SAFETY DATA SHEET

Updated on 26/09/2024

1. Material Identification

Product Name : Propylene
Catalog Number : io-2943
CAS Number : 115-07-1
Identified uses : Laboratory chemicals, manufacture of chemical compounds
Company : Ionz

>> R&D Use only

2. Hazards Identification

GHS Classification:

Flammable liquid (category 2)
Acute toxicity, oral (Category 3)
Acute toxicity, dermal (Category 3)
Acute toxicity, inhalation (Category 3)
Specific target organ toxicity, single exposure (Category 1)

Note

>> Pictograms displayed are for > 99.9% (2195 of 2197) of reports that indicate hazard statements. This chemical does not meet GHS hazard criteria for < 0.1% (2 of 2197) of reports.

Pictogram(s)

GHS Hazard Statements

>> H220 (> 99.9%): Extremely flammable gas [Danger Flammable gases]

>> H280 (54.5%): Contains gas under pressure; may explode if heated [Warning Gases under pressure]

Precautionary Statement Codes

>> P203, P210, P222, P280, P377, P381, P403, and P410+P403

NFPA 704 Diamond

NFPA Health Rating

>> 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA Fire Rating

>> 4 - Materials that rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and burn readily.

NFPA Instability Rating

>> 1 - Materials that in themselves are normally stable but that can become unstable at elevated temperatures and pressures.

Health Hazards:

>> Moderate concentration in air causes dizziness, drowsiness, and unconsciousness. Contact with liquefied propylene will cause "freezing burn". (USCG, 1999)

ERG 2024, Guide 115 (Propylene)

>> Vapors may cause dizziness or asphyxiation without warning, especially when in closed or confined areas.

>> Some may be irritating if inhaled at high concentrations.

>> Contact with gas, liquefied gas or cryogenic liquids may cause burns, severe injury and/or frostbite.

>> Fire may produce irritating and/or toxic gases.

>> Behavior in Fire: Containers may explode. Vapor is heavier than air and may travel considerable distance to a source of ignition and flash back. (USCG, 1999)

ERG 2024, Guide 115 (Propylene)

>> EXTREMELY FLAMMABLE.

>> Will be easily ignited by heat, sparks or flames.

>> Will form explosive mixtures with air.

>> Vapors from liquefied gas are initially heavier than air and spread along ground.

>> CAUTION: Hydrogen (UN1049), Deuterium (UN1957), Hydrogen, refrigerated liquid (UN1966), Methane (UN1971) and Hydrogen and Methane mixture, compressed (UN2034) are lighter than air and will rise. Hydrogen and Deuterium fires are difficult to detect since they burn with an invisible flame. Use an alternate method of detection (thermal camera, broom handle, etc.)

>> Vapors may travel to source of ignition and flash back.

>> Cylinders exposed to fire may vent and release flammable gas through pressure relief devices.

>> Containers may explode when heated.

>> Ruptured cylinders may rocket.

>> CAUTION: When LNG - Liquefied natural gas (UN1972) is released on or near water, product may vaporize explosively.

>> Extremely flammable. Gas/air mixtures are explosive.

3. Composition/Information On Ingredients

Chemical name : Propylene
CAS Number : 115-07-1
Molecular Formula : C3H6
Molecular Weight : 42.0800 g/mol

4. First Aid Measures

First Aid:

>> EYES: First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.

>> SKIN: CAUTION: Exposure of skin to compressed gases may result in freezing of the skin. Treatment for frostbite may be necessary. Remove the victim from the source of contamination. IMMEDIATELY wash affected areas gently with COLD water (and soap, if necessary) while removing and isolating all contaminated clothing. Dry carefully with clean, soft towels. If symptoms such as inflammation or irritation develop, IMMEDIATELY call a physician or go to a hospital for treatment.

>> INHALATION: IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. If symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop, call a physician and be prepared to transport the victim to a hospital. Provide proper respiratory protection to rescuers entering an unknown atmosphere.

Whenever possible, Self-Contained Breathing Apparatus (SCBA) should be used; if not available, use a level of protection greater than or equal to that advised under Protective Clothing.

>> INGESTION: This compound is a gas, therefore inhalation is the first route of exposure. (NTP, 1992)

ERG 2024, Guide 115 (Propylene)

>> General First Aid:

>> Call 911 or emergency medical service.

>> Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and avoid contamination.

>> Move victim to fresh air if it can be done safely.

>> Administer oxygen if breathing is difficult.

