MARLENE SOLUTION

MATERIAL SAFETY DATA SHEET

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SECTION I PRODUCT IDENTIFICATION

MANUFACTURER: THE JOHN G. MARSHALL MFG. CO., INC.
626 HANOVER PIKE, SUITE 102
HAMPSTEAD, MD 21074

INFORMATION AND EMERGENCY PHONE DURING BUSINESS HOURS 800-777-6634

FOR EMERGENCY ASSISTANCE INVOLVING A SPILL, LEAK, OR FIRE WITH THIS PRODUCT CALL CHEMTREC 800-424-9300

PHYSICAL DATA: BLENDED SOLUTION
SYNONYMS: NONE

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by volume)
Trichloroethylene	79-01-6	75.0
Propylene Glycol Monomethyl Ether Acetate	(108-65-6)	25.0

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye

Exposure causes eye irritation. Symptoms may include stinging, tearing, redness, and swelling.

Skin

Exposure may cause mild skin irritation. Prolonged or repeated exposure may dry the skin. Symptoms may include redness, burning, drying and cracking, and skin burns.

Swallowing

Single dose oral toxicity is low. Swallowing small amounts during normal handling is not likely to cause harmful effects; swallowing large amounts may be harmful. This material can enter the lungs during swallowing or vomiting and cause lung inflammation and/or damage.

Inhalation

Exposure to vapor or mist is possible. Short-term inhalation toxicity is low. Breathing small amounts during normal handling is not likely to cause harmful effects; breathing large amounts may be harmful.

Symptoms of Exposure

gastrointestinal irritation (nausea, vomiting, diarrhea), irritation (nose, throat, respiratory tract), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), and death.

Target Organ 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: liver abnormalities, 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, and may aggravate pre-existing disorders of these organs: liver abnormalities, anemia, lung damage.

Developmental Information

No data

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Cancer Information

Some studies with trichloroethylene in laboratory animals have produced cancer (primarily liver and/or lung), while others have not. The relevance of these findings to humans is uncertain. There is no evidence that trichloroethylene causes cancer in humans. Trichloroethylene is not listed as a carcinogen by IARC, NTP, or OSHA.

Other Health Effects

No Data

Primary Route(s) of Entry

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

Swallowing

Do not induce vomiting. This material is an aspiration hazard. If individual is drowsy or unconscious, place on left side with the head down. Seek medial attention. 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 arrhythmia. Sympathomimetic drugs may initiate cardiac arrhythmia in persons exposed to this material.

5. FIRE FIGHTING MEASURES

Flash Point

120°F TCC

Explosive Limit

(for component) Lower 2.0%

Autoignition Temperature

670°F

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.

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Extinguishing Media

Regular foam, water fog, carbon dioxide, dry chemical

Fire Fighting Instructions

Wear 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.

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. 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 sue of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain 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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection

Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type of 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.

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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 VPEL 50.000 ppm - TWA
OSHA VPEL 200.000 ppm - STEL
ACGIH TLV 50.000 ppm - TWA
ACGIH TLV 100.000 ppm - STEL
Glycol Ether PM Acetate (108-65-6)
No Exposure Limits Established

9. PHYSICALAND CHEMICAL PROPERTIES

Boiling Point

(for components) 188°F (86.7°C)

Vapor Pressure

(for components) 58 mmHg @ 68.00°F

Specific Vapor Density

4.55 @ AIR=1

Specific Gravity

1.337 @ 77.00°F

Liquid Density

11.14 lbs/gal @ 77.00°F
1.336 kg/l @ 25.00°C

Percent Volatiles

100.0%

Evaporation Rate

SLOWER THAN ETHYL ETHER

Appearance

Colorless Liquid

State

Liquid

Physical Form

Homogeneous Solution

Color

No Data

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Odor
No Data

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 alkalies, strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

12. ECOLOGICAL INFORMATION

13. DISPOSAL CONSIDERATION

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

14. TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101
DOT Description:
COMPOUNDS, CLEANING, N.O.S. Combustible Liquid, Keep away from Food - NA1993, III
Container/Mode:
55 GAL DRUM/TRUCK PACKAGE
NOS Component:

RQ (Reportable Quantity) - 49 CFR 172.101
100 lbs.

15. REGULATORY INFORMATION

US Federal Regulations
TSCA (Toxic Substances Control Act) Status
TSCA (UNITED STATES) The intentional ingredients of this product are listed

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CERCLA RQ - 40 CFR 302.4

Component	RQ (lbs)
TRICHLOROETHYLENE	100

SARA 302 Components - 40 CFR 355 Appendix A

None

Section 311/312 Hazard Class - 40 CFR 370.2

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

SARA 313 Components - 40 CFR 372.65

Section 313 Component(s)	CAS Number	Max %
TRICHLOROETHYLENE	79-01-6	75.00

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.
TRICHLOROETHYLENE

New Jersey RTK Label Information

TRICHLOROETHYLENE	79-01-6
Glycol Ether PM Acetate	108-65-6

Pennsylvania RTK Label Information

ETHENE, TRICHLORO-	79-01-6
Glycol Ether PM Acetate	108-65-6

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.

******END******