

UNION CARBIDE CORP LINDE DIV -- ISOPROPANOL ANHYDROUS -- 6810-00-753-4993

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Product Identification
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Product ID:ISOPROPANOL ANHYDROUS

MSDS Date:08/10/1998

FSC:6810

NIIN:00-753-4993

Status Code:A

MSDS Number: CKWQK

=== Responsible Party ===

Company Name:UNION CARBIDE CORP LINDE DIV

Address:39 OLD RIDGEBURY RD

City:DANBURY

State:CT

ZIP:06817-0001

Country:US

Info Phone Num:800-822-4357;

304-744-3487

Emergency Phone Num:800-822-4357

Resp. Party Other MSDS Num.:000000001194

CAGE:36346

=== Contractor Identification ===

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Address:39 OLD RIDGEBURY RD

Box:City:DANBURY

State:CT

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Composition/Information on Ingredients
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Ingred Name:ISOPROPANOL

CAS:67-63-0

RTECS #:NT8050000

= Wt:100.

OSHA PEL:980 MG/M3;400 PPM

OSHA STEL:1225 MG/M3,500 PPM

ACGIH TLV

:983 MG/M3;400 PPM
ACGIH STEL:1230 MG/M3;500 PPM

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===== Hazards Identification =====

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES

Health Hazards Acute and Chronic:ACUTE:INHALATION: HIGH CONCENTRATIONS OF VAPOR MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION, WITH LOSS OF CONSCIOUSNESS. VAPOR CAUSES IRRITATION OF RESPIRATORY TRACT. EYE CONTACT: CAUSES IRRITATION, CORNEAL INJURY. SKIN CONTACT: MAY CAUSE MINOR IRRITATION. PROLONGED OR REPEATED CONTACT MAY CAUSE

DEFATTING AND DRYING OF SKIN. SKIN ABSORPTION: EXPOSURE TO SMALL

QUANTITIES IS NOT EXPECTED TO CAUSE ADVERSE HEALTH EFFECTS. PROLONGED EXPOSURE MAY RESULT IN ABSORPTION OF HARMFUL AMOUNTS, PARTICULARLY IN INFANTS. SWALLOWING: SLIGHTLY TOXIC. MAY CAUSE DIZZINESS. CHRONIC: PROLONGED OR REPEATED SKIN EXPOSURE CAN CAUSE

DEFATTING.

Explanation of Carcinogenicity:NO EVIDENCE SUGGESTIVE OF CARCINOGENIC ACTIVITY WAS NOTED IN CHRONIC VAPOR INHALATION

STUDIES WITH

ISOPROPANOL IN RATS AND MICE.

Effects of Overexposure:INHALATION: CNS DEPRESSION, WEAKNESS, DROWSINESS, LOSS OF CONSCIOUSNESS, RESPIRATORY TRACT IRRITATION, COUGHING, CHEST DISCOMFORT. EYE CONTACT: IRRITATION, STINGING, DISCOMFORT, PAIN, CORNEAL INJURY. SKIN CONTACT: IRRITATION, ITCHING, REDNESS, DEFATTING, DRYING. SKIN ABSORPTION: ADVERSE HEALTH EFFECTS, SAME SIGNS AS FOR INGESTION. INGESTION: DIZZINESS, FAINTNESS, DROWSINESS, DECREASED AWARENESS AND R

ESPONSIVENESS,

LACK OF COORDINATION, ABDOMINAL DISCOMFORT, NAUSEA, VOMITING, DIARRHEA.

Medical Cond Aggravated by Exposure:SKIN CONTACT MAY AGGRAVATE AN EXISTING DERMATITIS.

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===== First Aid Measures =====

First Aid:INHALATION: MOVE TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. IF BREATHING DIFFICULT, GIVE OXYGEN BY QUALIFIED PERSONNEL. GET MEDICAL ATTENTION. EYES: FLUSH WITH WATER, CONTINUE WASHING FOR SEVERAL MINUTES

. REMOVE CONTACT LENSES. GET MEDICAL

ATTENTION. SKIN: REMOVE CONTAMINATED CLOTHING. WASH SKIN WITH SOAP AND WATER. IF IRRITATION PERSISTS OR IF CONTACT HAS BEEN PROLONGED, GET MEDICAL ATTENTION. SWALLOWING: IF PATIENT IS FULLY CONSCIOUS, GIVE TWO GLASSES OF WATER. INDUCE VOMITING. THIS SHOULD BE DONE ONLY BY MEDICAL OR EXPERIENCED FIRST-AID PERSONNEL. GET MEDICAL ATTENTION.

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===== Fire Fighting Measures =====

Flash Point Method:TCC

Flas

h Point:=11.7C, 53.F

Lower Limits:2.0

Upper Limits:12.7

Extinguishing Media:APPLY ALCOHOL-TYPE OR ALL-PURPOSE-TYPE FOAM BY MANUFACTURER'S RECOMMENDED TECHNIQUES FOR LARGE FIRES. USE CARBON DIOXIDE OR DRY CHEMICAL MEDIA FOR SMALL FIRES.

