Safety Data Sheet ATTACK

Product and Company Identification (Section 1)

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Product Number: 8212800

DATE OF PRINT : 3/15/2015
Product Name : ATTACK
Chemical Name: MIXTURE
Chemical Family: Dichloromethane
Use: Epoxy Solvent / Industrial Solvent.

Hazards and Identification (Section 2)

Emergency Overview
Color: Clear
Physical State: Liquid
Odor: Characteristic
Hazard of Product:

WARNING! Causes eye irritation. Prolonged exposure may cause skin burns. May cause central nervous system effects; can cause death if too much is breathed. Harmful if inhaled. May be harmful if swallowed. May cause skin irritation. Aspiration hazard. Can enter lungs and cause damage to body systems. Isolate area. Keep upwind of spill. Stay out of low areas. Toxic fumes may be released in fire situations. Suspect cancer hazard. May cause cancer.

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OHSA Hazard Communication Standard, 29 CFR 1910.1200

Skin Irritation- Category 2
Eye irritation- Category 2A
Carcinogenicity- Category 2
Specific target organ toxicity-single exposure-Category 3
Specific target organ toxicity-repeated exposure-Category 2

Label elements
Hazard pictograms

Signal word: **WARNING!**

Hazards
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness
Suspected of causing cancer
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements
Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fumes/gas/mist/vapors/spray
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear eye protection/face protection.
Wear protective gloves.
Use personal protective equipment as requires.

Response
IF ON SKIN: wash with plenty of soap and water.
IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for Breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/attention
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.

Storage
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Disposal
Dispose of contents/container to an approved waste disposal plant
Other Hazards
Toxic fumes may be released in fire situations.

Eye Contact: May cause pain disproportionate to the level of irritation to eye tissues. May cause moderate eye irritation which may be slow to heal. May cause slight corneal injury. Vapor may cause eye irritation experienced as mild discomfort and redness.

Skin Contact: Brief contact may cause moderate skin irritation with local redness. May cause more severe response on covered skin (under clothing, gloves).Prolonged contact may cause skin burns. Symptoms may include pain, severe local redness, swelling and tissue damage. Extensive skin contact, such as immersion may cause an intense burning sensation, followed by a cold, numb feeling which will subside after contact. May cause drying and flaking of the skin.

Skin Absorption: Prolong skin contact is unlikely to result in absorption of harmful amounts.

Inhalation: In confined or poorly ventilated areas vapor can readily accumulate and cause unconsciousness and death. Vapor may cause irritation of the upper respiratory tract (nose and throat). May cause carboxyhemoglobinemia, thereby impairing the blood's ability to transport oxygen. Minimal anesthetic or narcotic effects may be seen in the range of 500-1000ppm. Progressively higher levels over 1000ppm may cause dizziness, drunkenness and as low as 10,000ppm , unconsciousness and death. These high levels may also cause cardiac arrhythmias(irregular heartbeats).

Ingestion: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury, however, swallowing larger amounts may cause injury.

Aspiration Hazard: Aspiration into the lungs may occur during ingestion or vomiting, resulting in rapid absorption and injury to other body systems.

Effects of Repeated Exposure: In animals, effects have been reported on the following organs, Kidney, Liver, Blood. May cause carboxyhemoglobinemia , thereby impairing the blood's ability to transport oxygen.

Cancer Information: This product has been shown to increase the incidence of malignant tumors in mice and benign tumors in rats. Other animal studies, as well as several human epidemiology studies, failed to show a tumorigenic response. Dichloromethane is not believed to pose a measurable carcinogenic risk to man when handled as recommended. Studies have shown that tumors observed in mice are unique to that species.

Birth Defects: Has been toxic to the fetus in laboratory animals at doses toxic to the mother.

IMPORTANT: While Hughes Associates believes the information contained herein to be accurate , Hughes Associates makes no representation or warranty, express or implied, regarding and assumes no liability for the accuracy or completeness of the information. Hughes Associates assumes no responsibility for injury from the use of the product described herein. The BUYER assumes all responsibility for handlings, using and/or reselling the Product in accordance with the applicable federal, state and local law. This SDS shall not in any way limit or preclude the operation and effect of any of the provisions of Hughes Associates terms and conditions of sale.

