

# *Chem-Impex International Inc.*

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## SAFETY DATA SHEET

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### SECTION 1. CHEMICAL IDENTIFICATION

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CATALOG #: 34452

NAME: Isopropyl alcohol

SYNONYMS: 2-Propanol  
IPA

24 HOUR EMERGENCY TELEPHONE: (800) 535-5053(USA)  
352-323-3500 (INTERNATIONAL)

TO REQUEST AN MSDS: (800) 869-9290

CUSTOMER SERVICE: (630) 766-2112

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### SECTION 2. HAZARDS IDENTIFICATION

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#### CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

#### GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)

FLAMMABLE LIQUIDS (CATEGORY 2), H225

EYE IRRITATION (CATEGORY 2A), H319

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (CATEGORY 3), CENTRAL NERVOUS SYSTEM, H336

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

#### GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

PICTOGRAM



SIGNAL WORD

DANGER

**HAZARD STATEMENT(S)**

H225 HIGHLY FLAMMABLE LIQUID AND VAPOUR  
H319 CAUSES SERIOUS EYE IRRITATION  
H336 MAY CAUSE DROWSINESS OR DIZZINESS.

**PRECAUTIONARY STATEMENT(S)**

P210 KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT SURFACES. - NO SMOKING.  
P233 KEEP CONTAINER TIGHTLY CLOSED.  
P240 GROUND/BOND CONTAINER AND RECEIVING EQUIPMENT.  
P241 USE EXPLOSION-PROOF ELECTRICAL/ VENTILATING/ LIGHTING EQUIPMENT.  
P242 USE ONLY NON-SPARKING TOOLS.  
P243 TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGE.  
P261 AVOID BREATHING DUST/ FUME/ GAS/ MIST/ VAPOURS/ SPRAY.  
P264 WASH THOROUGHLY AFTER HANDLING.  
P271 USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA.  
P280 WEAR PROTECTIVE GLOVES/ EYE PROTECTION/ FACE PROTECTION.  
P303 + P361 + P353 IF ON SKIN (OR HAIR): TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/SHOWER.  
P304 + P340 + P312 IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP COMFORTABLE FOR BREATHING. CALL A POISON CENTER/DOCTOR IF YOU FEEL UNWELL.  
P305 + P351 + P338 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING.  
P337 + P313 IF EYE IRRITATION PERSISTS: GET MEDICAL ADVICE/ ATTENTION.  
P370 + P378 IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR ALCOHOL-RESISTANT FOAM TO EXTINGUISH.  
P403 + P233 STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED.  
P403 + P235 STORE IN A WELL-VENTILATED PLACE. KEEP COOL  
P405 STORE LOCKED UP.  
P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED WASTE DISPOSAL PLANT.

**HAZARDS NOT OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS**

MAY FORM EXPLOSIVE PEROXIDES.

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

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MF: C<sub>3</sub>H<sub>8</sub>O  
MW: 60.10  
CAS-NO. 67-63-0  
PURITY: 99 - 100% (Assay)

**HAZARDOUS COMPONENTS**

| COMPONENT         | CLASSIFICATION   | CONCENTRATION |
|-------------------|--|---------------|
| Isopropyl alcohol |  |               |
|                   | FLAM. LIQ. 2; EYE IRRIT. 2A;<br>STOT SE 3; H225, H319, H336<br><br>CONCENTRATION LIMITS: >= 20<br>%: STOT SE 3, H336 | <= 100 %      |

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

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**SECTION 4. FIRST-AID MEASURES**

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**DESCRIPTION OF FIRST AID MEASURES**

**GENERAL ADVICE** SHOW THIS MATERIAL SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.

**IF INHALED** AFTER INHALATION: FRESH AIR. CALL IN PHYSICIAN.

**IN CASE OF SKIN CONTACT** IN CASE OF SKIN CONTACT: TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/ SHOWER

**IN CASE OF EYE CONTACT** AFTER EYE CONTACT: RINSE OUT WITH PLENTY OF WATER. CALL IN OPHTHALMOLOGIST. REMOVE CONTACT LENSES.

**IF SWALLOWED** AFTER SWALLOWING: IMMEDIATELY MAKE VICTIM DRINK WATER (TWO GLASSES AT MOST). CONSULT A PHYSICIAN.

**MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED** THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE SECTION 2.2) AND/OR IN SECTION 11.

**INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED** NO DATA AVAILABLE

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## **SECTION 5. FIRE AND EXPLOSION DATA**

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### **EXTINGUISHING MEDIA**

#### **SUITABLE EXTINGUISHING MEDIA**

SUITABLE EXTINGUISHING MEDIA  
CARBON DIOXIDE (CO<sub>2</sub>) FOAM DRY POWDER

UNSUITABLE EXTINGUISHING MEDIA  
FOR THIS SUBSTANCE/MIXTURE NO LIMITATIONS OF  
EXTINGUISHING AGENTS ARE GIVEN.

#### **SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE**

CARBON OXIDES  
COMBUSTIBLE.  
PAY ATTENTION TO FLASHBACK.  
VAPORS ARE HEAVIER THAN AIR AND MAY SPREAD  
ALONG FLOORS.  
DEVELOPMENT OF HAZARDOUS COMBUSTION GASES OR  
VAPOURS POSSIBLE IN THE EVENT OF FIRE.  
FORMS EXPLOSIVE MIXTURES WITH AIR AT AMBIENT  
TEMPERATURES.

#### **ADVICE FOR FIREFIGHTERS**

IN THE EVENT OF FIRE, WEAR SELF-CONTAINED  
BREATHING APPARATUS.

#### **FURTHER INFORMATION**

REMOVE CONTAINER FROM DANGER ZONE AND COOL  
WITH WATER. PREVENT FIRE EXTINGUISHING WATER  
FROM CONTAMINATING SURFACE WATER OR THE  
GROUND WATER SYSTEM.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

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#### **PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES**

ADVICE FOR NON-EMERGENCY PERSONNEL: DO NOT  
BREATHE VAPORS, AEROSOLS. AVOID SUBSTANCE  
CONTACT. ENSURE ADEQUATE VENTILATION. KEEP AWAY  
FROM HEAT AND SOURCES OF IGNITION.  
EVACUATE THE DANGER AREA, OBSERVE EMERGENCY  
PROCEDURES, CONSULT AN EXPERT.  
FOR PERSONAL PROTECTION SEE SECTION 8.

#### **ENVIRONMENTAL PRECAUTIONS**

DO NOT LET PRODUCT ENTER DRAINS. RISK OF  
EXPLOSION.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP**

COVER DRAINS. COLLECT, BIND, AND PUMP OFF SPILLS. OBSERVE POSSIBLE MATERIAL RESTRICTIONS (SEE SECTIONS 7 AND 10). DISPOSE OF PROPERLY. CLEAN UP AFFECTED AREA

**REFERENCE TO OTHER SECTIONS**

FOR DISPOSAL SEE SECTION 13.

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**SECTION 7. HANDLING AND STORAGE**

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**PRECAUTIONS FOR SAFE HANDLING**

WORK UNDER HOOD. DO NOT INHALE SUBSTANCE/MIXTURE. AVOID GENERATION OF VAPOURS/AEROSOLS.  
KEEP AWAY FROM OPEN FLAMES, HOT SURFACES AND SOURCES OF IGNITION.TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGE.  
CHANGE CONTAMINATED CLOTHING. WASH HANDS AFTER WORKING WITH SUBSTANCE.  
FOR PRECAUTIONS SEE SECTION 2.2.

**CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES**

KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE. KEEP AWAY FROM HEAT AND SOURCES OF IGNITION.

HANDLE AND STORE UNDER INERT GAS. HYGROSCOPIC  
STORAGE CLASS (TRGS 510): 3: FLAMMABLE LIQUIDS

Store at RT

**SPECIFIC END USE(S)**

APART FROM THE USES MENTIONED IN SECTION 1.2 NO OTHER SPECIFIC USES ARE STIPULATED.

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**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**CONTROL PARAMETERS**

**COMPONENTS WITH WORKPLACE CONTROL PARAMETERS**

| COMPONENT         | CAS-NO. | VALUE                                  | CONTROL PARAMETERS | BASIS                                   |
|-------------------|---------|--|--------------------|---|
| Isopropyl alcohol | 67-63-0 | TWA                                    | 200 PPM            | USA. ACGIH THRESHOLD LIMIT VALUES (TLV) |
|                   | REMARKS | NOT CLASSIFIABLE AS A HUMAN CARCINOGEN |                    |   |
|                   |         | STEL                                   | 400 PPM            | USA. ACGIH THRESHOLD LIMIT VALUES (TLV) |
|                   |         | NOT CLASSIFIABLE AS A HUMAN CARCINOGEN |                    |   |

