 ppm TWA8, the action level is 0.5 ppm TWA8, the ACGIH TLV is 1 ppm TWA8 and OSHA has established an excursion limit of 5 ppm (15 minute average).

WARNING: Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions.

Any use of this product in elevated-temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions. Further information is available in a technical bulletin entitled "Ignition Hazards of Organic Chemical Vapors."

X. REGULATORY INFORMATION

STATUS ON SUBSTANCE LISTS:

The concentrations shown are maximum or ceiling levels (weight %) to be used for calculations for regulations. Trade Secrets are indicated by "TS".

FEDERAL EPA

Comprehensive Environmental Response Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQs) in 40 CFR 302.4.

Components present in this product at a level which could require reporting under the statute are: