

ATTN: Alan

Page: 1 MATERIAL SAFETY DATA SHEET

PRODUCT NAME: PAMIR

UPDATED 01/01/2009

SECTION I - PRODUCT IDENTIFICATION

Manufacturer: GAGE PRODUCTS COMPANY
625 WANDA AVENUE
FERNDALE MI 48220

Information Phone: 313-541-3824
Emergency Phone: 313-541-3824
CHEMTREC Phone: 1-800-424-9300

Product Class: CHLOR. HYDROCARBON
Trade Name: CHLOROTHENE SM
Product Code: CH 04-
C.A.S. Number: MIXTURE
Proper Shipping Name: 1,1,1-TRICHLOROETHANE
Haz Class: ORM-A
ID #: UN2813

Hazard Ratings: Health - 3
Fire - 0
Reactivity - 0
Personal Protection - B

SECTION II - HAZARDOUS INGREDIENTS

Table with 7 columns: Ingredients, CAS #, Weight %, Exposure Limits (ACGIH/TLV, OSHA/PEL), and VP (mm Hg). Rows include 1,1,1-TRICHLOROETHANE, 1,4-DIOXANE, 1,2-BUTYLENE OXIDE, and NITROMETHANE.

Pamir

ALL Ingredients in this product are listed in the T.S.C.A. Inventory.

* Indicates a Toxic Chemical subject to SARA Title III, section 313 release reporting (EPA Regulation 40 CFR 372).

SECTION III - PHYSICAL DATA

Boiling Range: 163-182 Deg
Evap. Rate: Faster than n-Butyl Acetate
Volatiles volume: 100 %
Vapor Density: Heavier than Air.
Liquid Density: Heavier than Water.
Wgt per gallon: 10.64 Pounds
Spec. Gravity: 1.28
Appearance: CLEAR, COLORLESS LIQUID
V.O.C.: 10.64 LBS/GAL

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability Class: NONE Flash Point: NONE LEL: N/AP
-EXTINGUISHING MEDIA:

Chlorinated solvents are not flammable under ordinary conditions. However, flammable vapor-air mixtures can form at higher temperatures. Use "alcohol" foam, water spray, dry chemical, or carbon dioxide to put out fires. Use media suitable for surrounding fire. Plan fire protection and response strategy through consultation with local fire protection authorities or appropriate specialists.

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SECTION IV - FINE AND EXPLOSION HAZARD DATA (cont.)

-EXTINGUISHING MEDIA: (cont.)
-SPECIAL FIREFIGHTING PROCEDURES:

During fire conditions chlorinated solvents can emit highly toxic and irritating fumes, including hydrochloric acid and phosgene. Clear area of unprotected personnel. Do not enter confined fire space without full bunker gear (Helmet with face shield, bunker coats, gloves and rubber boots), including a NIOSH-approved, self-contained breathing apparatus. Use water spray to cool fire exposed surfaces. Also, use water to flush spilled material away from the source. Vapors are harmful; stay upwind of a fire to minimize breathing of vapors, gases, fumes or decomposition products being generated.

-UNUSUAL FIRE & EXPLOSION HAZARDS

Containers exposed to intense heat from fire must be cooled to prevent vapor pressure build-up which may result in container rupture. Cool containers exposed directly to flames with large quantities of water as needed to prevent weakening of container itself. EMPTY CONTAINER WARNING: "EMPTY" containers contain residues (liquid, solid, and/or vapor) that can be dangerous. DO NOT pressurize, cut, weld, braze, grind, drill, solder or expose containers to heat, sparks, open flame. They may explode and cause injury and/or death. DO NOT attempt to clean drums. Residues are difficult to remove. "EMPTY" drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. Dispose of all containers in an environmentally safe way and in accordance with governmental regulations. For work on tanks, refer to OSHA regulations ANSI Z49.1 and other governmental and industrial references pertaining to cleaning, repairing, welding or other operations.

SECTION V - HEALTH HAZARD DATA

-PERMISSIBLE EXPOSURE LEVEL:

Avoid contact with skin and clothing. Avoid breathing vapors. Use with adequate ventilation to maintain levels below PEL.

-EFFECTS OF OVEREXPOSURE:

INHALATION: Moderately hazardous. Vapors may cause irritation to the nose, throat and respiratory tract. High vapor concentrations may result in CNS depression evidenced by giddiness, headache, dizziness and nausea. In extreme cases, unconsciousness and death may occur.

