

MATERIAL SAFETY DATA SHEET

1: CHEMICAL PRODUCT IDENTIFICATION

Product Name: IR-303 SPOT CLEAN Product Code: IR-303 Reference: Appendix A to 29 CFR Section 1910.1052: Substance Safety Data Sheet and Technical Guidelines for Methylene Chloride MSDS Date: June 4, 2009

2: COMPOSITION, INFORMATION ON INGREDIENTS

No.	D. Component CAS REG. NO.	Amount %	OSHA		ACGIH	
			PEL	STEL	TLV	STEL
1	Dichloromethane 75-09-2 ; NCI-C50102.	75 - 80	25* ppm	125* ppm	50	150
2	Perchloroethylene 127-18-4	10 - 15	100		50	
3	Isopropanol 67-63-0	8 - 13	400 0		400	

Exposure may not exceed 25 parts MC per million parts of air (25 ppm) as an eight-hour time-weighted average (8-hour TWA PEL) or 125 parts of MC per million parts of air (125 ppm) averaged over a 15-minute period (STEL).

3: HAZARDS IDENTIFICATION

EMERGENCY RESPONSE INFORMATION

HAZARDS	HMIS	NFPA
Toxicity	2	2
Fire	1	1
Reactivity	0	0
Special	G	

RATING	DEGREE OF HAZARD
4	Extreme
3	High
2	Moderate
1	Slight
0	Insignificant

	SPECIAL EQUIPMENT LEGEND			
А	Safety Glasses	F	C + Dust Mask	
в	A + Gloves	G	B + Respirator	
с	B + Apron	н	F + Goggles	
D	C + Face Shield	I	B + Respirator	
Е	B + Dust Mask	x	Ask Supervisor	

Danger! Potentially combustible liquid! Harmful if inhaled. High vapor concentrations may cause dizziness or unconsciousness. Causes irritation or burns to skin and eyes. Harmful or fatal if swallowed. Pulmonary aspiration hazard: can enter lungs and cause damage.

If an exposed person has been overcome, notify someone else and put into effect the established emergency rescue procedures. Understand the facility's emergency rescue procedures and know the locations of rescue equipment before the need arises. Do not become a casualty yourself. Any exposure or suspected exposure should initiate an evaluation of OSHA standard 29 CFR 1910.1052 for appropriate action.

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Primary Routes of Exposure Inhalation Skin Contact Eye Contact Ingestion

Inhalation:

MC is an anesthetic. Inhalation of vapors, mist or spray is the major route of potential exposure and can cause mental confusion, light-headedness, nausea, vomiting, and headache. Continued exposure may cause increased light-headedness, staggering, unconsciousness, dizziness, anesthesia, drowsiness, and other central nervous system effects, including death. High vapor concentrations may also cause irritation of the eyes, nose, throat and lungs and respiratory tract. Exposure to MC may make the symptoms of angina (chest pains) worse. The Warning Property of Odor Threshold is approximately 200-300 ppm (Significantly above the PEL); causes olfactory fatigue or desensitization of smell thereby decreasing the ability to detect vapor presence or concentration by the sense of smell. Different authors have reported varying odor thresholds for MC. Kirk-Othmer and Sax both reported 25 to 50 ppm; Summer and May both reported 150 ppm; Spector reports 320 ppm. Patty, however, states that since one can become adapted to the odor, MC should not be considered to have adequate warning properties.

Skin Contact:

Skin absorption of material may produce systemic toxicity. Causes irritation or dermatitis with prolonged or repeated contact. If liquid MC remains on the skin, it may cause skin burns. Removes natural oils and fats from skin.

Eye Contact:

Direct contact with material causes severe irritation or eye damage. Vapors may irritate. Kirk-Othmer reports that ``MC vapor is seriously damaging to the eyes.'' Sax agrees with Kirk-Othmer's statement. The ACGIH Documentation of TLVs states that irritation of the eyes has been observed in workers exposed to concentrations up to 5000 ppm.

Ingestion:

Small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause severe pulmonary injury, possibly progressing to death. This product has a low order of oral toxicity.

4: FIRST AID MEASURES

Reporting signs and symptoms: You should inform your employer if you develop any signs or symptoms and suspect that they are caused by exposure to MC.

