

UNION CARBIDE -- HEXYL CARBITOL SOLVENT - INHIBITOR, ICING, FUEL SYSTEM  
MATERIAL SAFETY DATA SHEET  
NSN: 685000D003001  
Manufacturer's CAGE: 61637  
Part No. Indicator: A  
Part Number/Trade Name: HEXYL CARBITOL SOLVENT

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General Information  
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Item Name: INHIBITOR, ICING, FUEL SYSTEM  
Company's Name: UNION CARBIDE CORP., INDUSTRIAL CHEMICALS DIVISION  
Company's Street: 39 OLD RIDGEBURY ROAD  
Company's City: DANBURY  
Company's State: CT  
Company's Country: US  
Company's Zip Code: 06817-0001  
Company's Emerg Ph #: 800-822-4357/PATRICIA CODY AT 203  
Company's Info Ph #: 800-822-4357/ 203-794-3451  
Record No. For Safety Entry: 001  
Tot Safety Entries This Stk#: 001  
Status: SE  
Date MSDS Prepared: 06JUN91  
Safety Data Review Date: 21APR93  
Supply Item Manager: CX  
MSDS Serial Number: BQKWG  
Specification Number: MIL-I-85470  
Hazard Characteristic Code: T6  
Unit Of Issue: NK  
Unit Of Issue Container Qty: UNKNOWN  
Type Of Container: UNKNOWN  
Net Unit Weight: UNKNOWN

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Ingredients/Identity Information  
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Proprietary: NO  
Ingredient: ETHANOL, 2-(2-(HEXYLOXY)ETHOXY)-/HEXYL CARBITOL  
Ingredient Sequence Number: 01  
Percent: 96.400  
NIOSH (RTECS) Number: KL2625000  
CAS Number: 112-59-4  
OSHA PEL: NOT ESTABLISHED  
ACGIH TLV: NOT ESTABLISHED  
Other Recommended Limit: NONE RECOMMENDED  
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Proprietary: NO  
Ingredient: ETHANOL, 2-(HEXYLOXY)/HEXYL CELLOSOLVE  
Ingredient Sequence Number: 02  
Percent: 1.400  
NIOSH (RTECS) Number: KL2450000  
CAS Number: 112-25-4  
OSHA PEL: NOT ESTABLISHED  
ACGIH TLV: NOT ESTABLISHED  
Other Recommended Limit: NONE RECOMMENDED  
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Proprietary: NO

Ingredient: DIETHYLENE GLYCOL MONOBUTYL ETHER/BUTYL CARBITOL  
Ingredient Sequence Number: 03  
Percent: 0.370  
NIOSH (RTECS) Number: KJ9100000  
CAS Number: 112-34-5  
OSHA PEL: NOT ESTABLISHED  
ACGIH TLV: NOT ESTABLISHED  
Other Recommended Limit: NONE RECOMMENDED  
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Proprietary: NO  
Ingredient: 2-BUTOXYETHANOL/BUTYL CELLOSOLVE  
Ingredient Sequence Number: 04  
Percent: 0.002  
NIOSH (RTECS) Number: KJ8575000  
CAS Number: 111-76-2  
OSHA PEL: S, 50 PPM  
ACGIH TLV: S, 25 PPM; 9293  
Other Recommended Limit: NONE RECOMMENDED  
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Proprietary: NO  
Ingredient: OCTYL CELLOSOLVE  
Ingredient Sequence Number: 05  
Percent: 0.027  
NIOSH (RTECS) Number: 10094540C  
OSHA PEL: NOT ESTABLISHED  
ACGIH TLV: NOT ESTABLISHED  
Other Recommended Limit: NONE RECOMMENDED  
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Proprietary: NO  
Ingredient: GLYCOLS (TYPE NOT SPECIFIED)  
Ingredient Sequence Number: 06  
Percent: 0.474  
NIOSH (RTECS) Number: 1001317GL  
OSHA PEL: NOT ESTABLISHED  
ACGIH TLV: NOT ESTABLISHED  
Other Recommended Limit: NONE RECOMMENDED  
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Proprietary: NO  
Ingredient: ALCOHOLS (TYPE NOT SPECIFIED)  
Ingredient Sequence Number: 07  
Percent: 0.203  
NIOSH (RTECS) Number: 1001307AA  
OSHA PEL: NOT ESTABLISHED  
ACGIH TLV: NOT ESTABLISHED  
Other Recommended Limit: NONE RECOMMENDED  
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Proprietary: NO  
Ingredient: WATER  
Ingredient Sequence Number: 08  
Percent: 0.050  
NIOSH (RTECS) Number: ZC0110000  
CAS Number: 7732-18-5  
OSHA PEL: NOT ESTABLISHED  
ACGIH TLV: NOT ESTABLISHED  
Other Recommended Limit: NONE RECOMMENDED  
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Proprietary: NO