Fire Fighting Procedures:USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS AND STRUCTURES. USE WATER SPRAY TO DISPERSE VAPORS; RE-IGNITION IS POSSIBLE. USE SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING.

Unusual Fire/Explosion Hazard:

PRODUCT VAPORS MAY TRAVEL OR BE MOVED BY AIR CURRENTS AND IGNITED BY PILOT LIGHTS, OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM PRODUCT HANDLING POINT. VAPORS FROM THIS MATERIAL MAY SETTLE IN LOW OR CONFINED AREAS OR TRAVEL A LONG DISTANCE TO AN IGNITION SOURCE AND FLASHBACK EXPLOSIVELY.

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===== Accidental Release Measures =====

Spill Release Procedures:EXTINGUISH IGNITION SOURCE UNTIL AREA IS DETERMINED TO BE FREE FROM FIRE OR EXPLOSION HAZARD

. SMALL SPILLS

CAN BE FLUSHED WITH LARGE AMOUNTS OF WATER, LARGER SPILLS SHOULD BE COLLECTED FOR DISPOSAL. PERSONAL PRECAUTIONS: AVOID CONTACT WITH EYES. WEAR SUITABLE PROTECTIVE EQUIPMENT.

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===== Handling and Storage =====

Handling and Storage Precautions:KEEP AWAY FROM HEAT, SPARKS , FLAMES. AVOID CONTACT WITH EYES. KEEP CONTAINER CLOSED. USE WITH ADEQUATE VENTILATION. VAPORS MAY TRAVEL OR MOVED BY AIR CURRENTS AND IGNITED BY PILOT L

IGHTS, OTHER IGNITION SOURCES DISTANT FROM HANDLING
POINT AND FLASHBACK EXPLOSIVELY. WASH THOROUGHLY AFTER HANDLING.
Other Precautions:VAPOR MAY SETTLE IN LOW OR CONFINED AREAS, OR TRAVEL
A LONG DISTANCE TO AN IGNITION SOURCE AND FLASH BACK EXPLOSIVELY.

===== Exposure Controls/Personal Protection =====

Respiratory Protection:USE SELF-CONTAINED BREATHING APPARATUS IN HIGH
VAPOR CONCENTRATIONS.

Ventilation:GENERAL (MECHANICAL) ROOM VENTILATION IS EXPECTED TO BE

SATISFACTORY WHERE PRODUCT IS STORED AND HANDLED IN CLOSED
EQUIPMENT. (CONTD.SEE SUPPLEMENTAL)

Protective Gloves:PLASTIC, RUBBER.

Eye Protection:MONOGOGGLES.

Other Protective Equipment:EYE BATH, SAFETY SHOWER.

Supplemental Safety and Health

(CONTD FROM VENTILATION) SPECIAL, LOCAL VENTILATION IS NEEDED AT POINTS
WHERE VAPORS CAN BE EXPECTED TO ESCAPE TO THE WORKPLACE AIR.

===== Physical/Chemical Properties =====

HCC:F2

Boiling Pt:=82.3C, 180.1F

Melt/Freeze P

t:=-88.3C, -127.F

Vapor Pres:4.4 KPA (33 MMHG)

Vapor Density:2.1

Spec Gravity:0.787 (H2O=1) 20C/20C

VOC Pounds/Gallon:785

Solubility in Water:100%@ 20C

Appearance and Odor:TRANSPARENT COLORLESS LIQUID, SLIGHT
ETHANOL/ACETONE-LIKE ODOR

Percent Volatiles by Volume:100%

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

STRONG OXIDIZING AGENTS. HALOGENS. STRONG INORGANIC ACIDS. ALDEHYDES.
HALOGEN COMPOUNDS.

Hazardous Decompositio

n Products:CARBON MONOXIDE AND/OR CARBON DIOXIDE.
CARBON MONOXIDE IS HIGHLY TOXIC IF INHALED; CARBON DIOXIDE IN
SUFFICIENT CONCENTRATIONS CAN ACT AS AN ASPHYXIAN.
Conditions to Avoid Polymerization:WILL NOT OCCUR.

===== Toxicological Information =====

Toxicological Information:ACUTE TOXICITY: PERORAL: RAT, LD50: 6.48
(4.80-8.76) ML/KG. MAJOR SIGNS: UNSTEADY GAIT, PROSTRATION, HEAVY
BREATHING. GROSS PATHOLOGY: LUNGS AND ABDOMINAL VISCERA DISCOLORED.