>> If victim is not breathing:

>> DO NOT perform mouth-to-mouth resuscitation; the victim may have ingestedor inhaled the substance.

>> If equipped and pulse detected, wash face and mouth, then give artificial respiration using a proper respiratory medical device (bag-valve mask, pocket mask equipped with a one-way valve or other device).

>> If no pulse detected or no respiratory medical device available, provide continuouscompressions. Conduct a pulse check every two minutes or monitor for any signs of spontaneous respirations.

>> Remove and isolate contaminated clothing and shoes.

>> For minor skin contact, avoid spreading material on unaffected skin.

>> In case of contact with substance, remove immediately by flushing skin or eyes with running water for at least 20 minutes.

>> For severe burns, immediate medical attention is required.

>> Effects of exposure (inhalation, ingestion, or skin contact) to substance may be delayed.

>> Keep victim calm and warm.

>> Keep victim under observation.

>> For further assistance, contact your local Poison Control Center.

>> Note: Basic Life Support (BLS) and Advanced Life Support (ALS) should be done by trained professionals.

>> Specific First Aid:

>> Clothing frozen to the skin should be thawed before being removed.

>> In case of contact with liquefied gas, only medical personnel should attempt thawing frosted parts.

>> In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if adhering to skin.

>> In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping paper and/or the "ERAP" section.

First Aid Measures

Inhalation First Aid

>> Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.

Skin First Aid

>> ON FROSTBITE: rinse with plenty of water, do NOT remove clothes. Refer for medical attention .

Eye First Aid

>> First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

5. Fire Fighting Measures

>> Hazardous decomposition products formed under fire conditions: Carbon oxides

>> Excerpt from ERG Guide 115 [Gases - Flammable (Including Refrigerated Liquids)]:

>> DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED. CAUTION: Hydrogen (UN1049), Deuterium (UN1957), Hydrogen, refrigerated liquid (UN1966) and Hydrogen and Methane mixture, compressed (UN2034) will burn

with an invisible flame. Use an alternate method of detection (thermal camera, broom handle, etc.).

>> SMALL FIRE: Dry chemical or CO2.

>> LARGE FIRE: Water spray or fog. If it can be done safely, move undamaged containers away from the area around the fire. CAUTION: For LNG - Liquefied natural gas (UN1972) pool fires, DO NOT USE water. Use dry chemical or high-expansion foam.

>> FIRE INVOLVING TANKS: Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Do not direct water at source of leak or safety devices; icing may occur. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks in direct contact with flames. For massive fire, use unmanned master stream devices or monitor nozzles; if this is impossible, withdraw from area and let fire burn. (ERG, 2024)

>> Shut off supply; if not possible and no risk to surroundings, let the fire burn itself out. In other cases extinguish with powder, carbon dioxide. In case of fire: keep cylinder cool by spraying with water. NO direct contact with water. Combat fire from a sheltered position.

6. Accidental Release Measures

Isolation and Evacuation:

Isolation and evacuation measures to take when a large amount of this chemical is accidentally released in an emergency.

>> Excerpt from ERG Guide 115 [Gases - Flammable (Including Refrigerated Liquids)]:

>> IMMEDIATE PRECAUTIONARY MEASURE: Isolate spill or leak area for at least 100 meters (330 feet) in all directions.

>> LARGE SPILL: Consider initial downwind evacuation for at least 800 meters (1/2 mile).

>> FIRE: If tank, rail tank car or highway tank is involved in a fire, ISOLATE for 1600 meters (1 mile) in all directions; also, consider initial evacuation for 1600 meters (1 mile) in all directions. In fires involving Liquefied Petroleum Gases (LPG) (UN1075), Butane (UN1011), Butylene (UN1012), Isobutylene (UN1055), Propylene (UN1077), Isobutane (UN1969), and Propane (UN1978), also refer to the "BLEVE - Safety Precautions" section. (ERG, 2024)

Evacuation: ERG 2024, Guide 115 (Propylene)

>> Immediate precautionary measure

>> Isolate spill or leak area for at least 100 meters (330 feet) in all directions.

>> Large Spill

>> Consider initial downwind evacuation for at least 800 meters (1/2 mile).

>> Fire

>> If tank, rail tank car or highway tank is involved in a fire, ISOLATE for 1600 meters (1 mile) in all directions; also, consider initial evacuation for 1600 meters (1 mile) in all directions.

>> In fires involving Liquefied Petroleum Gases (LPG) (UN1075), Butane (UN1011), Butylene (UN1012), Isobutylene (UN1055), Propylene (UN1077), Isobutane (UN1969), and Propane (UN1978), also refer to the "BLEVE - Safety Precautions" section.