Inhalation:

Remove subject to fresh air at once. Keep subject warm and at rest. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Obtain medical attention as soon as possible.

Eye Contact:

Flush eyes with a large amount of water for at least 15 minutes. Consult a physician immediately.

Skin Contact:

Wash affected skin areas thoroughly with soap and water until no odor remains. If redness or swelling develops, consult a physician. Immediately remove contaminated clothing and wash before reuse.

Ingestion:

Do Not induce vomiting! Do Not give liquids. Keep subject at rest. Obtain Emergency Medical Attention. Small amounts which accidentally enter the mouth should be rinsed out until the taste is gone.



NOTE TO PHYSICIAN: Because rapid absorption may occur through the lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Exposure may increase "myocardial irritability." Do not administer sympathomimetic drugs unless absolutely necessary. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Supportive care. Treatment based on judgement of the physician in response to reactions of the patient. Carboxyhemoglobinemia may aggravate any pre-existing condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemias.

5: FIRE FIGHTING MEASURES

FIRE AND EXPLOSIVE PROPERTIES:

Flash Point:	> 150°F TCC
Auto-ignition Temperature:	$556^{\circ}C = 1033^{\circ}F$
Lower Explosion Limit:	12% @ 25°C
Upper Explosion Limit:	22% @ 25°C

Unusual Hazards:

Isopropanol is Flammable! MC has no flash point in a conventional closed tester, but it forms flammable vapor-air mixtures at approximately 100 deg.C (212 deg.F), or higher. Forms flammable vapor-air mixtures. Lower temperature increases the difficulty of getting it to ignite; will release invisible vapors that form flammable mixtures that might ignite or explode. Vapors can travel considerable distances to an ignition source. Toxic gasses will form upon combustion. Material can accumulate static charges which can cause an incendiary electrical discharge. Material will partially dissolve and sink in water. It has a low boiling point of 39.8 deg.C (104 deg.F).

Extinguishing Agents:

Water spray, regular foam, dry chemical, carbon dioxide are appropriate. Use extinguishing media appropriate for surrounding media. Use water spray to cool adjacent fire exposed containers to avoid rupture and spattering.

Personal Protective Equipment:

As in any fire, wear self contained breathing apparatus (pressure demand, MSHA/NIOSH approved or equivalent) and full protective gear.

Special Procedures:

When involved in fire, MC emits highly toxic and irritating fumes such as phosgene, hydrogen chloride and carbon monoxide. Wear breathing apparatus and use water spray to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposures. For purposes of compliance with 29 CFR 1910.307, locations classified as hazardous due to the presence of MC shall be Class I.

6: ACCIDENTAL RELEASE MEASURES

Personal Protection:

Persons not wearing protective equipment and clothing should be restricted from areas of spills or leaks until cleanup has been completed. See the PERSONAL PROTECTION MEASURES Section for recommendations. If exposed to material during clean-up operations, see the FIRST AID PROCEDURES Section for appropriate actions.

Procedures:

Prevent ignition; stop leak; ventilate and evacuate area; keep spectators away; contain spill immediately with



inert noncombustible materials (e.g. sand, earth, absorbent). Transfer liquids and solid diking material to separate suitable closed metal containers for recovery or disposal.

CAUTION: Keep spills and cleaning runoff out of municipal sewers, watercourses and open bodies of water. Use water spray to disperse vapors.

Spills larger than 300 lbs. are subject to CERCLA reporting and are to be reported to the National Response Center and to local authorities.

7: HANDLING AND STORAGE

Handling:

Avoid all contact with skin, eyes or clothing. Avoid breathing of mist or vapor. Never siphon by mouth. Contact lenses should not be worn when working with this chemical.

Remove and wash contaminated clothing before reuse.

Practice good personal hygiene: Wash after handling; shower at end of work period. Do not eat, drink or smoke in the work area. Do not keep food, beverage, or smoking materials, or eat or smoke in regulated areas where MC concentrations are above the permissible exposure limits.

Storage Conditions:

Store in a cool, dry, well ventilated area out of sunlight. Protect against physical damage. Consult NFPA and OSHA codes. Keep away from heat, sparks and open flame. Protect from storage temperatures above 100°F to prevent container rupture.

Keep Out of Reach of Children.