PERCUTANEOUS: RABBIT LD50 24 HR OCCLUDED 8.0 (4.9-13.1 ML/KG.
GROSS PATHOLOGY: LUNGS, LIVER, STOMACH DISCOLORED. INHALATION:
STATIC GENERATION OF VAPOR EXPOSURE TIME 2 H, RABBIT, ROOM
TEMPERATURE, KILL RATE:4/6, MAJOR SIGNS: LACRIMATION, LOSS OF
COORDINATION, PROSTATION. GROSS PATHOLOGY: LUNGS DISCOLORED. THERE
ARE FOUR MORE INHALATION AND ONE MORE IRRITATION TEST RESULTS ON
THE MANUFACTURER'S MSDS BUT SPACE NOT AVAILABL E TO INCLUDE HERE.

===== Ecological Information =====

Ecological:ENVIRONMENTAL FATE: BOD (% OXYGEN CONSUMPTION): DAY5=28%;
DAY 10=77%; DAY 20=78%. ECOTOXICITY TO MICRO-ORGANISMS: BACTERIAL/NA
IC50 5000 MG/L. ECOTOXICITY TO AQUATIC INVEREBRATES: DAPHNIA LC50
48 H 755 0 MG/L. ECOTOXICITY TO FISH: FATHEAD MINNOW LC50 96 H 8300
MG/L. FURTHER INFORMATION: TI IOD (MEASURED) 2.30 MG/MG. TI IOD
(CALCULATED) 2.40 MG/MG. OCTANOL/WATER PARTITION
COEFFICIENT-MEASURED: 0.14.

===== Disposal Considerations =====

Waste Disposal Methods:INCINERATE IN FURNACE IF PERMITTED UNDER
FEDERAL, STATE, LOCAL REGULATIONS. DISPOSE IN ACCORDANCE WITH
APPLICABLE FEDERAL, STATE, PROVINCIAL, LOCAL ENVIRONMENTAL
REGULATIONS. EMPTY CONTAINERS SHOULD B E RECYCLED OR DISPOSED OF
THROUGH APPROVED WASTE MANAGEMENT FACILITY. PRODUCT IS
BIODEGRADABLE IN BI OLOGICAL WASTEWATER TREATMENT PLANT.

===== MSDS Transport Information =====

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Transport Information:U.S. D.O.T.: NON-BULK: PROPER SHIPPING NAME:
ISOPROPANOL; UN 1219; HAZARD CLASS: 3; PKG: I I. BULK: PROPER
SHIPPING NAME: ISOPROPANOL; UN1219; HAZARD CLASS: 3; PKG: I I.
ADDITIONAL TRANSPORTATION SYST EM INFORMATION CAN BE OBTAINED
THROUGH YOUR UCC SALES OR CUSTOMER SERVICE REPRESENTATIVE.

===== Regulatory Information =====

SARA Title III Information:SECTIONS 302 AND 304: NONE OF THE COMPONENTS
OF THIS PRODUCT AR
E LISTED AS EXTREMELY HAZARDOUS SUBSTANCES IN 40
CFR PART 355 AND ARE PRESENT AT LEVELS WHICH COULD REQUIRE
REPORTING AND EMERGENCY PLANN ING. SECTION 313: NONE OF THE
COMPONENTSOF THIS PRODUCT ARE LISTED AS TOXIC CHEMICALS IN 40 CFR
372.65 AND ARE PRESENT AT LEVELS WHICH COULD REQUIRE REPORTING AND
CUSTOMER NOTIFICATION UNDER SECTION 3 13 AND 40 CFR PART 372.
SECTION 311 AND 312: DELAYED HAZARD: YES; FIRE HAZARD: YES;
IMMEDIATE HEALTH HAZARD: YES; REACTIVE HAZARD; NO
; SUDDEN RELEASE
OF PRESSURE HAZARD: NO.

Federal Regulatory Information:CERCLA:SECTION 103: NO COMPONENTS OF
THIS PRODUCT ARE LISTED AS HAZARDOUS SUBSTANCES IN 40 CFR 302.4
(UNLISTED HAZARDOUS SUBSTANCES NOT IDENTIFIED) AND PRESENT AT
LEVELS WHICH COULD REQUIRE REPORTING. TOXIC SUBSTANCES CONTROL ACT
(TSCA):ALL COMPONENTS OF THIS PRODUCT ARE ON TSCA INVENTORY OR ARE
EXEMPT FROM TSCA INVENTORY REQUIREMENTS. CONTD. FROM STATE)NO
LISTED SUBSTANCES KNOWN TO CALIFORNIA TO
CAUSE CANCER, BIRTH
DEFECTS, OTHER REPRODUCTIVE HARM, AT LEVELS WHICH WOULD REQUIRE A
WARNING UNDER T HIS STATUTE. CA. SCAQMD RULE 443.1: VOC: 785 G/L
VAPOR PRESSURE 33MMHG @ 20C.

State Regulatory Information:PENNSYLVANIA: THIS PRODUCT IS SUBJECT TO
THE WORKER AND COMMUNITY RIGHT-TO-KNOW ACT. THE FOLLOWING
COMPONENTS OF THIS PRODUCT ARE AT LEVELS WHICH COULD REQUIRE
IDENTIFICATION IN THE MSDS: ISOPROPANOL, CAS# 67-63-0,