Chem-Impex International Inc.

Tel: (630) 766-2112 E-mail: <u>sales@chemimpex.com</u> Shipping and Correspondence: 935 Dillon Drive Wood Dale, IL 60191 USA Fax: (630) 766-2218 Web site: <u>www.chemimpex.com</u> Manufacturing site: 825 Dillon Drive Wood Dale, IL 60191 USA

SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

| CATALOG #: | 31721 |
|----------------------|-----------------------------------|
| NAME: | 1-Dodecanol |
| SYNONYMS: | Dodecyl alcohol Lauryl alcohol |
| 24 HOUR EMERGENCY | (800) 535-5053(USA) |
| TELEPHONE: | 352-323-3500 (INTERNATIONAL) |
| TO REQUEST AN MSDS: | (800) 869-9290 |
| CUSTOMER SERVICE: | (630) 766-2112 |

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS) EYE IRRITATION (CATEGORY 2A), H319 SHORT-TERM (ACUTE) AQUATIC HAZARD (CATEGORY 1), H400 LONG-TERM (CHRONIC) AQUATIC HAZARD (CATEGORY 1), H410 FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

| GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS | | |
|--|---|--|
| PICTOGRAM | | |
| SIGNAL WORD | WARNING | |
| HAZARD STATEMENT(| S) | |
| H319 | CAUSES SERIOUS EYE IRRITATION. | |
| H410 | VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING | |
| | EFFECTS. | |
| PRECAUTIONARY STATEMENT(S) | | |
| P264 | WASH SKIN THOROUGHLY AFTER HANDLING. | |
| P273 | AVOID RELEASE TO THE ENVIRONMENT. | |
| P280 | WEAR PROTECTIVE GLOVES/ EYE PROTECTION/ FACE | |
| | PROTECTION. | |
| 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. | |
| P391 | COLLECT SPILLAGE. | |
| P501 | DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED | |
| | WASTE DISPOSAL PLANT. | |
| HAZARDS NOT | NONE | |

OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

| MF: | $\mathrm{C}_{12}\mathrm{H}_{26}\mathrm{O}$ |
|-----|--|
| MW: | 186.33 |

CAS-NO. 112-53-8

PURITY:

HAZARDOUS COMPONENTS

| COMPONENT | CLASSIFICATION | CONCENTRATION |
|-------------|---|---------------|
| 1-Dodecanol | | |
| | EYE IRRIT. 2A; AQUATIC ACUTE 1; AQUATIC CHRONIC 1; H319, H400, H410 | <= 100 % |

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

SECTION 4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

| GENERAL ADVICE | CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.MOVE OUT OF DANGEROUS AREA. |
|--|---|
| IF INHALED | IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. CONSULT A PHYSICIAN. |
| IN CASE OF SKIN CONTACT | WASH OFF WITH SOAP AND PLENTY OF WATER. CONSULT A PHYSICIAN. |
| IN CASE OF EYE CONTACT | RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND CONSULT A PHYSICIAN. |
| IF SWALLOWED | NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER. 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 |

SECTION 5. FIRE AND EXPLOSION DATA

EXTINGUISHING MEDIA

| SUITABLE | USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY |
|---------------------|--|
| EXTINGUISHING MEDIA | CHEMICAL OR CARBON DIOXIDE. |

SPECIAL HAZARDSCARBON OXIDESARISING FROM THESUBSTANCE OR MIXTURE

ADVICE FORWEAR SELF CONTAINED BREATHING APPARATUS FOR**FIREFIGHTERS**FIRE FIGHTING IF NECESSARY.

FURTHER INFORMATION NO DATA AVAILABLE

SECTION 6. ACCIDENTAL RELEASE MEASURES

| PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY | USE PERSONAL PROTECTIVE EQUIPMENT. AVOID DUST FORMATION. AVOID BREATHING VAPOURS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. AVOID BREATHING DUST. |
|--|--|
| PROCEDURES | FOR PERSONAL PROTECTION SEE SECTION 8. |
| ENVIRONMENTAL PRECAUTIONS | PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED. |
| METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP | PICK UP AND ARRANGE DISPOSAL WITHOUT CREATING DUST. SWEEP UP AND SHOVEL. KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL. |
| REFERENCE TO OTHER SECTIONS | FOR DISPOSAL SEE SECTION 13. |