Store upright in original closed container. Because of its potentially corrosive properties (decomposition of unstabilized material to hydrochloric acid), and its high vapor pressure, MC should be stored in plain, galvanized or lead lined, mild steel containers in a cool, dry, well ventilated area away from direct sunlight, heat source and acute fire hazards.

All piping and valves at the storage, loading or unloading station should be of material that is resistant to MC and should be carefully inspected prior to connection to the container or transport vehicle and periodically during the operation.

Electrical Equipment: Electrical installations in Class 1B hazardous locations as defined in Article 500 of the National Electrical Code, should be installed according to Article 501 of the code; and electrical equipment should be suitable for use in atmospheres containing MC vapors. See Flammable and Combustible Liquids Code (NFPA No. 325M), Chemical Safety Data Sheet SD-86 (Manufacturing Chemists' Association, Inc.). Portable heating units should not be used in confined areas where MC is used.

"Empty" containers retain product residue (liquid and/or vapor) that can be dangerous. Do NOT pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity or other sources of ignition due to explosion or fire hazard. Empty drums should be completely drained and properly bunged and promptly returned to a reconditioner or other proper disposal.

Concentrated vapors of this product are heavier than air and will collect in low areas such as pits, storage tanks and other confined areas. Do not enter these areas where vapors of this product are suspected unless special breathing apparatus is used and an observer is present for assistance.

The use of air for unloading of product out of vessels or transport containers is not recommended.

8: EXPOSURE CONTROLS, PERSONAL PROTECTION

Respiratory Protection:

A respiratory program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Good industrial hygiene practices recommend that engineering controls be used to reduce environmental concentrations to the permissible exposure level. However, there are some exceptions where respirators may be used to control exposure. Respirators may be used when engineering and work practice controls are not



feasible, when such controls are in the process of being installed, or when these controls fail and need to be supplemented. Respirators may also be used for operations which require entry into tanks or closed vessels, and in emergency situations.

If the use of respirators is necessary, the only respirators permitted are those that have been approved by the Mine Safety and Health Administration (MSHA) or the National Institute for Occupational Safety and Health (NIOSH).

In addition to respirator selection, a complete written respiratory protection program should be instituted which includes regular training, maintenance, inspection, cleaning, and evaluation. If you can smell MC while wearing a respirator, proceed immediately to fresh air. If you experience difficulty in breathing while wearing a respirator, tell your employer.

Where mists or vapor concentration exceeds or is likely to exceed 12.5 ppm, wear a MSHA / NIOSH approved (or equivalent) full face Supplied-air respirator. Supplied-air respirators are required because air-purifying respirators do not provide adequate respiratory protection against MC.

For vapor concentrations above 125 ppm and for spills and/or emergencies use an approved positive pressure self-contained breathing apparatus or positive pressure air line, with full facepiece and auxiliary self-contained air supply. Follow any applicable respirator use standards and regulations.

To determine exposure levels, monitoring should be conducted regularly.

Eye Protection:

Contact lenses should not be worn. Wear safety glasses, chemical splash goggles (ANSI Z87.1 or approved equivalent), or full face shield. If vapor exposure causes eye discomfort use a full face respirator.

Skin & Hand Protection:

Employees must be provided with and required to use impervious clothing resistant to solvent permeation: Viton, polyvinyl alcohol, neoprene, nitrile, or equivalent; gloves, face shields (eight-inch minimum), boots, aprons and other appropriate protective clothing necessary to prevent repeated or prolonged skin contact with liquid MC or contact with vessels containing liquid MC. Any clothing which becomes wet with liquid MC should be removed immediately and not reworn until the employer has ensured that the protective clothing is fit for reuse. Contaminated protective clothing should be placed in a regulated area designated by the employer for removal of MC before the clothing is laundered or disposed of. Clothing and equipment should remain in the regulated area until all of the MC contamination has evaporated; clothing and equipment should then be laundered or disposed of as appropriate.

Other Protection:

Ask your supervisor where MC is used in your work area and for any additional plant safety and health rules.