Ingredient: ETHANOL, 2-(2-(2-BUTOXYETHOXY)ETHOXY)-/BUTOXY TRIGLYCOL  
Ingredient Sequence Number: 09  
Percent: 0.259  
NIOSH (RTECS) Number: KJ9450000  
CAS Number: 143-22-6  
OSHA PEL: NOT ESTABLISHED.  
ACGIH TLV: NOT ESTABLISHED.  
Other Recommended Limit: NONE RECOMMENDED

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Proprietary: NO  
Ingredient: UNKNOWNNS  
Ingredient Sequence Number: 10  
Percent: BALANCE  
NIOSH (RTECS) Number: 1009455UN  
OSHA PEL: NOT ESTABLISHED  
ACGIH TLV: NOT ESTABLISHED  
Other Recommended Limit: NONE RECOMMENDED

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Physical/Chemical Characteristics  
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Appearance And Odor: WATER-WHITE LIQUID - SWEETISH ODOR  
Boiling Point: 498F,259C  
Melting Point: -40F,-40C  
Vapor Pressure (MM Hg/70 F): <0.001@20C  
Vapor Density (Air=1): 6.6  
Specific Gravity: 0.935  
Decomposition Temperature: UNKNOWN  
Evaporation Rate And Ref: <0.01 (N-BUTYL ACETATE=1)  
Solubility In Water: SOLUBLE  
Percent Volatiles By Volume: NIL  
Corrosion Rate (IPY): UNKNOWN

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Fire and Explosion Hazard Data  
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Flash Point: 271F,133C  
Flash Point Method: PMCC  
Lower Explosive Limit: 0.7  
Upper Explosive Limit: 13.0  
Extinguishing Media: USE ALCOHOL-/ALL-PURPOSE-TYPE FOAM BY MANUFACTURER'S  
RECOMMENDED TECHNIQUES (LARGE FIRE), CO2/DRY CHEMICAL (SMALL FIRE)  
Special Fire Fighting Proc: WEAR PROTECTIVE CLOTHING AND NIOSH-APPROVED  
SELF-CONTAINED BREATHING APPARATUS OPERATED IN THE POSITIVE PRESSURE MODE.  
COOL FIRE EXPOSED CONTAINERS WITH WATER.  
Unusual Fire And Expl Hazrds: THIS MATERIAL MAY PRODUCE A FLOATING FIRE  
HAZARD. CONTAINERS MAY RUPTURE DUE TO VAPOR PRESSURE BUILDUP.

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Reactivity Data  
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Stability: YES  
Cond To Avoid (Stability): EXCESSIVE HEAT  
Materials To Avoid: NONE  
Hazardous Decomp Products: CARBON MONOXIDE, CARBON DIOXIDE  
Hazardous Poly Occur: NO  
Conditions To Avoid (Poly): NOT RELEVANT

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Health Hazard Data  
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LD50-LC50 Mixture: TLV (BUTYL CELLOSOLVE) 25 PPM SKIN(MSDS)  
Route Of Entry - Inhalation: NO  
Route Of Entry - Skin: YES  
Route Of Entry - Ingestion: NO  
Health Haz Acute And Chronic: ACUTE-EYES:MAY CAUSE PAIN, TEARING, BLINKING & CORNEAL INJURY. SKIN:MAY CAUSE ITCHING, REDNESS & SWELLING. MAY BE ABSORBED IN TOXIC AMOUNTS. INHALED:NO SHORT-TERM ADVERSE HEALTH EFFECTS AT AMBIENT TEMPERATURE. ORAL:MODERATELY TOXIC.MAY CAUSE IRRITATION, VOMITING, DIARRHEA, DIZZINESS, LOSS OF CONSCIOUSNESS. CHRONIC-DERMATITIS.  
Carcinogenicity - NTP: NO  
Carcinogenicity - IARC: NO  
Carcinogenicity - OSHA: NO  
Signs/Symptoms Of Overexp: MAY CAUSE EYE PAIN, TEARING, BLINKING & CORNEAL INJURY. MAY CAUSE SKIN ITCHING, REDNESS & SWELLING. MAY BE ABSORBED IN TOXIC AMOUNTS THROUGH SKIN. NO SHORT-TERM ADVERSE HEALTH EFFECTS BY INHALATION, AT AMBIENT TEMPERATURE. MODERATELY TOXIC IF INGESTED. MAY CAUSE IRRITATION, VOMITING, DIARRHEA, DIZZINESS & LOSS OF CONSCIOUSNESS.  
Med Cond Aggravated By Exp: PRE-EXISTING SKIN DISORDERS MAY BE MORE SUSCEPTIBLE TO THIS MATERIAL.  
FLUSH WITH WATER FOR 15 MINUTES, HOLDING EYELIDS OPEN. SKIN:WASH WITH SOAP & WATER. INHALED:NO EMERGENCY CARE ANTICIPATED. ORAL:DO NOT INDUCE VOMITING. IF CONSCIOUS, DRINK TWO GLASSES OF WATER. CONTACT PHYSICIAN. NOTE TO PHYSICIAN:MODERATE ACUTE SYSTEMIC TOXICITY BY INGESTION & SUSTAINED SKIN CONTACT. GASTRIC LAVAGE WITH ENDOTRACHEAL INTUBATION SUGGESTED.