Spillage Disposal:

Methods for containment and safety measures to protect workers dealing with a spillage of this chemical.

>> Evacuate danger area! Consult an expert! Ventilation. Remove all ignition sources. NEVER direct water jet on liquid. Personal protection: chemical protection suit including self-contained breathing apparatus.

Accidental Release Measures

Public Safety: ERG 2024, Guide 115 (Propylene)

>> CALL 911. Then call emergency response telephone number on shipping paper. If shipping paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.

>> Keep unauthorized personnel away.

>> Stay upwind, uphill and/or upstream.

>> Many gases are heavier than air and will spread along the ground and collect in low or confined areas (sewers, basements, tanks, etc.).

Spill or Leak: ERG 2024, Guide 115 (Propylene)

>> ELIMINATE all ignition sources (no smoking, flares, sparks or flames) from immediate area.

>> All equipment used when handling the product must be grounded.

>> Do not touch or walk through spilled material.

>> Stop leak if you can do it without risk.

>> If possible, turn leaking containers so that gas escapes rather than liquid.

>> Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.

>> Do not direct water at spill or source of leak.

>> CAUTION: For LNG - Liquefied natural gas (UN1972), DO NOT apply water, regular or alcohol-resistant foam directly on spill. Use a high-expansion foam if available to reduce vapors.

>> Prevent spreading of vapors through sewers, ventilation systems and confined areas.

>> Isolate area until gas has dispersed.

>> CAUTION: When in contact with refrigerated/cryogenic liquids, many materials become brittle and are likely to break without warning.

Public Safety: ERG 2024, Guide 115 (Propylene)

>> CALL 911. Then call emergency response telephone number on shipping paper. If shipping paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.

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>> Prevent spreading of vapors through sewers, ventilation systems and confined areas.

>> Isolate area until gas has dispersed.

>> CAUTION: When in contact with refrigerated/cryogenic liquids, many materials become brittle and are likely to break without warning.

7. Handling And Storage

Safe Storage:

>> Fireproof. Cool.

Storage Conditions:

>> Keep container tightly closed in a dry and well-ventilated place. Contents under pressure. Storage class (TRGS 510): Gases

8. Exposure Control/ Personal Protection

>> 500.0 [ppm]

>> 500 ppm as TWA; A4 (not classifiable as a human carcinogen)

TLV-TWA (Time Weighted Average)

>> 500 ppm [2005]

Emergency Response: ERG 2024, Guide 115 (Propylene)

>> DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

>> CAUTION: Hydrogen (UN1049), Deuterium (UN1957), Hydrogen, refrigerated liquid (UN1966) and Hydrogen and Methane mixture, compressed (UN2034) will burn with an invisible flame. Use an alternate method of detection (thermal camera, broom handle, etc.)

>> Small Fire

>> Dry chemical or CO2.

>> Large Fire

>> Water spray or fog.

>> If it can be done safely, move undamaged containers away from the area around the fire.

>> CAUTION: For LNG - Liquefied natural gas (UN1972) pool fires, DO NOT USE water. Use dry chemical or high-expansion foam.

>> Fire Involving Tanks

>> Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles.

>> Cool containers with flooding quantities of water until well after fire is out.

>> Do not direct water at source of leak or safety devices; icing may occur.

>> Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.

>> ALWAYS stay away from tanks in direct contact with flames.

>> For massive fire, use unmanned master stream devices or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

Inhalation Risk:

>> On loss of containment this substance can cause suffocation by lowering the oxygen content of the air in confined areas.

Effects of Short Term Exposure:

>> Rapid evaporation of the liquid may cause frostbite. The substance may cause effects on the central nervous system. Exposure could cause lowering of consciousness.

Fire Prevention

>> NO open flames, NO sparks and NO smoking. Closed system, ventilation, explosion-proof electrical equipment and lighting. Prevent build-up of electrostatic charges (e.g., by grounding) if in liquid state.

Inhalation Prevention

>> Use ventilation.

Skin Prevention

>> Cold-insulating gloves.

Eye Prevention

>> Wear safety goggles or face shield.

Ingestion Prevention

>> Do not eat, drink, or smoke during work.

Exposure Control and Personal Protection

Protective Clothing: ERG 2024, Guide 115 (Propylene)

>> Wear positive pressure self-contained breathing apparatus (SCBA).

>> Structural firefighters' protective clothing provides thermal protection but only limited chemical protection.

