

MATERIAL SAFETY DATA SHEET

MIL-SOLV 2000 A-154

Revision Number 5, Revision Date 10/5/06

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product code A00367PL MSDS 1006
Product name MIL-SOLV 2000 Safety Solvent, A-154
Chemical characterization Aerosol
Manufacturer, importer, supplier
 Chemax Corporation
 PO Box 7453
 Beaumont, TX 77726
 Phone: 800-346-0132
EMERGENCY TELEPHONE NUMBER 1-800-346-0132

2. HAZARD IDENTIFICATION

Emergency Overview:

- Warning
- Irritating to eyes and skin.
- Vapors may be harmful
- Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 122°F (50°C)
- KEEP OUT OF REACH OF CHILDREN

HMIS (Hazardous Material Information System)	Health=2; Fire=1; Reactivity=0 Personal protective equipment = B
Eye contact	May cause slight irritation.
Skin contact	Substance may cause slight skin irritation. Prolonged skin contact may defat the skin and produce dermatitis.
Inhalation	Inhalation of high vapour concentrations may cause nasal & respiratory irritation and symptoms like headache, dizziness, tiredness, nausea, vomiting and possible unconsciousness.
Ingestion:	ASPIRATION HAZARD: Aspiration may cause chemical pneumonitis if aspirated into lungs. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
General advice	Ensure adequate ventilation, especially in confined areas. Avoid contact with skin and eyes.
Properties affecting health	Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effect.
Principle Routes of Exposure	Inhalation and Skin Absorption

3. COMPOSITION/INFORMATION ON INGREDIENTS (hazardous components 1% or greater; carcinogens 0.1% or greater)

CAS	Chemical Name	% Weight	ACGIH*	OSHA*
106-94-5	n-Propyl bromide	85-95	10 ppm TWA	N/A
124-38-9	Carbon dioxide	< 5.0	5000 ppm TWA	5000 ppm TWA (exposures < 10,000 ppm to be cited de minimus); 9000 mg/m3 TWA
67-63-0	Isopropyl Alcohol	< 5.0	200 ppm TWA	400 ppm TWA; 980 mg/m3 TWA

* ACGIH - Occupational Exposure Limits - TWA's

* OSHA - Final PELs - Time Weighted Averages (TWAs)

4. FIRST AID MEASURES

Eye contact • Immediately flush with plenty of water. After initial flushing, remove any

	<ul style="list-style-type: none"> contact lenses and continue flushing for at least 15 minutes. If eye irritation persists, consult a specialist
Skin contact	<ul style="list-style-type: none"> Wash off with soap and water If skin irritation persists, call a physician
Inhalation	<ul style="list-style-type: none"> Move to fresh air If not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth. Obtain medical attention
Ingestion:	<ul style="list-style-type: none"> DO NOT INDUCE VOMITING Aspiration hazard Immediate medical attention is required
Aggravated Medical Conditions	<ul style="list-style-type: none"> May aggravate existing eye, skin, or upper respiratory conditions

5. FIRE-FIGHTING MEASURES

NFPA (National Fire Protection Association)	Health=2; Fire=1; Reactivity=0; Special = -
Flammability as per USA Flame Projection Test (aerosols)	Not Categorized as Flammable
Flash point (non-aerosols)	NA
Suitable extinguishing media	Foamy spray. Dry chemical. Carbon dioxide (CO2).
Extinguishing media which must not be used for safety reasons	None
Specific Hazards	Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 122°F (50°C)
Special protective equipment for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
Specific methods	Water mist may be used to cool closed containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Ensure adequate ventilation. Use personal protective equipment.
Environmental precautions	Prevent product from entering drains. Should not be released into the environment
Methods for cleaning up	Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container .

7. HANDLING AND STORAGE

Handling

Safe handling advice	Wear personal protective equipment. Do not pierce or burn, even after use. Do not spray on naked flame or any incandescent material.
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Storage

Technical measures/Precautions	KEEP OUT OF REACH OF CHILDREN. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 122°F (50°C).
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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures	Ensure adequate ventilation, especially in confined areas
Hand protection	Neoprene gloves
Eye protection	Safety glasses with side-shields
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators
Skin and body protection	None under normal use.
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice.

