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MATERIAL SAFETY DATA SHEET

00426-1003

Ashland Chemical Co.

Page 001
Date Prepared: 01/28/98
Date Printed: 01/29/98
MSDS No: 999.0283259-004.009

WS 9320
MARLENE SOLUTION

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity
Product Name: WS 9320
General or Generic ID: BLEND

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

Emergency Telephone Number:
1-800-ASHLAND (1-800-274-5253)
24 hours everyday

Regulatory Information Number:
1-800-325-3751

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by volume)
TRICHLOROETHYLENE	79-01-6	55.0
ISOPROPANOL	67-63-0	45.0

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye
Can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.

Skin
Can cause skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, burns and other skin damage. Additional symptoms of skin contact may include: numbness of the fingers when they are immersed in this material, 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.

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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 small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8). Alcohol consumed before or after exposure may worsen harmful effects.

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: stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways), cough, central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), muscle weakness, low blood pressure, mild, temporary changes in the liver, effects on heart rate, respiratory depression (slowing of the breathing rate), loss of coordination, confusion, irregular heartbeat, lung edema (fluid buildup in the lung tissue), kidney damage, coma, and death.

Target Organ Effects

Persons exposed to trichloroethylene may become intolerant to alcohol with small quantities causing drunkenness and skin blotches. Studies on trichloroethylene-exposed workers indicate that overexposure to this chemical may result in involuntary eye movement, tremors, sleep disturbances, symptoms of central nervous system (CNS) depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), and other CNS effects. Brief or prolonged exposure to trichloroethylene and its decomposition products (e.g. dichloroacetylene) has been associated with cranial neuropathy (characterized by facial numbness), although it isn't clear which agent is responsible for the effect. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals, and may aggravate pre-existing disorders of these organs in humans: mild, reversible liver effects, liver abnormalities, effects on hearing, spleen damage, nervous system damage, kidney damage, lung damage, brain damage. Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans,

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and may aggravate pre-existing disorders of these organs: liver abnormalities, anemia, lung 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 (or a component) is listed as a carcinogen by the International Agency for Research on Cancer. Several epidemiology studies have found no increase in cancer incidence in groups exposed to trichloroethylene. In two later studies, exposure to trichloroethylene has been associated with slight increases in certain types of cancer (liver, kidney, non-Hodgkins lymphoma, biliary tract). Cancer incidence in these studies did not increase with increasing estimated trichloroethylene exposure levels. Some studies with trichloroethylene in laboratory animals have produced cancer (primarily liver and/or lung), while others have not.

Other Health Effects

No data

Primary Route(s) of Entry

Inhalation, Skin absorption, Skin contact, Eye contact.

4. FIRST AID MEASURES

Eyes

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

Skin

Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before reuse.

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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, lung (for example, asthma-like conditions), liver, kidney, central nervous system, nervous system, spleen, auditory system. Exposure to this material may aggravate any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemias. Individuals with preexisting heart disorders may be more susceptible to arrhythmias (irregular heartbeats) if exposed to high concentrations of this material.

5. FIRE FIGHTING MEASURES**Flash Point**

50.8 - 70.0 F (10.0 - 21.1 C) ICC

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Explosive Limit
(for component) Lower 2.8 %

Autoignition Temperature
No data

Hazardous Products of Combustion
May form: carbon dioxide and carbon monoxide, hydrogen chloride,
phosgene, various hydrocarbons.

Fire and Explosion Hazards
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. Never use welding or cutting torch on or near drum (even
empty) because product (even just residue) can ignite explosively.

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
Not determined

6. ACCIDENTAL RELEASE MEASURES

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

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Large Spill

Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. 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.

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. All five-gallon pails and larger metal containers, including tank cars and tank trucks, should be grounded and/or bonded when material is transferred. Emergency eyewash fountains and safety showers should be available in the immediate vicinity of potential exposure. Warning. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

Storage

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 impervious 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

TRICHLOROETHYLENE (79-01-6)
 OSHA PEL 50.000 ppm - TWA
 OSHA PEL 200.000 ppm - STEL
 ACGIH TLV 50.000 ppm - TWA
 ACGIH TLV 100.000 ppm - STEL

ISOPROPANOL (57-53-0)
 OSHA PEL 400.000 ppm - TWA
 OSHA PEL 500.000 ppm - STEL
 ACGIH TLV 400.000 ppm - TWA
 ACGIH TLV 500.000 ppm - STEL

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9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point

(for component) 180.0 F (82.2 C) @ 750 mmHg

Vapor Pressure

(for component) 60.000 mmHg @ 58.00 F

Specific Vapor Density

> 1.000 @ AIR=1

Specific Gravity

1.155 @ 77.00 F

Liquid Density

9.620 lbs/gal @ 77.00 F

1.156 kg/l @ 25.00 C

Percent Volatiles

100.0 %

Evaporation Rate

SLOWER THAN ETHYL ETHER

Appearance

No data

State

LIQUID

Physical Form

HOMOGENEOUS SOLUTION

Color

No data

Odor

No data

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pH
Not applicable

10. STABILITY AND REACTIVITY

Hazardous Polymerization
Product will not undergo hazardous polymerization.

Hazardous Decomposition
May form: carbon dioxide and carbon monoxide, hydrogen chloride,
phosgene, various hydrocarbons.

Chemical Stability
Stable.

Incompatibility
Avoid contact with: aluminum, strong alkalis, strong oxidizing
agents.

11. TOXICOLOGICAL INFORMATION

No data

12. ECOLOGICAL INFORMATION

No data

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:
 COMPOUNDS, CLEANING, LIQUID,3,NA1993,II

Container/Mode:
 55 GAL DRUM/TRUCK PACKAGE

NOS Component:
 ISOPROPANOL

RQ (Reportable Quantity) - 49 CFR 172.101
 Product Quantity (lbs) Component

 144 TRICHLOROETHYLENE

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)

 TRICHLOROETHYLENE 100

SARA 302 Components - 40 CFR 355 Appendix A
 None

Section 311/312 Hazard Class - 40 CFR 370.2
 Immediate(X) Delayed(X) Fire(X) Reactive() Sudden
 Release of Pressure()

SARA 313 Components - 40 CFR 372.65
 Section 313 Component(s) CAS Number

 TRICHLOROETHYLENE 79-01-6 55.80

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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 1985: This product contains the following substance(s) known to the state of California to cause cancer.

TRICHLOROETHYLENE

New Jersey RTK Label Information

TRICHLOROETHYLENE

73-01-6

ISOPROPYL ALCOHOL

67-53-0

Pennsylvania RTK Label Information

ETHENE, TRICHLORO-

73-01-6

2-PROPANOL

67-53-0

15. 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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SOURCE: ASHLAND INC WTR EASYWTR