>> Always wear thermal protective clothing when handling refrigerated/cryogenic liquids.

Protective Clothing: ERG 2024, Guide 115 (Propylene)

>> Wear positive pressure self-contained breathing apparatus (SCBA).

>> Structural firefighters' protective clothing provides thermal protection but only limited chemical protection.

>> Always wear thermal protective clothing when handling refrigerated/cryogenic liquids.

9. Physical And Chemical Properties

Molecular Weight:

>> 42.08

Exact Mass:

>> 42.0469501914

Physical Description:

>> Propylene is a colorless gas with a faint petroleum like odor. It is shipped as a liquefied gas under its own vapor pressure. For transportation it may be stenched. Contact with the liquid can cause frostbite. It is easily ignited. The vapors are heavier than air. Any leak can either be liquid or vapor. It can asphyxiate by the displacement of air. Under prolonged exposure to fire or intense heat the containers may rupture violently and rocket. It is used to make other chemicals. Can cause explosion.

>> COLOURLESS COMPRESSED LIQUEFIED GAS.

Color/Form:

>> Colorless gas

Odor:

>> Practically odorless; aromatic

Boiling Point:

>> -53.9 °F at 760 mmHg (NTP, 1992)

>> -48 °C

Melting Point:

>> -301.4 °F (NTP, 1992)

>> -185 °C

Flash Point:

>> -162 °F (NTP, 1992)

>> Flammable gas

Solubility:

>> 44.6 mL/100 mL (NTP, 1992)

>> Solubility in water: poor

Density:

>> 0.609 at -52.6 °F (USCG, 1999) - Less dense than water; will float

>> Relative density (water = 1): 0.5

Vapor Density:

>> 1.46 at 32 °F (NTP, 1992) - Heavier than air; will sink (Relative to Air)

>> Relative vapor density (air = 1): 1.5

Vapor Pressure:

>> 1 mmHg at -205.4 °F ; 760 mmHg at -53.9 °F (NTP, 1992)

>> Vapor pressure, kPa at 25 °C: 1158

LogP:

>> log Kow = 1.77

>> 1.77

Stability/Shelf Life:

>> Stable under recommended storage conditions.

Autoignition Temperature:

>> 851 °F (USCG, 1999)

>> 460 °C

Viscosity:

>> 83.4 micropoises at 16.7 °C

Heat of Combustion:

>> -19,692 Btu/lb = -10,940 cal/g = -458.04X10+5 J/kg

Heat of Vaporization:

>> 18.42 kJ/mol at BP

Polymerization:

Polymerization is a process of reacting monomer molecules together in a chemical reaction to form polymer chains or three-dimensional networks.

>> A mixture under confinement in a glass pressure bottle at 20 °C polymerized explosively, the polymerization probably being initiated by access of light through the clear glass container. Such alkene-sulfur dioxide co-polymerizations will not occur above a ceiling temperature, different for each alkene.

Odor Threshold:

>> Odor Threshold Low: 23.0 [ppm]

>> Odor Threshold High: 68.0 [ppm]

>> Odor threshold, (recognition/detection) from CHEMINFO

Refractive Index:

>> Index of refraction: 1.3567 at -40 °C/D

10. Stability And Reactivity

>> Highly flammable.

>> Highly Flammable

11. Toxicological Information

Toxicity Summary:

>> IDENTIFICATION AND USE: Propylene is a colorless gas. It is used in manufacture of isopropyl alcohol, polypropylene, synthetic glycerol, acrylonitrile, propylene oxide, heptene, cumene, polymer gasoline, acrylic acid, vinyl resins, oxo chemicals. It is also used as aerosol propellant and component. Formerly used in dental surgery as temporary anesthetic. HUMAN STUDIES: In the gaseous state propylene is not irritating to the skin or eyes based on limited human studies. However, should skin or eye contact occur to this chemical in its liquid state, tissue freezing, severe cold burn, and/or frostbite may result. ANIMAL STUDIES: No adverse effects were observed in repeated dose inhalation toxicity studies in rodents at concentrations up to 10,000 ppm propylene, for 14 weeks. Furthermore, there was no evidence of carcinogenicity in rats or mice exposed to propylene concentrations as high as 10,000 ppm for up to 103 weeks. Inflammation of the nasal cavity was the only indication of toxicity observed following exposure of male rats to 5,000 and 10,000 ppm propylene and female rats exposed to 10,000 propylene for 103 weeks. These effects were not observed when rats were exposed to similar concentrations for 14 weeks. Mutagenic activity was observed in a single bacterial strain in the Ames assay in the presence of metabolic activation. Inhalation exposure of pregnant Wistar rats to propylene from implantation to one day prior to the expected day of parturition (days 6-19 p.c.) elicited no maternal toxicity, prenatal or developmental toxicity, or teratogenicity at all tested concentrations up to 10,000 ppm.