Composition Information (Section 3)

Component	CAS #	Amount
1. Dichloromethane	75-09-2	*
2. Dimethylformamide	68-12-2	*

** Attack is a mixture of the above two components. The percentage of each of these ingredients is proprietary information. Denotes chemical subject to reporting requirements of (SARA) section 313 and 40 CFR Part 372

First Aid Measures (Section 4)

General Advice: First Aid responders should pay attention to self protection and use the recommended protective clothing (Chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection(pocket mask, etc.). If breathing is difficult oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin Contact: Immediately flush eyes with water; remove contact lenses, if present after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Ingestion: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and indication of immediate medical attention and

special treatment needed(below), no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed: Maintain adequate ventilation and oxygenation of the patient. Treat with 100% oxygen. Exposure may increase " myocardial irritability". Do not administer sympathomimetic drugs such as epinephrine unless absolutely necessary. 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. If burn is present treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
Carboxyhemoglobinemia may aggravate any preexisting condition sensitive to a decrease in available oxygen such as chronic lung disease, coronary artery decrease or anemia. Skin contact may aggravate preexisting dermatitis.

Fire Fighting Measures (Section 5)

Suitable extinguishing media : Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam , Water fog, applied gently may be used as a blanket for fire extinguishment .

Special hazards arising from the mixture.

Hazardous Combustion Products: During a fire , smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Hydrogen chloride. Carbon monoxide. Carbon dioxide. Combustion products may include trace amounts of Phosgene. Chlorine.

Unusual Fire and Explosion Hazards: Container may vent and/or rupture due to fire. Although this product does not have a flash point, it can burn at room temperature. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas.

Advice for Fire Fighters

Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Use water spray to cool fire exposed containers and fire affected zone until fire is out an danger of reignition has passed. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Water fog, applied gently may be used as a blanket for fire extinguishment.

Special Protective Equipment for firefighters: Wear positive-pressure self-contained breathing

apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers. boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Accidental Release Measures (Section 6)

Personal precautions, protective equipment and emergency procedures: Isolate area. Refer to Section 7, Handling, for additional precautionary measures. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas. Keep personnel out of confined or poorly ventilated areas. Keep upwind of spill. Ventilate area of leak or spill. Only trained and properly protected personnel must be involved in clean-up operations. Confine space entry procedures must be followed before entering the area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure controls and Personal Protection.

Environmental precautions: Material will sink in water. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Small spills: Collect in suitable and properly labeled containers. Large spills: Dike area to contain spill. Pump into suitable and properly labeled containers. See Section 13, Disposal Considerations for additional information.

Handling and Storage (Section 7)

Handling:
General Handling: Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Do not enter confined spaces unless adequately ventilated. To avoid uncontrolled emissions, vent vapor from container to storage tank. Vapors of this product are heavier than air and lethal concentrations of vapors can collect in low, confined and unventilated spaces such as tanks, pits, small rooms and even in equipment (degreasers) that is used for degreasing metal parts. Don not enter these confined spaces where vapors of this product are suspected unless special breathing apparatus is used and an observer is present for assistance. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Storage:
Store under cover in a dry, clean, cool, well ventilated place away from sunlight. Do not handle or store near an open flame, heat, or sources of ignition. Keep container tightly closed when not in use. Do not store in: Zinc. Aluminum. Aluminum alloys. Plastic .

Exposure Controls/Personal Protection (Section 8)

Exposure Limits

Component	List	Type	Value
Dichloromethane	ACGIH	TWA	50ppm BEI
	OSHA	TWA	25ppm SKIN
	OSHA	STEL	125ppm SKIN
	OSHA	Action Level	12.5ppm SKI

A BEI notation flowing the exposure guideline refers to a guidance value for assessing biological monitoring results as an indicator of the uptake of a substance from all routes of exposures. A "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact.
It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

Personal Protection:

Eye/Face Protection: Use chemical goggles. If exposure causes eye discomfort , use a full-face respirator.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.
Hand Protection: Use gloves chemically resistant to this materials include: Polyvinyl alcohol("PVA"). Ethyl vinyl alcohol laminate ("EVAL"). Viton. Examples of acceptable glove barrier materials include: Butyl rubber. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials , as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved self -contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area, wash hands and face before smoking or eating.

Engineering Controls

Ventilation: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only in enclosed systems or with local exhaust ventilation. Exhaust systems should be designed to move the air away fro the source of vapor/aerosol generation and people working at this point. Lethal concentrations may exist in areas with poor ventilation.