|  |  |      |                        |  |
|--|--|------|------------------------|--|
|  |  | ST   | 500 PPM<br>1,225 MG/M3 | USA. NIOSH RECOMMENDED EXPOSURE LIMITS   |
|  |  | TWA  | 400 PPM<br>980 MG/M3   | USA. NIOSH RECOMMENDED EXPOSURE LIMITS   |
|  |  | TWA  | 400 PPM<br>980 MG/M3   | USA. OCCUPATIONAL EXPOSURE LIMITS (OSHA) - TABLE Z-1 LIMITS FOR AIR CONTAMINANTS |
|  |  | PEL  | 400 PPM<br>980 MG/M3   | CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS                 |
|  |  | STEL | 500 PPM<br>1,225 MG/M3 | CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS                 |

#### BIOLOGICAL OCCUPATIONAL EXPOSURE LIMITS

| COMPONENT         | CAS-NO. | PARAMETERS                      | VALUE   | BIOLOGICAL SPECIMEN | BASIS                                     |
|-------------------|---------|---------------------------------|---------|---------------------|---|
| Isopropyl alcohol | 67-63-0 | ACETONE                         | 40 MG/L | URINE               | ACGIH - BIOLOGICAL EXPOSURE INDICES (BEI) |
|                   | REMARKS | END OF SHIFT AT END OF WORKWEEK |         |                     |   |

#### DERIVED NO EFFECT LEVEL (DNEL)

| APPLICATION AREA | ROUTES OF EXPOSURE | HEALTH EFFECT              | VALUE          |
|------------------|--------------------|----------------------------|----------------|
| WORKERS          | INHALATION         | LONG-TERM SYSTEMIC EFFECTS | 500 MG/M3      |
| WORKERS          | SKIN CONTACT       | LONG-TERM SYSTEMIC EFFECTS | 888 MG/KG BW/D |
| CONSUMERS        | INHALATION         | LONG-TERM SYSTEMIC EFFECTS | 89 MG/M3       |
| CONSUMERS        | SKIN CONTACT       | LONG-TERM SYSTEMIC EFFECTS | 319 MG/KG BW/D |
| CONSUMERS        | INGESTION          | LONG-TERM SYSTEMIC EFFECTS | 26 MG/KG BW/D  |

#### PREDICTED NO EFFECT CONCENTRATION (PNEC)

| COMPARTMENT          | VALUE      |
|----------------------|------------|
| SOIL                 | 28 MG/KG   |
| SEA WATER            | 140.9 MG/L |
| FRESH WATER          | 140.9 MG/L |
| SEA SEDIMENT         | 552 MG/KG  |
| FRESH WATER SEDIMENT | 552 MG/KG  |

#### EXPOSURE CONTROLS

**APPROPRIATE ENGINEERING CONTROLS** CHANGE CONTAMINATED CLOTHING. WASH HANDS AFTER WORKING WITH SUBSTANCE.

#### PERSONAL PROTECTIVE EQUIPMENT

|  |  |
|--|--|
| <b>EYE/FACE PROTECTION</b>               | USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU). SAFETY GLASSES   |
| <b>SKIN PROTECTION</b>                   | HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED PRIOR TO USE. USE PROPER GLOVE REMOVAL TECHNIQUE (WITHOUT TOUCHING GLOVE'S OUTER SURFACE) TO AVOID SKIN CONTACT WITH THIS PRODUCT. DISPOSE OF CONTAMINATED GLOVES AFTER USE IN ACCORDANCE WITH APPLICABLE LAWS AND GOOD LABORATORY PRACTICES. WASH AND DRY HANDS. |
| <b>BODY PROTECTION</b>                   | FLAME RETARDANT ANTISTATIC PROTECTIVE CLOTHING.  |
| <b>RESPIRATORY PROTECTION</b>            | REQUIRED WHEN VAPOURS/AEROSOLS ARE GENERATED. OUR RECOMMENDATIONS ON FILTERING RESPIRATORY PROTECTION ARE BASED ON THE FOLLOWING STANDARDS: DIN EN 143, DIN 14387 AND OTHER ACCOMPANYING STANDARDS RELATING TO THE USED RESPIRATORY PROTECTION SYSTEM.   |
| <b>CONTROL OF ENVIRONMENTAL EXPOSURE</b> | DO NOT LET PRODUCT ENTER DRAINS. RISK OF EXPLOSION.  |