Evidence for Carcinogenicity:

Evidence that this chemical does or may cause cancer. The information here is collected from various sources by the Hazardous Substances Data Bank (HSDB).

>> Evaluation: There is inadequate evidence in humans for the carcinogenicity of propylene. There is inadequate evidence in experimental animals for the carcinogenicity of propylene. Overall evaluation: Propylene is not classifiable as to its carcinogenicity to humans (Group 3).

Carcinogen Classification:

This section provides the International Agency for Research on Cancer (IARC) Carcinogenic Classification and related monograph links. In the IARC Carcinogenic classification, chemicals are categorized into four groups: Group 1 (carcinogenic to humans), Group 2A (probably carcinogenic to humans), Group 2B (possibly carcinogenic to humans), and Group 3 (not classifiable as to its carcinogenicity to humans).

IARC Carcinogenic Agent

>> Propylene

IARC Carcinogenic Classes

>> Group 3: Not classifiable as to its carcinogenicity to humans

IARC Monographs

>> Volume Sup 7: Overall Evaluations of Carcinogenicity: An Updating of IARC Monographs Volumes 1 to 42, 1987; 440 pages; ISBN 92-832-1411-0 (out of print)

>> Volume 60: (1994) Some Industrial Chemicals

Exposure Routes:

>> The substance can be absorbed into the body by inhalation.

Inhalation Exposure

>> Drowsiness. Suffocation.

Skin Exposure

>> ON CONTACT WITH LIQUID: FROSTBITE.

Eye Exposure

>> See Skin.

Adverse Effects:

An adverse effect is an undesired harmful effect resulting from a medical treatment or other intervention.

>> Other Poison - Simple Asphyxiant

>> ACGIH Carcinogen - Not Classifiable.

Toxicity Data:

>> LC50 (rat) = 570,000 ppm/15min

Antidote and Emergency Treatment:

>> Immediate first aid: Ensure that adequate decontamination has been carrier out. If patient is not breathing, start artificial respiration, preferably with a demand-valvle resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR if necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. if vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. /Aliphatic hydrocarbons and related compounds/

Human Toxicity Excerpts:

>> /HUMAN EXPOSURE STUDIES/ At a concentration of 6.4% for 2.25 min, mild /CNS depression/, paresthesias, and inability to concentrate /have been/ noted. However, memory was not impaired. At 12.8% in 1 min, the same symptoms were markedly accentuated and at 24 and 33% unconsciousness followed in 3 min. Human exposure to 23% propylene for 3 to 4 min however did not produce unconsciousness.

Non-Human Toxicity Excerpts:

>> /LABORATORY ANIMALS: Acute Exposure/ ...Exposure to 6 ppm propylene for 6 hours produced 160 ng propylene oxide per gram of blood in rats... 600 ppm propylene for 8 hours produced 740 ng propylene oxide per gram of blood. Both exposure concentrations reduced nasal and liver cytochrome P450 levels (to differing degrees).

National Toxicology Program Studies:

Reports from the National Toxicology Program, an interagency program supported by three government agencies (NIH, FDA, and CDC) within the Department of Health and Human Services. This program plays a critical role in generating, interpreting, and sharing toxicological information about chemicals of public health concerns.

>> Toxicology and carcinogenesis studies of propylene (greater than 99% pure) were conducted by exposing groups of 50 F344/N rats and 49 or 50 B6C3F1 mice of each sex to propylene in air by inhalation at concentrations of 5,000 or 10,000 ppm, 6 hr/day, 5 days/wk, for 103 wk. Other groups of 50 rats and 50 mice of each sex in chambers received air only on the same schedule and served as chamber controls. The highest concentration of propylene that was considered safe for these studies was 10,000 ppm because of risk of explosion, that can occur at higher

concentrations. ... Hemangiosarcomas were found in one low-dose male mouse (liver), two high-dose male mice (spleen), and three high-dose female mice (subcutis, spleen, and uterus). Hemangiomas were found in one low-dose and in one high-dose female mouse (liver). ... Under the conditions of these studies, there was no evidence of carcinogenicity in male and female F344/N rats or in male and female B6C3F1 mice exposed to propylene by inhalation at concentrations of 5,000 or 10,000 ppm for 103 wk. In the nasal cavity, propylene induced squamous metaplasia of the respiratory epithelium in male and female rats and epithelial hyperplasia in female rats.

