

WELD - AID PRODUCTS

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MATERIAL SAFETY DATA SHEET

I - IDENTIFICATION

PRODUCT NAME: WELD KLEEN HEAVY DUTY
MATERIAL DESCRIPTION: Hazardous Blend
CHEMICAL FAMILY: Halogenated Hydrocarbons

PRODUCT CODE: 007030
REVISION DATE: 4/96
DOT ID #: UN 1950

II - PRODUCT AND COMPONENT DATA

COMPONENTS

1. Methylene Chloride*
2. Edible Oleic Oil

CAS REGISTRY NO.

75 - 09 - 2
None

%

>85%
< 10%

* Denotes chemical subject to reporting of Section 313 of Title III of the 1986 Superfund Amendments and Reauthorization Act (SARA) and 40 CFR Part 372

III - PHYSICAL DATA

APPEARANCE AND COLOR: Clear, Colorless liquid, mildly sweet odor
BOILING POINT: 103.1 (39.5°C)
VAPOR PRESSURE: 352 mm Hg @ 20°C
EVAPORATION RATE (Ether = 1): 0.7

SPECIFIC GRAVITY: 1.31 @ 25/25°C
VAPOR DENSITY IN AIR: (Air=1): 2.9
% VOLATILE BY VOLUME: 100
SOLUBILITY IN WATER: 1.32 gm/100 gm @ 25°C

IV - REACTIVITY DATA

STABILITY: Stable

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen chloride, phosgene (sm. amt.), silicon dioxide

CONDITIONS TO AVOID: Avoid contact with open flame, electric arcs, or other hot surfaces which can cause thermal decomposition.

INCOMPATIBILITY: Strong alkalis, oxidizers, reactive materials
HAZARDOUS POLYMERIZATION: Will not occur

V - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method Used): 1. None (TCC) 2. >400 (PMCC)

EXTINGUISHING AGENTS: Water, foam, dry chemical, carbon dioxide (CO₂)

UNUSUAL FIRE AND EXPLOSION HAZARDS: Concentrated vapors can be ignited by a high intensity ignition source. Firefighters should wear self-contained, positive pressure breathing apparatus, due to thermal decomposition products.

FLAMMABLE LIMITS IN AIR: 12-19% (Vol.) @ 100°C

NFPA HAZARD RATINGS: Health 2, Flammability 1
Reactivity 0

VI - TOXICITY AND FIRST AID

EXPOSURE LIMITS: (ACGIH) - 50 ppm TWA (8hr.); (OSHA) - 500 ppm TWA (8hr.) 1,000 ppm Ceiling (29 CFR 1910.1000); Odor threshold approximately 200-300 ppm (causes olfactory fatigue)

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Alcoholism, acute and chronic liver and kidney disease, chronic lung disease, anemia, coronary disease or rhythm disorders of the heart.

ACUTE TOXICITY:

INHALATION: Major route of potential exposure. Methylene chloride depresses the central nervous system. Concentrations between 900-1,000 ppm may cause dizziness. Nausea, headache and vomiting can occur at concentrations above 2,000 ppm. At 7,000 ppm, numbness and tingling in arms and legs and rapid heartbeat have occurred. Loss of consciousness and death have occurred at levels above 9,000 ppm, if exposure is prolonged. Carboxyhemoglobin levels can be elevated in persons exposed to methylene chloride and can cause substantial stress on the cardiovascular system. This elevation can be additive to the increase caused by smoking and other carbon monoxide sources.

SKIN: Liquid methylene chloride is painful and irritating if confined to skin by gloves, clothing, etc. Prolonged or repeated contact may cause irritation, defatting of skin, and dermatitis. Absorption through intact skin is possible if contact with liquid is prolonged.

EYES: Liquid may cause temporary irritation with temporary corneal injury. Vapors may irritate eyes.

INGESTION: Single dose toxicity low to moderate. If vomiting occurs, methylene chloride can be aspirated into lungs, which can cause chemical pneumonia and systemic effects.

FIRST AID:

INHALATION: Remove to fresh air. If breathing has stopped, administer artificial respiration. Call a physician.

SKIN: Remove contaminated clothing and shoes. Wash exposed area thoroughly with soap and water for at least 15 minutes. Wash contaminated clothing before reuse.

EYES: Flush eyes immediately with water for at least 15 minutes. If irritation persists, call a physician.