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## **SECTION 9.      PHYSICAL AND CHEMICAL PROPERTIES**

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### **INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES**

|  |   |
|--|---|
| APPEARANCE                                   | Clear, colorless liquid   |
| ODOUR  | ALCOHOL-LIKE  |
| ODOUR THRESHOLD                              | 1 PPM   |
| PH   | AT 20 °C NEUTRAL  |
| MELTING POINT/FREEZING POINT                 |   |
| BOILING POINT                                | 81 - 83 °C  |
| FLASH POINT                                  | 12 °C   |
| EVAPORATION RATE                             | 3.0   |
| FLAMMABILITY (SOLID, GAS)                    | NO DATA AVAILABLE   |
| UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS | UPPER EXPLOSION LIMIT: 13.4 %(V)<br>LOWER EXPLOSION LIMIT: 2 %(V) |
| VAPOUR PRESSURE                              | 43 HPA AT 20 °C   |
| VAPOUR DENSITY                               | 2.07  |
| RELATIVE DENSITY                             | 0.79  |
| WATER SOLUBILITY                             | SOLUBLE   |
| PARTITION COEFFICIENT: N- OCTANOL/WATER      | LOG POW: 0.05 - BIOACCUMULATION IS NOT EXPECTED.                  |

|                           |  |
|---------------------------|--|
| AUTO-IGNITION TEMPERATURE | 425.0 C  |
| DECOMPOSITION TEMPERATURE | DISTILLABLE IN AN UNDECOMPOSED STATE AT NORMAL PRESSURE. |
| VISCOSITY                 | NO DATA AVAILABLE  |
| EXPLOSIVE PROPERTIES      | NO DATA AVAILABLE  |
| OXIDIZING PROPERTIES      | NO DATA AVAILABLE  |

**OTHER SAFETY INFORMATION**

|                         |                     |
|-------------------------|---------------------|
| MINIMUM IGNITION ENERGY | 0.65 MJ             |
| CONDUCTIVITY            | < 0.1 MS/CM         |
| SURFACE TENSION         | 20.8 MN/M AT 25.0 C |
| RELATIVE VAPOR DENSITY  | 2.07                |

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**SECTION 10. STABILITY AND REACTIVITY**

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|   |  |
|---|--|
| <b>REACTIVITY</b>                         | VAPORS MAY FORM EXPLOSIVE MIXTURE WITH AIR.  |
| <b>CHEMICAL STABILITY</b>                 | REACTS WITH AIR TO FORM PEROXIDES. THE PRODUCT IS CHEMICALLY STABLE UNDER STANDARD AMBIENT CONDITIONS. TEST FOR PEROXIDE FORMATION BEFORE DISTILLATION OR EVAPORATION. TEST FOR PEROXIDE FORMATION OR DISCARD AFTER 1 YEAR. STABLE UNDER RECOMMENDED STORAGE CONDITIONS. |
| <b>POSSIBILITY OF HAZARDOUS REACTIONS</b> | VAPORS MAY FORM EXPLOSIVE MIXTURE WITH AIR.  |
| <b>CONDITIONS TO AVOID</b>                | WARMING.   |
| <b>INCOMPATIBLE MATERIALS</b>             | RUBBER, VARIOUS PLASTICS, OILS   |
| <b>HAZARDOUS DECOMPOSITION PRODUCTS</b>   | IN THE EVENT OF FIRE: SEE SECTION 5  |

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**SECTION 11. TOXICOLOGICAL INFORMATION**

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**INFORMATION ON TOXICOLOGICAL EFFECTS**



