Material Safety Data Sheet

Ashland Chemical Co.

Date Prepared: 01/20/98
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TRICHLOROETHANE 111 (INDISC)

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity
Product Name: TRICHLOROETHANE 111 (INDISC)
General or Generic ID: CHLORINATED HYDROCARBON

Company
Ashland Chemical Co.
P.O. Box 2219
Columbus, OH 43216
614-790-3333

Emergency Telephone Number:
1-800-ASHLAND (1-800-274-5263)
24 hours everyday

Regulatory Information Number:
1-800-325-3751

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by weight)
TRICHLOROETHANE 1,1,1-	71-55-6	100.0
DIOXANE	123-91-1	3.0

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3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye
May cause mild eye irritation. Symptoms include stinging, tearing, and redness.

Skin
May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

Swallowing
Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

Inhalation
Breathing of vapor or mist is possible. Breathing this material

may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).

Symptoms of Exposure

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: mouth and throat irritation (soreness, dry or scratchy feeling, cough), stomach or intestinal upset (nausea, vomiting, diarrhea), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), temporary changes in behavior, low blood pressure, loss of coordination, irregular heartbeat, anesthesia, respiratory failure and death.

Target Organ Effects

Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: liver damage.

Developmental Information

This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

Cancer Information

This material is not expected to cause cancer in humans since it did not cause cancer in laboratory animals. This material is not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration.

Other Health Effects

No data

Primary Route(s) of Entry

Inhalation, Skin absorption, Skin contact, Eye contact.

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4. FIRST AID MEASURES

Eyes

If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Swallowing

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention;

keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Note to Physicians

Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 3 - Swallowing) when deciding whether to induce vomiting. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, liver, Individuals with preexisting heart disorders may be more susceptible to arrhythmias (irregular heartbeats) if exposed to high concentrations of this material.

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5. FIRE FIGHTING MEASURES

Flash Point

Not applicable

Explosive Limit

(for product) Lower 7.5 Upper 15.0 %

Autoignition Temperature

No data

Hazardous Products of Combustion

May form: carbon dioxide and carbon monoxide, chlorine, hydrogen chloride, phosgene.

Fire and Explosion Hazards

No flash to boiling point. This product contains halogenated solvents which inhibit flashing until the halogenated solvent has been evaporated away. The product may become combustible or flammable after this occurs. Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point.

Extinguishing Media

regular foam, water fog, carbon dioxide, dry chemical.

Fire Fighting Instructions

Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

NFPA Rating

Health - 2, Flammability - 1, Reactivity - 0

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6. ACCIDENTAL RELEASE MEASURES

Small Spill

Absorb liquid on vermiculite, floor absorbent or other absorbent material.

Large Spill

Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent, or other absorbent material and shoveled into containers.

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7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage

1,1,1-Trichloroethane products or formulations should not be packaged in aluminum aerosol cans or with finely divided aluminum or its alloys in an aerosol can. Aluminum equipment should not be used for storage and/or transfer, e.g. pumps, mixers, fittings, storage tanks, etc. Contact with aluminum parts in a pressurizable fluid system may cause violent reactions.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection

Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

Skin Protection

Wear resistant gloves (consult your safety equipment supplier)., To prevent repeated or prolonged skin contact, wear impervious clothing and boots..

Respiratory Protections

If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

Engineering Controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

Exposure Guidelines

Component

TRICHLOROETHANE 1,1,1- (71-55-6)

OSHA VPEL 350.000 ppm - TWA
OSHA VPEL 450.000 ppm - STEL
ACGIH TLV 350.000 ppm - TWA
ACGIH TLV 450.000 ppm - STEL

DIOXANE (123-91-1)
OSHA VPEL 25.000 ppm - TWA (Skin)
ACGIH TLV 25.000 ppm - TWA (Skin)

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9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point
(for product) 161.6 - 190.4 F (72.0 - 88.0 C) @ 760 mmHg

Vapor Pressure
(for product) 100.000 mmHg @ 68.00 F

Specific Vapor Density
4.550 @ AIR=1

Specific Gravity
1.300 - 1.324 @ 77.00 F

Liquid Density
10.890 lbs/gal @ 77.00 F
1.309 kg/l @ 25.00 C

Percent Volatiles
100.0 %

Evaporation Rate
2.60

Appearance
No data

State
LIQUID

Physical Form
No data

Color
No data

Odor
No data

pH
Not applicable

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10. STABILITY AND REACTIVITY

Hazardous Polymerization
Product will not undergo hazardous polymerization.

Hazardous Decomposition
May form: carbon dioxide and carbon monoxide, chlorine, hydrogen chloride, phosgene, Open flame, welding arcs, resistance heaters,

etc., which can result in thermal decomposition releasing hydrogen chloride and small amounts of phosgene and chlorine..

Chemical Stability

Stable. Gross contamination with water can cause hydrolysis, producing small amounts of hydrochloric acid.

Incompatibility

Avoid contact with: amines, reactive metals such as aluminum and magnesium, strong alkalies, strong oxidizing agents.

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11. TOXICOLOGICAL INFORMATION

No data

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12. ECOLOGICAL INFORMATION

No data

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13. DISPOSAL CONSIDERATION

Waste Management Information

Dispose of in accordance with all applicable local, state and federal regulations.

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14. TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101

DOT Description:

No data

Container/Mode:

No data

NOS Component:

None

RQ (Reportable Quantity) - 49 CFR 172.101

Product Quantity (lbs)	Component
1000	METHYLCHLOROFORM
3333	DIOXANE

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15. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status

TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4(a)

Component	RQ (lbs)

1,1,1-TRICHLOROETHANE	1000
1,4-DIOXANE	100

SARA 302 Components - 40 CFR 355 Appendix A

None

Section 311/312 Hazard Class - 40 CFR 370.2

Immediate(X) Delayed(X) Fire( ) Reactive( ) Sudden Release of Pressure( )

SARA 313 Components - 40 CFR 372.65

Section 313 Component(s)	CAS Number	%
1,1,1-TRICHLOROETHANE (METHYL CHLOROFORM	71-55-6	100.00
1,4-DIOXANE	123-91-1	3.00

International Regulations

Inventory Status

Not determined

State and Local Regulations

California Proposition 65

The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains the following substance(s) known to the state of California to cause cancer.

1,4-DIOXANE

New Jersey RTK Label Information

METHYL CHLOROFORM	71-55-6
1,4-DIOXANE	123-91-1

Pennsylvania RTK Label Information

ETHANE, 1,1,1-TRICHLORO-	71-55-6
1,4-DIOXANE	123-91-1

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16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

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