Physical and Chemical Properties (Section 9)

Appearance Physical State	Liquid
Color	Clear
Odor	Characteristic
Odor Threshold	250ppm Literature
Ph	Not applicable
Melting Point	-96.7 *C(-142.1*F)Literature
Freezing Point	-96.7*C(-142.1*F)Literature
Boiling Point(760mmHg)	39.8*C (103.6*F)Literature
Flash Point-closed cup	Tag Closed Cup ASTM D56 None
Evaporation Rate (Butyl Acetate=1)	No test data available
Flammability (solid, gas)	No
Flammable Limits in Air	Lower:14 percent(V)Literature Upper:22 percent(V)Literature
Vapor Pressure	355 mmHg @ 20*C Literature
Vapor Density (air=1)	2.93 Literature
Specific Gravity (H20=1)	1.320 25*C/25*C Literature
Solubility in water (by weight)	1.3 percent @ 25*C Literature
Partition coefficient,n-octanol/water(log Pow)	1.25 Measured
Autoignition Temperature	556*C (1,033*F) Literature
Decomposition Temperature	No test data available
Dynamic Viscosity	0.41mPa.s Literature
Kinematic Viscosity	0.31mm2/s @25 *C Literature
Explosive properties	Not explosive
Oxidizing properties	No
Molecular Weight	84.94 g/mol Literature
Percent Volatiles	100 Wt. percent Literature
Particle Size	Not applicable to liquids
Henry's Law Constant (H)	3.98E+02 Pa*m3/mole

Stability and Reactivity (Section 10)

Reactivity : No dangerous reaction known under conditions of normal use.

Chemical stability: Stable under recommended storage conditions. See Storage, Section 7

Possibility of hazardous reactions: Polymerization will not occur.

Conditions to Avoid: Exposure to elevated temperatures can cause product to decompose. Avoid open flames, welding arcs, or other high temperature sources which induce thermal decomposition. Avoid direct sunlight or ultraviolet sources.

Incompatible Materials: Avoid contact with oxidizing materials. Avoid contact with: Strong bases. Water contamination may cause corrosion of metals due to formation of hydrochloric acid. Avoid contact with metals such as: Zinc powders, Aluminum powders , Magnesium powders, Potassium ,Sodium. Avoid unintended contact with Amines.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Hydrogen chloride. Decomposition products can include trace amounts of: Chlorine, Phosgene.

Toxicological Information (Section 11)

Acute Toxicity
Ingestion: No deaths occurred at this concentration. LD50,rat >2,000mg/kg

Dermal: No deaths occurred at this concentration. LD50 , rat> 2,000mg/kg

Inhalation: LC50, 4 h, Vapor, mouse 86mg/l

Eye damage/eye irritation: May cause pain disproportionate to the level of irritation to eye tissues. May cause moderate eye irritation which may be slow to heal. May cause slight corneal injury. Vapor may cause eye irritation experienced as mild discomfort and redness.

Skin corrosion/irritation: Brief contact may cause moderate skin irritation with local redness. May cause more severe response on covered skin(under clothing, gloves). Prolonged contact may cause skin burns. Symptoms may include pain, severe local redness , swelling, and tissue damage. Extensive skin contact with ethylene chloride, such as immersion, may cause an intense burning sensation, followed by a cold numb feeling which will subside after contact. May cause drying and flaking of the skin.

Sensitization
Skin: No relevant data found

Respiratory: Relevant data not available.

Repeated Dose Toxicity: In animals, effects have been reported on the following organs: Kidney, Liver, Blood. May cause carboxyhemoglobinemia, thereby impairing the blood's ability to transport oxygen.

Chronic Toxicity and Carcinogenicity: Methylene Chloride has been shown to increase the incidence of malignant tumors in mice and benign tumors in rats. Other animal studies, as well as several human epidemiology studies, failed to show a tumorigenic response. Methylene chloride is not believed to pose a measurable carcinogenic risk to man when handled as recommended . Studies have shown that tumors observed in mice are unique to that species.

Carcinogenicity Classifications

Component	List	Classification
Dichloromethane	ACGIH	Confirmed animal carcinogen with Unknown relevance to humans;Group A3
	NTP	Anticipated carcinogen
	OSHA	Potential cancer hazard.
	IARC	Possibly carcinogenic to humans;2B

Developmental Toxicity: Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

Reproductive Toxicity: In animal studies, did not interfere with reproduction.

Genetic Toxicology: In vitro genetic toxicity studies were negative in some cases and positive in other cases. Negative or equivocal results have been obtained in genetic toxicity tests with ethylene chloride using mammalian cells or animals. This is consistent with the lack of interaction with DNA
In rats and hamsters. Although results of Ames bacterial test have generally been positive, overall the data suggest that genotoxic potential does not appear to be a significant factor in the toxicity of this product.

Ecological information (Section 12)

Toxicity
Material is practically non-toxic to aquatic organisms on an acute basis(LC50/EC50/EL50/LL50>100mg/L in the most sensitive species tested.