TSCA Test Submissions:

Under the Toxic Substances Control Act (TSCA), EPA has broad authority to issue regulations designed to require manufacturers (including importers) or processors to test chemical substances and mixtures for health and environmental effects. This section provides information on test reports submitted for this chemical under TSCA.

>> Oncogenicity was evaluated in male and female Sprague Dawley rats (at least 100/sex/group) exposed to propene via inhalation at 0, 200, 1000 or 5000 ppm for 7 hrs/day, 5 days/week for 2 yrs. Propene did not show any carcinogenic effects in the rats.

12. Ecological Information

Resident Soil (mg/kg)

>> 2.20e+03

Industrial Soil (mg/kg)

>> 9.30e+03

Resident Air (ug/m3)

>> 3.10e+03

Industrial Air (ug/m3)

>> 1.30e+04

Tapwater (ug/L)

>> 6.30e+03

MCL (ug/L)

>> 2.00e-01

Risk-based SSL (mg/kg)

>> 6.00e+00

Chronic Inhalation Reference Concentration (mg/m3)

>> 3.00e+00

Volatile

>> Volatile

Mutagen

>> Mutagen

Fraction of Contaminant Absorbed in Gastrointestinal Tract

>> 1

Soil Saturation Concentration (mg/kg)

>> 3.49e+02

Sediment/Soil Concentrations:

Concentrations of this compound in sediment/soil.

>> SEDIMENT: In 1977, respective propylene concentrations in core samples taken from the Bering shelf, Bering slope, and Aleutian basin were: 9-77, 7-87, and 6-40 mL/L interstitial water(1).

13. Disposal Considerations

Spillage Disposal

>> Evacuate danger area! Consult an expert! Ventilation. Remove all ignition sources. NEVER direct water jet on liquid. Personal protection: chemical protection suit including self-contained breathing apparatus.

Disposal Methods

>> SRP: Recycle any unused portion of the material for its approved use or return it to the manufacturer or supplier. Ultimate disposal of the chemical must consider: the material's impact on air quality; potential migration in air, soil or water; effects on animal, aquatic and plant life; and conformance with environmental and public health regulations. If it is possible or reasonable use an alternative chemical product with less inherent propensity for occupational harm/injury/toxicity or environmental contamination.

>> Propylene is a waste chemical stream constituent which may be subjected to ultimate disposal by controlled incineration.

>> Product: Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Contaminated packaging: Dispose of as unused product.

14. Transport Information

DOT

Propylene
2.1

IATA

Propylene
2.1,

15. Regulatory Information

DHS Chemicals of Interest (COI):

This section provides the Department of Homeland Security (DHS) Chemicals of Interest (COI) and related information (Ref: 6 eCFR part 27 - https://www.ecfr.gov/current/title-6/chapter-I/part-27).

Chemicals of Interest(COI)

>> Propylene

Release: Minimum Concentration (%)

>> 1

Release: Screening Threshold Quantities (in pounds)

>> 10000

Security Issue: Release - Flammables

>> Flammable chemical that can be released at a facility.

Regulatory Information

The Australian Inventory of Industrial Chemicals

>> Chemical: 1-Propene, homopolymer, isotactic

The Australian Inventory of Industrial Chemicals

>> Chemical: 1-Propene

REACH Registered Substance

>> Status: Active Update: 31-07-2023 https://echa.europa.eu/registration-dossier/-/registered-dossier/16184

New Zealand EPA Inventory of Chemical Status

>> Propylene: HSNO Approval: HSR001011 Approved with controls

New Zealand EPA Inventory of Chemical Status

>> 1-Propene, homopolymer, isotactic: Does not have an individual approval but may be used as a component in a product covered by a group standard. It is not approved for use as a chemical in its own right.

16. Other Information

Other Safety Information

Chemical Assessment

>> IMAP assessments - 1-Propene: Human health tier I assessment

Chemical Assessment

>> IMAP assessments - 1-Propene, homopolymer, isotactic: Human health tier I assessment

>> IMAP assessments - 1-Propene, homopolymer, isotactic: Environment tier I assessment

"The information provided is believed to be accurate but is not comprehensive and should be used as a reference. It reflects our current knowledge and is intended for safety guidance related to the product. This document does not constitute a warranty of the product's properties. Ionz is not responsible for any damages resulting from handling or contact with the product incorrectly."