Medical Requirements:

Your employer is required to offer you the opportunity to participate in a medical surveillance program if you are exposed to MC at concentrations at or above the action level (12.5 ppm 8-hour TWA) for more than 30 days a year or at concentrations exceeding the PELs (25 ppm 8-hour TWA or 125 ppm 15-minute STEL) for more than 10 days a year. If you are exposed to MC at concentrations over either of the PELs, your employer will also be required to have a physician or other licensed health care professional ensure that you are able to wear the respirator that you are assigned. Your employer must provide all medical examinations relating to your MC exposure at a reasonable time and place and at no cost to you.

Monitoring and Measurement Procedures:

A. Exposure above the Permissible Exposure Limit:

1. Eight-hour exposure evaluation: Measurements taken for the purpose of determining employee exposure under this section are best taken with consecutive samples covering the full shift. Air samples must be taken in the employee's breathing zone.

2. Monitoring techniques: The sampling and analysis under this section may be performed by collection of the MC vapor on two charcoal adsorption tubes in series or other composition adsorption tubes, with



subsequent chemical analysis. Sampling and analysis may also be performed by instruments such as real-time continuous monitoring systems, portable direct reading instruments, or passive dosimeters as long as measurements taken using these methods accurately evaluate the concentration of MC in employees'' breathing zones.

OSHA method 80 is an example of a validated method of sampling and analysis of MC. Copies of this method are available from OSHA. The employer has the obligation of selecting a monitoring method which meets the accuracy and precision requirements of the standard under his or her unique field conditions. The standard requires that the method of monitoring must be accurate, to a 95 percent confidence level, to plus or minus 25 percent for concentrations of MC at or above 25 ppm, and to plus or minus 35 percent for concentrations at or below 25 ppm. In addition to OSHA method 80, there are numerous other methods available for monitoring for MC in the workplace.

B. Since many of the duties relating to employee exposure are dependent on the results of measurement procedures, employers must assure that the evaluation of employee exposure is performed by a technically qualified person.

Observation of Monitoring:

Your employer is required to perform measurements that are representative of your exposure to MC and you or your designated representative are entitled to observe the monitoring procedure. You are entitled to observe the steps taken in the measurement procedure, and to record the results obtained. When the monitoring procedure is taking place in an area where respirators or personal protective clothing and equipment are required to be worn, you or your representative must also be provided with, and must wear, protective clothing and equipment.

Access To Information:

A. Your employer is required to inform you of the information contained in this Appendix. In addition, your employer must instruct you in the proper work practices for using MC, emergency procedures, and the correct use of protective equipment.

B. Your employer is required to determine whether you are being exposed to MC. You or your representative has the right to observe employee measurements and to record the results obtained. Your employer is required to inform you of your exposure. If your employer determines that you are being over exposed, he or she is required to inform you of the actions which are being taken to reduce your exposure to within permissible exposure limits.

C. Your employer is required to keep records of your exposures and medical examinations. These records must be kept by the employer for at least thirty (30) years.

D. Your employer is required to release your exposure and medical records to you or your representative upon your request.

E. Your employee is required to provide labels and material safety data sheets (MSDS) for all materials, mixtures or solutions composed of greater than 0.1 percent MC. An example of a label that would satisfy these requirements would be:

Danger Contains Methylene Chloride Potential Cancer Hazard

May worsen heart disease because methylene chloride is converted to carbon monoxide in the body.

May cause dizziness, headache, irritation of the throat and lungs, loss of consciousness and death at high concentrations (for example, if used in a poorly ventilated room).

Avoid Skin Contact. Contact with liquid causes skin and eye irritation.

FACILITY CONTROL MEASURES:

Ventilation:

Use of this product does require adequate controlled mechanical ventilation and respiratory protection under normal operating conditions. Use of local exhaust ventilation is recommended to maintain exposure levels below 50 ppm (TWA), especially for confined spaces or to prevent confined space conditions. Lethal concentrations can easily exist in areas of poor ventilation.

Other Protective Equipment:

Facilities storing or utilizing this material should be equipped with eyewash and safety drench shower facilities.



These should be maintained in a sanitary condition. Suitable cleansing agents should also be provided to assure the effective removal of MC from the skin.

Because of the hazardous nature of MC, contaminated protective clothing should be placed in a regulated area designated by the employer for removal of MC before the clothing is laundered or disposed of.

For purposes of complying with 29 CFR 1910.141, the following items should be emphasized: The workplace should be kept clean, orderly, and in a sanitary condition. The employer should institute a leak and spill detection program for operations involving liquid MC in order to detect sources of fugitive MC emissions.