SECTION 7. HANDLING AND STORAGE

| PRECAUTIONS FOR SAFE HANDLING | AVOID CONTACT WITH SKIN AND EYES. AVOID FORMATION OF DUST AND AEROSOLS.FURTHER PROCESSING OF SOLID MATERIALS MAY RESULT IN THE FORMATION OF COMBUSTIBLE DUSTS. THE POTENTIAL FOR COMBUSTIBLE DUST FORMATION SHOULD BE TAKEN INTO CONSIDERATION BEFORE ADDITIONAL PROCESSING OCCURS. PROVIDE APPROPRIATE EXHAUST VENTILATION AT |
|---|---|
| | PLACES WHERE DUST IS FORMED. FOR PRECAUTIONS SEE SECTION 2.2. |
| CONDITIONS FOR SAFE STORAGE, INCLUDING | KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE. |

ANY INCOMPATIBILITIES

Store at RT

SPECIFIC END USE(S) APART FROM THE USES MENTIONED IN SECTION 1.2 NO OTHER SPECIFIC USES ARE STIPULATED

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

| COMPONENTS WITH | CONTAINS NO SUBSTANCES WITH OCCUPATIONAL |
|-------------------|--|
| WORKPLACE CONTROL | EXPOSURE LIMIT VALUES. |
| PARAMETERS | |

EXPOSURE CONTROLS

| APPROPRIATE | HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL |
|-------------|---|
| ENGINEERING | HYGIENE AND SAFETY PRACTICE. WASH HANDS |
| CONTROLS | BEFORE BREAKS AND AT THE END OF WORKDAY. |

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION SAFETY GLASSES WITH SIDE-SHIELDS CONFORMING TO EN166 USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU).

| SKIN PROTECTION | 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. |
|---|---|
| | FULL CONTACT MATERIAL: NITRILE RUBBER MINIMUM LAYER THICKNESS: 0.4 MM BREAK THROUGH TIME: 480 MIN MATERIAL TESTED:CAMATRIL (KCL 730, SIZE M) |
| | SPLASH CONTACT MATERIAL: NITRILE RUBBER MINIMUM LAYER THICKNESS: 0.11 MM BREAK THROUGH TIME: 30 MIN MATERIAL TESTED:DERMATRIL (KCL 740, SIZE M) |
| | IF USED IN SOLUTION, OR MIXED WITH OTHER SUBSTANCES, AND UNDER CONDITIONS WHICH DIFFER FROM EN 374, CONTACT THE SUPPLIER OF THE CE APPROVED GLOVES. THIS RECOMMENDATION IS ADVISORY ONLY AND MUST BE EVALUATED BY AN INDUSTRIAL HYGIENIST AND SAFETY OFFICER FAMILIAR WITH THE SPECIFIC SITUATION OF ANTICIPATED USE BY OUR CUSTOMERS. IT SHOULD NOT BE CONSTRUED AS OFFERING AN APPROVAL FOR ANY SPECIFIC USE SCENARIO. |
| BODY PROTECTION | IMPERVIOUS CLOTHING, THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE. |
| RESPIRATORY PROTECTION | FOR NUISANCE EXPOSURES USE TYPE P95 (US) OR TYPE P1 (EU EN 143) PARTICLE RESPIRATOR.FOR HIGHER LEVEL PROTECTION USE TYPE OV/AG/P99 (US) OR TYPE ABEK-P2 (EU EN 143) RESPIRATOR CARTRIDGES. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU). |
| CONTROL OF ENVIRONMENTAL EXPOSURE | PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED. |