Fish Acute & Prolonged Toxicity:LC50, Pimephales promelas(fathead minnow), flow through test,96h:193mg/l

Aquatic Invertebrate Acute Toxicity:LC50, Daphnia magna(water flea),static test: 27 mg/l

Aquatic Plant Toxicity: EbC50, Pseudokirchneriella subcapitata(green algae), biomass growth

inhibition, 96 h:>662mg/l

Toxicity to Micro-organisms:EC50,OECD 209 Test;activated sludge, static test, 40 min: 2,590 mg/l

Fish Chronic Toxicity Value(ChV): Pimephales promelas (fathead minnow) flow-through test, 28 d, growth, NOEC:83 mg/l

Persistence and Degradability: Biodegradation may occur under aerobic conditions (in the presence of oxygen). Biodegradation rate may increase in soil and/or water with acclimation.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
66%	50 h	Simulation study	Not Applicable

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
1.3E-13 cm3/s	79-110 d	Estimated

Theorectical Oxygen Demand: 0.38 mg/mg

Bioaccumulative potential

Bioaccumulation: Bioconcentration potential is low (BCF<100or Log Pow<3)/
Partition coefficient, n-octanol/water(log Pow): 1.25 Measured.
Bioconcentration Factor(BCF): 2-40 Fish; Measured.

Mobility in soil

Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient, soil organic carbon/water (Kroc): 46.8 Estimated.
Henry's Law Constant (H): 3.98E+02 Pa*m3/mole. Calculated.

Disposal Considerations (Section 13)

DO NOT DUMP INTO ANY SEWERS , ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations . Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information: FOR UNUSED & UNCONTANIMATED PRODUCT,the preferred options include sending to a licensed, permitted: Recycler, Reclaimer. Incinerator or other thermal destruction device.

Transport Information (Section 14)

DOT : Proper Shipping Name : Dichloromethane . Hazard Class : 6.1 , UN 1593 , PG lll

Placard Required : KEEP AWAY FROM FOOD . UN 1593, CLASS 6

IMDG: Proper Shipping Name: Dichloromethane. Hazard Class : 6.1 , UN 1593, PG lll
EMS # F-A, S-A
Marine Pollutant : No
Transport in Bulk according to Annex ll of MARPOL 73/78 and the IBC Code
Ship Type: 3
Pollution Category: Y

ICAO/IATA
Proper Shipping Name: Dichloromethane . Hazard Class:6.1, UN 1593, PG lll
Cargo Instruction: 663
Passenger Instrucitons: 655

Reportable quantity; 1,001 lb.- Methylene Chloride
It is the responsibility of the transporting organization to follow all applicable laws, requlations and rules relating to the transportation of the material.

Regulatory Information (Section 15)

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title lll(Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (acute) Health Hazard.....Yes
Delayed (Chronic) Health Hazard.....Yes
Fire Hazard.....No
Reactive Hazard..... No
Sudden release of Pressure Hazard.....No

Superfund Amendments and Reauthorization Act of 1986 Title lll (Emergency Planning and Community Right-to-Know Act of 1986) Section 313. Comprehensive Environmental Response ,Compensation, and Liability Act of 1980(CERLA).
This product contains the following substances which are subject to the reporting requirements of Section 313 Of Title lll of the superfund Amendments and Reauthorization Avt of 1986 and which are listed in 40CFR 372. This product contains the following substances which are subject to CERLA Section 103 reporting requirements and which are listed in 40 CFR 302.4
California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986) WARNING:

This product contains a chemical(s) known to the State of California to cause cancer.

Component	CAS#	Amount
ATTACK		
Dichloromethane	75-09-2	99.9%

Us Toxic Substances Control Act: All components of this product are on the TSCA Inventory or are exempt fro TSCA Inventory requirements under 40 CFR 720.30

Other Information (Section 16)

Recommended Uses and Restrictions: Industrial Solvent .
NOTICE: The Gesswein Company recommends that its customers minimize their exposure to "Attack". We therefore suggest that our customers consider adopting the lower of the current OSHA PEL or the ACGIH TLVs Limits. We also strongly recommend that only professional personnel use this product and thoroughly read the SDS to become aware of and understand any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as the effective date shown above. However, The Gesswein Company makes no warranty, express or implied regarding the accuracy of the data or the results to be obtained from the use thereof. Gesswein assumes no responsibility for injury from the use of the product described herein. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his/her activities comply with all federal, state, provincial or local laws.

The specific information herein is made for the purpose of complying with numerous Federal, state or Provincial, and local laws and regulations.