|  |   |
|--|---|
| <b>ACUTE TOXICITY</b>                        | <p>LD50 ORAL - RAT - 5,840 MG/KG<br/>(OECD TEST GUIDELINE 401)</p> <p>LC50 INHALATION - RAT - MALE AND FEMALE - 4 H - 37.5<br/>MG/L - VAPOR<br/>(OECD TEST GUIDELINE 403)</p> <p>LD50 DERMAL - RABBIT - 12,800 MG/KG<br/>REMARKS: (RTECS)</p> <p>NO DATA AVAILABLE</p>  |
| <b>SKIN<br/>CORROSION/IRRITATION</b>         | <p>SKIN - RABBIT<br/>RESULT: NO SKIN IRRITATION - 4 H<br/>(OECD TEST GUIDELINE 404)</p>   |
| <b>SERIOUS EYE<br/>DAMAGE/EYE IRRITATION</b> | <p>EYES - RABBIT<br/>RESULT: EYE IRRITATION<br/>(OECD TEST GUIDELINE 405)<br/>REMARKS: (REGULATION (EC) NO 1272/2008, ANNEX VI)</p>   |
| <b>RESPIRATORY OR SKIN<br/>SENSITISATION</b> | <p>BUEHLER TEST - GUINEA PIG<br/>RESULT: NEGATIVE<br/>(OECD TEST GUIDELINE 406)</p>   |
| <b>GERM CELL<br/>MUTAGENICITY</b>            | <p>TEST TYPE: AMES TEST<br/>TEST SYSTEM: SALMONELLA TYPHIMURIUM<br/>METABOLIC ACTIVATION: WITH AND WITHOUT<br/>METABOLIC ACTIVATION<br/>METHOD: OECD TEST GUIDELINE 471<br/>RESULT: NEGATIVE<br/>TEST TYPE: IN VITRO MAMMALIAN CELL GENE MUTATION<br/>TEST<br/>TEST SYSTEM: CHINESE HAMSTER OVARY CELLS<br/>METABOLIC ACTIVATION: WITH AND WITHOUT<br/>METABOLIC ACTIVATION<br/>METHOD: OECD TEST GUIDELINE 476<br/>RESULT: NEGATIVE<br/>TEST TYPE: IN VIVO MICRONUCLEUS TEST<br/>SPECIES: MOUSE<br/>CELL TYPE: BONE MARROW<br/>APPLICATION ROUTE: INTRAPERITONEAL INJECTION<br/>METHOD: OECD TEST GUIDELINE 474<br/>RESULT: NEGATIVE</p> |
| <b>CARCINOGENICITY</b>                       | <p>THIS PRODUCT IS OR CONTAINS A COMPONENT THAT IS NOT CLASSIFIABLE AS TO ITS<br/>CARCINOGENICITY BASED ON ITS IARC, ACGIH, NTP, OR EPA CLASSIFICATION.<br/>IARC: NO INGREDIENT OF THIS PRODUCT PRESENT AT LEVELS<br/>GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS<br/>PROBABLE, POSSIBLE OR CONFIRMED HUMAN<br/>CARCINOGEN BY IARC.</p>  |

|   |   |
|---|---|
| NTP:  | NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A KNOWN OR ANTICIPATED CARCINOGEN BY NTP.   |
| OSHA:   | NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS ON OSHA S LIST OF REGULATED CARCINOGENS.  |
| <b>REPRODUCTIVE TOXICITY</b>                              | NO DATA AVAILABLE   |
| <b>SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE</b>   | INHALATION, ORAL - MAY CAUSE DROWSINESS OR DIZZINESS. - CENTRAL NERVOUS SYSTEM<br>REMARKS: CLASSIFIED ACCORDING TO REGULATION (EU) 1272/2008, ANNEX VI (TABLE 3.1/3.2)  |
| <b>SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE</b> | NO DATA AVAILABLE   |
| <b>ASPIRATION HAZARD</b>                                  | NO DATA AVAILABLE   |
| <b>ADDITIONAL INFORMATION</b>                             | RTECS: NT8050000<br><br>CENTRAL NERVOUS SYSTEM DEPRESSION, PROLONGED OR REPEATED EXPOSURE CAN CAUSE:, NAUSEA, HEADACHE, VOMITING, NARCOSIS, DROWSINESS, OVEREXPOSURE MAY CAUSE MILD, REVERSIBLE LIVER EFFECTS, ASPIRATION MAY LEAD TO: LUNG EDEMA, PNEUMONIA<br>TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.<br><br>AFTER ABSORPTION:<br><br>HEADACHE<br>DIZZINESS<br>INEBRIATION<br>UNCONSCIOUSNESS<br>NARCOSIS<br><br>AFTER UPTAKE OF LARGE QUANTITIES:<br><br>COMA<br><br>HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICE.<br><br>KIDNEY - IRREGULARITIES - BASED ON HUMAN EVIDENCE |

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**SECTION 12. ECOLOGICAL INFORMATION**

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**TOXICITY**

|   |  |
|---|--|
| TOXICITY TO FISH                                    | FLOW-THROUGH TEST LC50 - PIMEPHALES PROMELAS (FATHEAD MINNOW) - 9,640 MG/L - 96 H<br><br>(OECD TEST GUIDELINE 203) |
| TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES | EC50 - DAPHNIA MAGNA (WATER FLEA) - 13,299 MG/L - 48 H<br><br>REMARKS: (IUCLID)                                    |
| TOXICITY TO ALGAE                                   | IC50 - DESMODESMUS SUBSPICATUS (GREEN ALGAE) - > 1,000 MG/L - 72H<br><br>REMARKS: (IUCLID)                         |
| TOXICITY TO BACTERIA                                | EC5 - PSEUDOMONAS PUTIDA - 1,050 MG/L - 16 H<br><br>REMARKS: (LIT.)  |