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

| | I II I SICALAND CHEMICAL I KOI EKI |
|------------------------|-------------------------------------|
| APPEARANCE | Off-white solid or colorless liquir |
| ODOUR | NO DATA AVAILABLE |
| ODOUR THRESHOLD | NO DATA AVAILABLE |
| PH | NO DATA AVAILABLE |
| MELTING | 22 - 27°C |
| POINT/FREEZING POINT | |
| INITIAL BOILING POINT | 258 - 262°C |
| AND BOILING RANGE | |
| FLASH POINT | 121 °C |
| EVAPORATION RATE | NO DATA AVAILABLE |
| FLAMMABILITY (SOLID, | NO DATA AVAILABLE |
| GAS) | |
| UPPER/LOWER | UPPER EXPLOSION LIMIT: 4 %(V) |
| FLAMMABILITY OR | LOWER EXPLOSION LIMIT: 0.6 %(V) |
| EXPLOSIVE LIMITS | |
| VAPOUR PRESSURE | 0.1 HPA AT 20 C |
| VAPOUR DENSITY | NO DATA AVAILABLE |
| RELATIVE DENSITY | |
| WATER SOLUBILITY | 1 G/L AT 23 C - SLIGHTLY SOLUBLE |
| PARTITION COEFFICIENT: | LOG POW: 4.8 |
| N- OCTANOL/WATER | |
| AUTO-IGNITION | CA.275 C AT 1013 HPA |
| TEMPERATURE | |
| DECOMPOSITION | NO DATA AVAILABLE |
| TEMPERATURE | |
| VISCOSITY | NO DATA AVAILABLE |
| EXPLOSIVE PROPERTIES | NO DATA AVAILABLE |
| OXIDIZING PROPERTIES | NO DATA AVAILABLE |
| | |
| OTHER SAFETY | NO DATA AVAILABLE |
| INFORMATION | |
| | |

SECTION 10. STABILITY AND REACTIVITY

| REACTIVITY | NO DATA AVAILABLE |
|--|--|
| CHEMICAL STABILITY | STABLE UNDER RECOMMENDED STORAGE CONDITIONS. |
| POSSIBILITY OF HAZARDOUS REACTIONS | NO DATA AVAILABLE |
| CONDITIONS TO AVOID | NO DATA AVAILABLE |
| INCOMPATIBLE MATERIALS | STRONG OXIDIZING AGENTS |

HAZARDOUS DECOMPOSITION PRODUCTS HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS. - CARBON OXIDES OTHER DECOMPOSITION PRODUCTS - NO DATA AVAILABLE IN THE EVENT OF FIRE: SEE SECTION 5

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY LD50 ORAL - RAT - MALE AND FEMALE - > 2,000 MG/KG (OECD TEST GUIDELINE 401)

INHALATION: NO DATA AVAILABLE

LD50 DERMAL - RABBIT - MALE AND FEMALE - 8,000 - 12,000 MG/KG (OECD TEST GUIDELINE 402)

NO DATA AVAILABLE

| SKIN | SKIN - RABBIT |
|----------------------|---|
| CORROSION/IRRITATION | RESULT: NO SKIN IRRITATION - 4 H |
| | (OECD TEST GUIDELINE 404) |

SERIOUS EYEIRRITATING TO EYES.DAMAGE/EYE IRRITATIONEYES RABBIT
RESULT: IRRITATING TO EYES. - 24 H
(OECD TEST GUIDELINE 405)

RESPIRATORY OR SKINMAXIMISATION TEST - GUINEA PIGSENSITISATIONRESULT: DID NOT CAUSE SENSITISATION ON
LABORATORY ANIMALS.
(OECD TEST GUIDELINE 406)

GERM CELL REVERSE MUTATION ASSAY MUTAGENICITY S. TYPHIMURIUM RESULT: NEGATIVE OECD TEST GUIDELINE 474 MOUSE - MALE AND FEMALE RESULT: NEGATIVE

CARCINOGENICITY IARC:

NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED HUMAN CARCINOGEN BY IARC.

| NTP: OSHA: | 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. NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS ON OSHA S LIST OF REGULATED CARCINOGENS. |
|--|--|
| REPRODUCTIVE TOXICITY | NO DATA AVAILABLE |
| SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE | NO DATA AVAILABLE |
| SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE | NO DATA AVAILABLE |
| ASPIRATION HAZARD | NO DATA AVAILABLE |
| ADDITIONAL INFORMATION | REPEATED DOSE TOXICITY - RAT - MALE AND FEMALE - ORAL - NO OBSERVED ADVERSE EFFECT LEVEL - 2,000 MG/KG |
| | RTECS: JR5775000 |
| | TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE |

NOT BEEN THOROUGHLY INVESTIGATED.