INGESTION: Do not induce vomiting. Contact physician or emergency medical facility immediately.

NOTE TO PHYSICIAN: Adrenaline should never be given to a person overexposed to methylene chloride. The finding of chronic toxic effects in laboratory animals may indicate toxicity to humans.

Overexposure should be avoided. Failure to do so could result in injury, illness or even death. Chronic overexposures to methylene chloride have caused liver and kidney toxic effects in experimental animals.

CARCINOGENICITY: Methylene chloride has been evaluated for possible cancer causing effects in laboratory animals. Inhalation studies at concentrations of 2, and 4,000 ppm increased the incidence of malignant liver and kidney 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 ppm/fg/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.

REPRODUCTIVE TOXICITY: Reproductive toxicity tests have been conducted to evaluate the potential 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.

VII - PERSONAL PROTECTION AND CONTROLS

RESPIRATORY PROTECTION: Where vapor concentration exceeds or is likely to exceed 50 ppm methylene chloride, an approved full face respirator with organic vapor canister is acceptable. Approved self-contained breathing apparatus or air line respirator, with full facepiece, is required for methylene chloride concentrations above 1,000 ppm and for spills and/or emergencies. Follow any applicable respirator use standards and regulations.

VENTILATION: Do not use in a closed or confined space. Open doors and/or windows. Use ventilation to maintain exposure levels of methylene chloride below 50 ppm (TWA).

SKIN PROTECTION: Wear solvent-resistant gloves such as Viton, polyvinyl alcohol, or equivalent. Solvent-resistant boots, apron, headgear and/or faceshield should be worn where splashing is possible.

EYE PROTECTION: Wear safety glasses. Contact lenses should not be worn. Chemical goggles and/or face shields should be worn where splashing is possible.

HYGIENE: Avoid contact with skin and avoid breathing vapors. Do not eat, drink or smoke in work area. Wash hands prior to eating, drinking, or using restroom.

OTHER CONTROL MEASURES: To determine exposure level(s), monitoring should be performed regularly. Safety shower and eyewash station should be made available.

NOTE: Protective equipment and clothing should be selected, used and maintained according to applicable standards and regulations. For further information, contact the clothing or equipment manufacturer.

VIII - STORAGE AND HANDLING PRECAUTIONS

Follow protective controls set forth in Section VII when handling this product. Store labeled sealed containers in a cool, dry, well-ventilated area out of sunlight. Prevent water or moist air from entering storage tanks or containers. Do not cut or weld on empty or full drums. Aluminum equipment should not be used for storage and/or transfer. Contact with aluminum parts in a pressurized fluid system may cause violent reactions. Consult equipment supplier for further information. Vapors are heavier than air and will collect in low areas. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276. Do not remove or deface label. Do not reuse drum without recycling or reconditioning in accordance with any applicable federal, state or local laws.

SARA Title III Hazard Categories: Immediate Health, Delayed Health

IX - SPILL, LEAK AND DISPOSAL PRACTICES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Evacuate the area, ventilate, and avoid breathing vapors. Dike area to contain spill. If spill occurs indoors, turn off air conditioning and/or heating system, to prevent vapors from contaminating entire building. Clean up area (wear protective equipment - refer to Section VII) by mopping or with absorbent material and place in closed containers for disposal. Avoid contamination of ground and surface waters. Do not flush to sewer. Reportable Quantity (RQ) is 1,000 lbs. Notify National Response Center (800/424-8802) of uncontrolled spills in excess of RQ.

WASTE DISPOSAL METHOD: Recovered liquids may be sent to a licensed reclaimer or incineration facility. Contaminated material must be disposed of in a permitted waste management facility. Consult federal, state or local disposal authorities for approved procedures.

X - TRANSPORTATION

DOT HAZARD CLASSIFICATION: Methylene chloride, 6.1, UN 1950, PG III, RQ

PLACARD REQUIRED: Keep away from food, 1950, Class 6

LABEL REQUIRED: Keep away from food, Class 6

Label as required by OSHA Hazard Communication Standard, and any applicable state and local regulations.

This sheet was compiled from the latest available information and reliable sources. Procedures are based on accepted usage. They are not necessarily all-inclusive and may vary in every circumstance. Weld-Aid provides no warranties either expressed or implied and assumes no responsibility for the accuracy or completeness of the data herein.