9: PHYSICAL AND CHEMICAL PROPERTIES TYPICAL

State	Liquid
Appearance	Clear
Color	Colorless
Odor	Characteristic penetrating chloroform-like
Viscosity	Very Thin
pH as is	Slightly acidic in water
Specific Gravity @ 68°F	1.2785
Density @ 60°F	10.65 Lbs/Gal
Vapor Density (Air = 1)	2.93
Vapor Pressure	355 mm Hg @ 20°C = 68°F
Freezing Point	$-72^{\circ}C = -97^{\circ}F$
Boiling Point (760 mm Hg)	$39.8^{\circ}C = 104^{\circ}F$
Solubility in Water	12% @ 25/25°C Moderate
Percent Volatility	100%
Evaporation Rate (ether $=$ 1)	0.7 Approximate
VOC %	10% = 1.07 Lbs/Gal (Exempt constituents)
HAP %	90% = 9.59 Lbs/Gal

10: STABILITY AND REACTIVITY

Instability:

This material is generally considered stable. Avoid open flames, welding arcs or other high temperature sources which induce thermal decomposition to hydrochloric acid. Conditions contributing to the instability of MC are heat and moisture.

Hazardous Decomposition Products:

Thermal decomposition can cause the evolution of hydrogen chloride and very small amounts of phosgene and chlorine; Carbon Dioxide, Carbon Monoxide if burned.

Hazardous Polymerization: This product will not undergo polymerization.

Incompatibility:

This product is not compatible with strong oxidizing agents and reactive metals such as sodium, potassium or magnesium. Contact with strong oxidizers, caustics, and chemically active metals such as aluminum or magnesium powder, sodium and potassium may cause fires and explosions.

Special precautions:

Liquid MC will attack some forms of plastics, rubber, and coatings.



11: TOXICOLOGICAL INFORMATION

Ingestion: Single dose oral toxicity for methylene chloride is low. The oral LD_{50} for rats is in the range of 1500 - 2500 mg/Kg. If aspirated (liquid enters the lung), it may be rapidly absorbed through the lungs and result in chemical pneumonia and injury to other body systems.

Inhalation of vapor is harmful: Overexposure to high concentrations, especially in confined or poorly ventilated areas, can cause eye, nose, throat, lung irritation (500 - 1000 ppm); Progressively higher levels over 1000 ppm can cause CNS (brain) effects, dizziness, drunkenness, difficulty in breathing; concentrations as low as 9,000 ppm can cause unconsciousness, coma and death. There are reports of heart irregularities or cardiac arrhythmias from massive exposures.

Prolonged exposures can cause Carboxyhemoglobinemia, thereby impairing the body's ability to transport oxygen; brain, liver, kidney effects/damage have been observed in animals.

Skin absorption: A single prolonged exposure is not likely to result in the material being absorbed through the skin in harmful amounts. The dermal LD_{50} has not been determined. Prolonged skin contact can incur absorption. Repeated or prolonged contact is irritating. Eye contact is irritating.

Carcinogenicity: Methylene Chloride has been evaluated for possible cancer causing effects in laboratory animals. Inhalation studies at concentrations of 2,000 and 4,000 ppm increased the incidence of malignant liver and lung tumors in mice. Three inhalation studies of rats have shown increased incidence of benign mammary gland tumors in female rats at concentrations of 500 ppm and above and increases in benign mammary gland tumors in males at concentrations of 1,500 ppm and above. Rats exposed to 50 and 200 ppm via inhalation showed no increased incidence of tumors. Mice and rats exposed by ingestion at levels up to 250 mg/kg/day lifetime and hamsters exposed via inhalation to concentrations up to 3,500 ppm lifetime did not show an increased incidence of tumors.

The International Agency for Research on Cancer (IARC) has concluded that, with respect to methylene chloride, there is sufficient evidence of the carcinogenicity to experimental animals and inadequate evidence of the carcinogenicity to humans, resulting in a classification as a 2B animal carcinogen. The NTP has identified methylene chloride as an animal carcinogen.

Methylene chloride is listed on the IARC and NTP carcinogen lists but not by OSHA. The State of California has listed methylene chloride under Proposition 65 as a chemical known to the state to cause cancer.