Wash hands before breaks and at the end of workday
 When using, do not eat, drink or smoke.
 Keep away from food and drink
 Keep working clothes separately

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Form	Aerosol
Appearance	Clear
Colour	colourless
Odour	Ethereal

Important Health Safety and Environmental Information

Specific Gravity	1.30
Density @ 68°F (20 °C)	10.842 lbs/gal
pH	N/A
Boiling point/range	N/A
Flash point	N/A
Vapour pressure	PSIG @ 70°F (Aerosols): 80-100.
Vapour density	(Air=1); greater than 1.
Water solubility	Insoluble.
Evaporation Rate	0.8 (ether = 1)
VOC Content(%)	94.1%; per US EPA Definition

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions
Conditions to avoid	Heat, flames and sparks. Extremes of temperature and direct sunlight. Do not expose to temperatures above 54°C .
Materials to avoid	Incompatible with strong bases and oxidizing agents, Reactive metals, (i.e. potassium, sodium, etc.)
Hazardous decomposition products	Carbon oxides , Hydrogen bromide, Bromine, hydrogen fluoride and Hydrogen chloride (trace amounts)
Polymerization	Hazardous polymerization does not occur

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Component Information

CAS	Chemical Name	% Weight	NIOSH - Selected LD50s and LC50s
106-94-5	n-Propyl bromide	85-95	Inhalation LC50 Rat: 253 g/m3/30M
124-38-9	Carbon dioxide	< 5.0	N/A
67-63-0	Isopropyl Alcohol	< 5.0	Oral LD50 Rat: 5045 mg/kg; Dermal LD50 Rabbit: 12800 mg/kg

Product Information

LD50/oral/rat =	Not Determined
LD50/dermal/rat =	Not Determined
Local effects	
Skin irritation	May cause skin irritation and/or dermatitis.
Eye irritation	Contact with eyes may cause irritation.
Inhalation	Excessive inhalation may cause irritation of respiratory tract.
Ingestion:	Harmful if swallowed.

Sensitization	May cause sensitization of susceptible persons.
Chronic toxicity	Prolonged exposure may cause chronic effects.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Component Information

CAS	Chemical Name	% Weight	EFFSD*
106-94-5	n-Propyl bromide	85-95	96 Hr LC50 fathead minnow: 67.3 mg/L (flow-through)
124-38-9	Carbon dioxide	< 5.0	N/A
67-63-0	Isopropyl Alcohol	< 5.0	96 Hr LC50 fathead minnow (29 days old):94900 mg/L (flow-through);96 Hr LC50 fathead minnow (31 days old):61200 mg/L (flow-through)

* EFFSD - Ecotoxicity - Freshwater Fish Species Data

Product Information

Aquatic toxicity Not Determined.

Other information:

Ozone depletion potential; ODP; (R-11 = 1)	Not Determined.
Global warming potential (GWP)	Not Determined.
Additional ecological information	Not Determined.
Mobility	Not Determined
Bioaccumulative potential	Not Determined

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products	Should not be released into the environment. Dispose of in accordance with local regulations.
Contaminated packaging	Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

DOT (Ground).
UN Number Not Applicable
Proper shipping name Consumer Commodity ORM-D
Packing group Not Applicable
Subsidiary Risk Not Applicable
Description 1 4G Fiberboard Box X 12 Metal Cans

IATA
UN Number UN1950
Proper shipping name Aerosols, Non-Flammable, 2.2
Packing group Not Applicable
Subsidiary Risk Not Applicable
Description 1 4G Fiberboard Box X 12 Metal Cans

TDG
UN Number UN1950
Proper shipping name Aerosols, Non-Flammable, Class 2.2
Packing group Not Applicable
Subsidiary Risk Not Applicable
Description 1 4G Fiberboard Box X 12 Metal Cans

15. REGULATORY INFORMATION

U.S. Inventories

CAS	Chemical Name	% Weight	TSCA*	CERCLA/SARA*	SARA III	CPCL*	CPCL*
106-94-5	n-Propyl bromide	85-95	Present	N/A	No	N/A	female reproductive toxicity, initial date 12/7/04
124-38-9	Carbon dioxide	< 5.0	Present	N/A	No	N/A	N/A
67-63-0	Isopropyl Alcohol	< 5.0	Present	N/A	No	N/A	N/A

* TSCA - United States - Section 8 (b) Inventory (TSCA)

* CERCLA/SARA - Hazardous Substances and their Reportable Quantities

* CPCL - California - Proposition 65 - Carcinogens List

* CPCL - California - Proposition 65 - Reproductive Toxicity - Female

International Inventories

CAS	Chemical Name	% Weight	DSL - Canada*	WHMIS*
106-94-5	n-Propyl bromide	85-95	Present	D2B
124-38-9	Carbon dioxide	< 5.0	Present	A; Uncontrolled product according to WHMIS classification criteria (solid)
67-63-0	Isopropyl Alcohol	< 5.0	Present	B2, D2B

* DSL - Canada - Domestic Substances List (DSL)

* WHMIS - Canada - WHMIS - Classifications of Substances

16. OTHER INFORMATION

Prepared By

D. Padovani (IB) Regulatory Department. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication.

End of Safety Data Sheet