SECTION 12. ECOLOGICAL INFORMATION

| TOXICITY | | |
|-------------------------------|-----------|---|
| TOXICITY TO FIS | SH 1 | MORTALITY LC50 - PIMEPHALES PROMELAS |
| | (| (FATHEAD MINNOW) - 1.01 MG/L - 96 H |
| TOXICITY TO DA | PHNIA AND | IMMOBILIZATION EC50 - DAPHNIA MAGNA (WATER |
| OTHER AQUATIC | C 1 | FLEA) - 0.765 MG/L - 48 H |
| INVERTEBRATES | 5 (| (OECD TEST GUIDELINE 202) |
| TOXICITY TO AL | GAE | GROWTH INHIBITION EC50 - DESMODESMUS |
| | 1 | SUBSPICATUS (GREEN ALGAE) - 0.66 MG/L - 72 H |
| | (| (OECD TEST GUIDELINE 201) |
| PERSISTENCE AND DEGRADABILITY | | |
| | | |
| DIODLORADADI | | |
| | | |
| | , | |
| BIOACCUMULA | TIVE | INDICATION OF BIOACCUMULATION |
| | | |
| BIOACCUMULA POTENTIAL | LITY | AEROBIC - EXPOSURE TIME 28 D RESULT: 79 % - READILY BIODEGRADABLE. (OECD TEST GUIDELINE 301D) INDICATION OF BIOACCUMULATION. |

| 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 | AN ENVIRONMENTAL HAZARD CANNOT BE EXCLUDED IN THE EVENT OF UNPROFESSIONAL HANDLING OR DISPOSAL. VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS. |

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCTCONTACT A LICENSED PROFESSIONAL WASTE
DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL.
OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS
TO A LICENSED DISPOSAL COMPANY.

CONTAMINATEDDISPOSE OF AS UNUSED PRODUCT.PACKAGINGDISPOSE OF AS UNUSED PRODUCT.

SECTION 14. TRANSPORT INFORMATION

DOT (US) NOT DANGEROUS GOODS

IMDG PROPER SHIPPING NAME: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(1-Dodecanol) UN NUMBER: 3077 CLASS: 9 PACKING GROUP: III EMS-NO: F-A, S-F MARINE POLLUTANT: YES IATA ENVIRONMENTALLY HAZARDOUS SUBSTANCE, PROPER SHIPPING NAME: SOLID, N.O.S.(1-Dodecanol) UN NUMBER: 3077 CLASS: 9 PACKING GROUP: III

FURTHER INFORMATION

EHS-MARK REQUIRED (IMDG CODE 2.10.3) FOR SINGLE PACKAGINGS AND COMBINATION PACKAGINGS CONTAINING INNER PACKAGINGS WITH DANGEROUS GOODS > 5L FOR LIQUIDS OR > 5KG FOR SOLIDS.

SECTION 15. REGULATORY INFORMATION

| SARA 302 COMPONENTS | NO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III, SECTION 302. | |
|---|---|---|
| SARA 313 COMPONENTS | COMPONENTS WITH KNO EXCEED THE THRESHOLD | T CONTAIN ANY CHEMICAL WN CAS NUMBERS THAT (DE MINIMIS) REPORTING SARA TITLE III, SECTION 313. |
| SARA 311/312 HAZARDS | ACUTE HEALTH HAZARD | |
| MASSACHUSETTS RIGHT TO KNOW COMPONENTS | NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT. | |
| PENNSYLVANIA RIGHT TO KNOW COMPONENTS | | |
| 1-Dodecanol | CAS-NO. 112-53-8 | REVISION DATE |
| NEW JERSEY RIGHT TO KNOW COMPONENTS | | |
| 1-Dodecanol | CAS-NO. 112-53-8 | REVISION DATE |

SECTION 16. OTHER INFORMATION

| FATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3. |
|--|
| CAUSES SERIOUS EYE IRRITATION. |
| VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS. |
| EFFEC1S. |
| |
| |
| MOLECULAR WEIGHT |
| MOLECULAR FORMULA |
| VOLATILE ORGANIC COMPOUNDS |
| AMERICAN CONFERENCE OF GOVERNMENENTAL |
| INDUSTRIAL HYGINISTS |
| |

INDUSTRIAL HYGINISTSCAS:CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBEROSHA:OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATIONPEL:PERMISSIBLE EXPOSURE LIMIT (OSHA)TLV:THRESHOLD LIMIT VALUE (ACGIH)IMPORTANT:

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