Epidemiology studies of 751 humans chronically exposed to methylene chloride in the workplace of which 252 were exposed for a minimum of 20 years did not demonstrate any increase in deaths caused by cancer or cardiac problems. A second study of 2,227 workers confirmed these results.

There are also some human epidemiological studies which show an association between occupational exposure to MC and increases in biliary (bile duct) cancer and a type of brain cancer. Other epidemiological studies have not observed a relationship between MC exposure and cancer. OSHA interprets these results to mean that there is suggestive (but not absolute) evidence that MC is a human carcinogen.

Reproductive Toxicity: Reproductive toxicity tests have been conducted to evaluate the adverse effects methylene chloride may have on reproduction and offspring of laboratory animals. The results indicate that methylene chloride does not cause birth defects in laboratory animals.

12: ECOLOGICAL INFORMATION

Toxic to fish and food organisms.



Procedure:

Dispose of unused contents with licensed reclaimers or to permitted incinerators. Incinerate liquid and contaminated solids in accordance with local, state and federal regulations.

Small spills should be absorbed onto sand and taken to a safe area for atmospheric evaporation. Incineration is the preferred method for disposal of large quantities by mixing with a combustible solvent and spraying into an incinerator equipped with acid scrubbers to remove hydrogen chloride gases formed. Complete combustion will convert carbon monoxide to carbon dioxide. Care should be taken for the presence of phosgene.

14: TRANSPORTATION INFORMATION

Proper Shipping Name: Toxic, Liquids, Organic, n.o.s. Contains: Dichloromethane, Tetrachloroethylene, Marine Pollutant Hazard Class: 6.1 Identification No.: UN2810 Packing Group: III Label: 6.1 Toxic PG III Emergency Response Guide No.: 153 RQ: 770 Lb.

15: REGULATORY INFORMATION

WORKPLACE CLASSIFICATIONS

This product is considered to be hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

This product is a 'controlled' product under the Canadian Workplace Hazardous Materials Information System (WHMIS) and is classified D1B, D2A, D2B.

EMERGENCY PLANNING AND COMMUNITY RIGHT - TO KNOW (SARA TITLE III)

Section 311/312 Categorizations (40 CFR 370) This product is a hazardous material under 29 CFR 1910.1200, and therefore is covered by Title III of SARA and is classified into the following hazard categories: Immediate (Acute) Health effects: Yes Delayed (Chronic) Health effects: Yes Fire Hazard: Yes Sudden release of pressure hazard: No Reactivity hazard: No

Section 313 Information (40 CFR 372)

This product does contain the following chemical which is listed in Section 313 at or above the de minimis concentrations:

Dichloromethane	77%
Tetrachloroethylene	13%

CERCLA Information (40 CFR 302.4)

Releases of this material to air, land or water are reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to the state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.

The Reportable Quantity RQ of Dichloromethane is 1000 Lbs.

The Reportable Quantity RQ of Tetrachloroethylene is 100 Lbs.



RCRA INFORMATION

When a decision is made to discard this material as supplied, it does meet RCRA's characteristic definition of ignitability, corrosivity, or reactivity, and is listed in 40 CFR 261.33.

CHEMICAL CONTROL LAW STATUS

All components of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

California Proposition 65

This product is regulated under the California Safe Drinking Water and Toxic Enforcement Act of 1986.

16: OTHER SUPPLEMENTAL INFORMATION

Uses: MC is used as a solvent, especially where high volatility is required. It is a good solvent for oils, fats, waxes, resins, bitumen, rubber and cellulose acetate and is a useful paint stripper and degreaser. It is used in paint removers, in propellant mixtures for aerosol containers, as a solvent for plastics, as a degreasing agent, as an extracting agent in the pharmaceutical industry and as a blowing agent in polyurethane foams. Its solvent property is sometimes increased by mixing with methanol, petroleum naphtha or tetrachloroethylene.

ABBREVIATIONS	
ACGIH	American Conference of Governmental Industrial Hygienists
OSHA	Occupational Safety and Health Administration
TLV	Threshold Limit Value
PEL	Permissible Exposure Limit
TWA	Time Weighted Average
STEL	Short Term Exposure Limit
BAc	Butyl acetate
NE	Not Established
ND	Not Determined
NA	Not Applicable

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