**PERSISTENCE AND DEGRADABILITY**

|                                    |  |
|------------------------------------|--|
| BIODEGRADABILITY                   | AEROBIC - EXPOSURE TIME 5 D<br><br>RESULT: 53 % - READILY BIODEGRADABLE.<br><br>(DIRECTIVE 67/548/EEC, ANNEX V, C.6) |
| THEORETICAL OXYGEN DEMAND          | 2,400 MG/G<br><br>REMARKS: (LIT.)  |
| RATIO BOD/THBOD                    | 49 %<br><br>REMARKS: (IUCLID)  |
| BIOACCUMULATIVE POTENTIAL          | NO BIOACCUMULATION IS TO BE EXPECTED (LOG POW <= 4).   |
| MOBILITY IN SOIL                   | NO DATA AVAILABLE  |
| RESULTS OF PBT AND VPVB ASSESSMENT | PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT CONDUCTED                           |
| OTHER ADVERSE EFFECTS              | NO DATA AVAILABLE  |

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**SECTION 13. DISPOSAL CONSIDERATIONS**

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**WASTE TREATMENT METHODS**

**PRODUCT**

WASTE MATERIAL MUST BE DISPOSED OF IN ACCORDANCE WITH THE NATIONAL AND LOCAL REGULATIONS. LEAVE CHEMICALS IN ORIGINAL CONTAINERS. NO MIXING WITH OTHER WASTE.

**CONTAMINATED  
PACKAGING**

DISPOSE OF AS UNUSED PRODUCT.

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**SECTION 14. TRANSPORT INFORMATION**

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**DOT (US)**

PROPER SHIPPING NAME: ISOPROPANOL  
UN NUMBER: 1219  
CLASS: 3  
PACKING GROUP: II  
REPORTABLE QUANTITY  
(RQ):  
POISON INHALATION HAZARD: NO

**IMDG**

PROPER SHIPPING NAME: ISOPROPANOL  
UN NUMBER: 1219  
CLASS: 3  
PACKING GROUP: II  
EMS-NO: F-E, S-D

**IATA**

PROPER SHIPPING NAME: ISOPROPANOL  
UN NUMBER: 1219  
CLASS: 3  
PACKING GROUP: II

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**SECTION 15. REGULATORY INFORMATION**

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**SARA 302 COMPONENTS**

THIS MATERIAL DOES NOT CONTAIN ANY COMPONENTS WITH A SECTION 302 EHS TPQ.

**SARA 313 COMPONENTS**

THE FOLLOWING COMPONENTS ARE SUBJECT TO REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313:

|                   | CAS NO. | REVISION DATE |
|-------------------|---------|---------------|
| Isopropyl alcohol | 67-63-0 | 03-01-2007    |

**SARA 311/312 HAZARDS**

FIRE HAZARD, ACUTE HEALTH HAZARD, CHRONIC HEALTH HAZARD

**MASSACHUSETTS RIGHT TO KNOW COMPONENTS**

|                   | CAS NO. | REVISION DATE |
|-------------------|---------|---------------|
| Isopropyl alcohol | 67-63-0 | 03-01-2007    |

**PENNSYLVANIA RIGHT TO KNOW COMPONENTS**

|                   | CAS NO. | REVISION DATE |
|-------------------|---------|---------------|
| Isopropyl alcohol | 67-63-0 | 03-01-2007    |

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**SECTION 16. OTHER INFORMATION**

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**FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.**

|      |   |
|------|---|
| H225 | HIGHLY <u>FLAMMABLE</u> LIQUID AND VAPOUR |
| H319 | CAUSES SERIOUS EYE <u>IRRITATION</u>      |
| H336 | MAY CAUSE DROWSINESS OR DIZZINESS.        |

**MSDS LEGEND**

|        |  |
|--------|--|
| MW:    | MOLECULAR WEIGHT   |
| MF:    | MOLECULAR FORMULA  |
| VOC:   | VOLATILE ORGANIC COMPOUNDS                               |
| ACGIH: | AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGINISTS |
| CAS:   | CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER                |
| OSHA:  | OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION            |
| PEL:   | PERMISSIBLE EXPOSURE LIMIT (OSHA)                        |
| TLV:   | THRESHOLD LIMIT VALUE (ACGIH)                            |

**IMPORTANT:**

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