SKIN: Direct contact with liquid may cause burning. Frequent or prolonged contact with liquid may cause drying and defatting of skin and toxic effects may be produced by absorption through the skin.

EYES: Direct eye contact with liquid will cause burning, redness and tearing. Overexposure may lead to corneal eye damage.

INGESTION: Swallowing of product will cause gastrointestinal distress, nausea, vomiting and/or diarrhea. Material is moderately toxic by ingestion.

(cont.)

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SECTION V - HEALTH HAZARD DATA (cont.)

-EFFECTS OF OVEREXPOSURE: (cont.)

AGGRAVATED MEDICAL CONDITION: Pre-existing skin and respiratory disorders may be aggravated by this product.

-FIRST AID:

INHALATION: Remove victim to fresh air. If breathing difficulties develop, administer oxygen and get medical attention. If victim is not breathing, administer artificial respiration and get medical attention.

SKIN: Flush affected areas with large amounts of water, remove contaminated clothing. Wash affected areas thoroughly with soap and water. If irritation or redness persists or develops, get medical attention.

EYES: Immediately flush eyes with a directed stream of water for at least 15 minutes while holding eyelids open. If irritation or redness develops or persists, get medical attention.

INGESTION: DO NOT INDUCE VOMITING. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs! (Aspiration pneumonia can be fatal.) Give victim lukewarm water if conscious and alert. GET IMMEDIATE MEDICAL ATTENTION.

SECTION VI - REACTIVITY DATA

STABILITY: Unstable Stable
HAZARDOUS POLYMERIZATION: May occur Will not occur

-INCOMPATIBILITY:

Prolonged contact with free water may result in corrosion and diminished stabilizer levels. Prolonged contact with, or storage in aluminum, its alloys, and particularly metallic aluminum and zinc powders should be avoided. These reactive metals can cause hydrochloric acid gas to form and if confined as in an aerosol can or pump, the gas pressure may rupture the container.

-CONDITIONS TO AVOID:

Open flame and excessive heat.

-HAZARDOUS DECOMPOSITION PRODUCTS:

Hydrogen chloride and very small amounts of phosgene and chlorine.

SECTION VII - SPILL OR LEAK PROCEDURES

-STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Recover small amounts of material by absorbing with an inert absorbent and scooping into properly labeled disposal drum. For large spills, evacuate the area. Allow only properly trained and equipped personnel in the area. Shut off source of leak only when safe to do so. Dike and contain material. If vapor cloud forms, water fog may be used to suppress it. Contain (cont.)

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SECTION VII - SPILL OR LEAK PROCEDURES (cont.)

- STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED (cont.)
Run-off water. Remove with vacuum truck or pump into salvage vessel. Do not allow run-off water or product to enter sewers or water ways.
- WASTE DISPOSAL METHOD:
Licensed waste treatment facility or recycler.
The CERCLA reportable quantity for 1,1,1 trichloroethane is 1000 lbs.
The reportable quantity for 1,4-Dioxane is 100 lbs.

SECTION VIII - SPECIAL PROTECTION INFORMATION:

- RESPIRATORY PROTECTION:
NIOSH approved for organic vapors. In accordance with 29 CFR 19.10.134. Use either an atmosphere-supplying respirator or an air purifying respirator for organic vapors.
- VENTILATION:
Use material only with adequate ventilation to prevent exceeding the recommended exposure limit. Air dry contaminated clothing in a well-ventilated area before laundering.
- PROTECTIVE GLOVES:
Recommended: chemical resistant
- EYE PROTECTION:
Safety glasses with side shields
- OTHER PROTECTIVE EQUIPMENT:
As required to minimize skin contact depending on use of material. An eyewash and safety shower should be located close to the work area.

SECTION IX - SPECIAL PRECAUTIONS

- PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
WORK/HYGIENIC PRACTICES: Wash thoroughly with soap and water after using material.
STORAGE: Store material in a cool area and away from direct sunlight. Keep liquid from heat and flame. Keep containers closed when not in use. Use material with adequate ventilation.

SEE EMPTY CONTAINER WARNING UNDER UNUSUAL FIRE AND EXPLOSION HAZARDS.

- OTHER PRECAUTIONS:
N/AV= Not available NE= Not established ND= No data found
N/AP= Not applicable UNK= Unknown

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We neither suggest nor guarantee that any hazards mentioned are the only ones which exist. Employers should use this information only as a supplement to other information to assure proper use of this material and the health and safety of employees.

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SECTION IX - SPECIAL PRECAUTIONS (cont.)

-OTHER PRECAUTIONS: (cont.)