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Precautions for Safe Handling and Use  
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Steps If Matl Released/Spill: WEAR PROTECTIVE EQUIPMENT, ESPECIALLY EYE PROTECTION. SMALL SPILLS COULD BE FLUSHED WITH LARGE AMOUNT OF WATER INTO SEWERS IF PERMITTED. LARGER SPILLS SHOULD BE COLLECTED FOR DISPOSAL.  
Waste Disposal Method: INCINERATE IN A FURNACE WHERE PERMITTED UNDER APPROPRIATE LOCAL, STATE AND FEDERAL REGULATIONS.  
Precautions-Handling/Storing: STORAGE- KEEP CONTAINER TIGHTLY CLOSED. DANGER; CAUSE EYE BURNS. HARMFUL IF ABSORBED THROUGH SKIN OR IF INGESTED.  
Other Precautions: WASH THOROUGHLY AFTER HANDLING. AVOID CONTACT WITH EYES, SKIN AND CLOTHING. KEEP OUT OF REACH OF CHILDREN. DO NOT SWALLOW. FOR INDUSTRIAL USE ONLY. USE WITH ADEQUATE VENTILATION.

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Control Measures  
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Respiratory Protection: NOT REQUIRED FOR USE AT NORMAL TEMPERATURES.  
Ventilation: GENERAL (MECHANICAL) ROOM VENTILATION IS EXPECTED TO BE SATISFACTORY.  
Protective Gloves: BUTYL  
Eye Protection: MONOGOGGLES  
Other Protective Equipment: EYE BATH, SAFETY SHOWER AND CHEMICAL RESISTANT APRON  
Work Hygienic Practices: OBSERVE GOOD PERSONAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES.  
Suppl. Safety & Health Data: WARNING: SUDDEN RELEASE OF HOT ORGANIC CHEMICAL VAPORS OR MISTS FROM PROCESS EQUIPMENT OPERATING AT ELEVATED TEMPERATURE AND PRESSURE MAY RESULT IN IGNITIONS WITHOUT PRESENCE OF OBVIOUS IGNITION SOURCES.

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Transportation Data  
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Trans Data Review Date: 93111

DOT PSN Code: ZZZ  
DOT Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION  
IMO PSN Code: ZZZ  
IMO Proper Shipping Name: NOT REGULATED FOR THIS MODE OF TRANSPORTATION  
IATA PSN Code: ZZZ  
IATA Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION  
AFI PSN Code: ZZZ  
AFI Prop. Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION

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Disposal Data  
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Label Data  
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Label Required: YES  
Technical Review Date: 21APR93  
MFR Label Number: NOT APPLICABLE  
Label Status: F  
Common Name: HEXYL CARBITOL SOLVENT  
Signal Word: WARNING!  
Acute Health Hazard-Moderate: X  
Contact Hazard-Moderate: X  
Fire Hazard-Slight: X  
Reactivity Hazard-None: X  
Special Hazard Precautions: ACUTE-EYES:MAY CAUSE PAIN, TEARING, BLINKING & CORNEAL INJURY. SKIN:MAY CAUSE ITCHING, REDNESS & SWELLING. MAY BE ABSORBED IN TOXIC AMOUNTS. INHALED:NO SHORT-TERM ADVERSE HEALTH EFFECTS AT NORMAL TEMPERATURE. ORAL:MODERATELY TOXIC.MAY CAUSE IRRITATION, VOMITING, DIARRHEA, DIZZINESS, LOSS OF CONSCIOUSNESS. CHRONIC-DERMATITIS. STORAGE-KEEP CONTAINER TIGHTLY CLOSED. DANGER; CAUSE EYE BURNS. FIRST AID- CONSULT PHYSICIAN IF SYMPTOMS PERSIST. EYE:FLUSH WITH WATER FOR 15 MINUTES, HOLDING EYELIDS OPEN. SKIN:WASH WITH SOAP & WATER. INHALED:NO EMERGENCY CARE ANTICIPATED. ORAL:DO NOT INDUCE VOMITING. IF CONSCIOUS, DRINK TWO GLASSES OF WATER. CONTACT PHYSICIAN.  
Protect Eye: Y  
Protect Skin: Y  
Label Name: UNION CARBIDE CORP., INDUSTRIAL CHEMICALS DIVISION  
Label Street: 39 OLD RIDGEBURY ROAD  
Label City: DANBURY  
Label State: CT  
Label Zip Code: 06817-0001  
Label Country: US  
Label Emergency Number: 800-822-4357/PATRICIA CODY AT 203