

Material Safety Data Sheet

May be used to comply with
OSHA's Hazard Communication Standard
29 CFR 1910.1200. Standard must be
consulted for specific requirements

U.S. Department of Labor

Occupation Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY

FANTASTIC II (BULK) (210300)

*Note: Blank spaces are not permitted. If any item is not applicable, or no
information is available, the space must be marked to indicate that.*

Section I

Manufactured For: Beaver Research Company		Emergency Telephone Number 1-800-255-3924 (Chem-Tel)
Address (Number, Street, City, State, and ZIP Code) 3700 E. Kilgore Road, Portage, MI 49002		Telephone Number For Information 269-382-0133
HMIS RATINGS:	Health: 2	Date Prepared 12/27/99
4=Severe 1=Slight	Flammability: 1	Signature of Preparer (optional)
3=Serious 0=Minimal	Reactivity: 0	
2=Moderate		

Section II - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	CAS No.	OSHA PEL	ACGIH TLV	Other Limits Recommended	%
Trichloroethylene	79-01-6	50ppmTWA 200ppmSTEL	50ppmTWA 100ppmSTEL	NIOSH REL = 25ppm (10 hr TWA)	

Section III - Physical/Chemical Characteristics

Boiling Point	188.4°F, 86.9°C	Specific Gravity (H ₂ O = 1)	1.46
Vapor Pressure (mm Hg @ 20°C)	59	% Volatile by volume	100
Vapor Density (AIR = 1)	4.54	Evaporation Rate (Butyl Acetate = 1)	N/A
Solubility in Water Insoluble	pH N/A		

Appearance and Odor

Colorless liquid with ether-like odor.

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used) Does not flash by standard methods.	Flammable Limits (STP) 8-10.5%	LEL --	UEL --
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Extinguishing Media

N/A. Use media suitable for surrounding fire. Use water spray to cool fire-exposed containers.

Special Fire Fighting Procedures

Self-contained breathing apparatus with full facepiece and protective clothing if involved in a fire of other materials.

Unusual Fire and Explosion Hazards

Trichloroethylene can be ignited with high-intensity sources of heat, such as some sparks and flames, or at high temperatures and pressures. This can occur at concentrations in air of about 8-10.5%.

Section V - Reactivity Data

Stability	Unstable	Conditions to Avoid	Avoid contact with aluminum equipment such as tanks, pumps and fittings. Aluminum-catalyzed decomposition gas can rupture confined areas in the equipment with explosive force.
	Stable	X	

Incompatibility (Materials to Avoid)

May react violently with alkali and alkaline earth metals such as sodium, potassium and barium. Avoid mixing with caustic soda, caustic potash, or oxidizing materials.

Hazardous Decomposition or Byproducts

Thermal decomposition: hydrogen chloride and traces of phosgene. Chemical decomposition: hydrogen chloride.

Hazardous	May Occur	Conditions to Avoid
Polymerization	Will Not Occur	X

Section VI - Health Hazard Data

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
	Yes	Yes	Yes

Health Hazards (Acute and Chronic)

General: This health hazard assessment is based on information from current literature.

Ingestion: The acute oral LD50 in rat is reported to be 4.9-7.0 g/kg. Relative to other materials, a single dose of this product is practically nontoxic by ingestion. Swallowing an excessive amount can cause gastrointestinal disturbances and central nervous system depression. **Eye Contact:** This material is severely irritating in rabbit eye studies; a similar degree of irritation will probably occur after human eye contact with liquid. Vapors will induce eye irritation. **Skin Contact:** This material is moderately irritating in rabbit dermal irritation studies. Irritation can develop following repeated and/or prolonged contact with human skin. Prolonged skin exposure to the liquid material may result in skin defatting and severe dermatitis. Confinement of this material on the skin increases skin injury and can result in chemical burns. **Skin absorption:** Systemically toxic concentrations are unlikely to be absorbed through the intact skin of man; however, systemically toxic concentrations may occur following absorption through damaged skin. They include liver and kidney injury. **Inhalation:** Following exposure to vapors and aerosols, this material can produce central nervous system depression. High atmospheric concentrations can result in eye, nasal and respiratory tract irritation, and cardiac sensitization to circulating epinephrine-like compounds can result in sudden fatal cardiac arrhythmias. At high concentrations which induce anaesthesia, animals have developed liver and kidney effects. **Other effects of overexposure:** Exposure potential is a critical element in the expression of a potential health hazard. This product, if handled in accordance with good industrial hygiene practice, will not present an actual hazard in the work.

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	No	2A (probable carcinogen)	No

Signs and Symptoms of Exposure

(See above "Health Hazards".)

Medical Conditions Generally Aggravated by Exposure

N/A

Emergency and First Aid Procedure

Skin: Remove contaminated clothing and footwear. Wash material off the skin with plenty of soap and water. If redness, itching or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse. **Eyes:** Immediately flush with plenty of water for at least 15 minutes and have eyes examined and treated by medical personnel.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Give 1 or 2 glasses of water to drink and refer to medical personnel. **Inhalation:** Remove to fresh air. If cough or other respiratory symptoms develop, consult medical personnel. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is labored, give oxygen. Consult medical personnel. **Note to Physician:** Gastric lavage may be effective within four hours of ingestion. Product is an asphyxiant and can induce cardiac muscular sensitization to circulating epinephrine-like compounds, resulting in potentially fatal heart arrhythmias. Do not give adrenaline or similar sympathomimetic drugs. Do not allow exposed person to exercise vigorously for 24 hours following potentially toxic exposure.

Section VII - Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled

Ventilate spill area. Wear skin, eye and respiratory protection during cleanup. Soak up liquid with absorbent and shovel into waste container. Cover container and remove from work area. For large spills, dike area and recover or soak up with an absorbent. Prevent contamination of ground or surface waters.

Waste Disposal Method

Discarded product is a hazardous waste, number U228, under RCRA, 40 CFR 261.33. Spent TRIKLONE LE used in degreasing and sludges from recovery of the solvent are hazardous wastes F001 under RCRA, 40 CFR 261.31. Also, spent TRIKLONE LE and still bottoms from recovery of the solvent are hazardous wastes F002 under RCRA, 40 CFR 261.31. Dispose of these wastes in a facility permitted for hazardous wastes.

Container Disposal

Emptied container retains product residue. Observe all hazard precautions. Keep away from heat, sparks and flames. Do not weld or use a cutting torch on or near container. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Ensure containers are completely empty. Then offer container for recycling/reconditioning or puncture or otherwise destroy empty container before disposal.

Precautions to be Taken in Handling and Storage

Prevent skin and eye contact. Avoid breathing vapors. Avoid contact with flames and hot surfaces. Avoid smoking when vapors present. Keep containers closed and store in a cool, dry area.

Section VIII - Control Measures

TLV® or suggested control value:

The ACGIH TLV is 50 ppm 8-hour TWA; the STEL is 100 ppm. The OSHA Table Z-2 lists the 8-hour TWA as 100 ppm, the acceptable ceiling concentration as 200 ppm, and the maximum concentration as 300 ppm for a duration of 15 minutes in a 2 hour period. The OSHA Table Z-1-A, which was revoked on June 30, 1993, listed the OSHA TWA as 50 ppm and the STEL as 200 ppm. The following U.S. states will continue to enforce Table Z-1-A limit: Alaska, California, Connecticut, Maryland, Michigan, Minnesota, New Mexico, Vermont, and Washington.

Respiratory Protection (Specify Type)

If needed, use MSHA/NIOSH approved respirator for organic vapors. For high concentrations and oxygen-deficient atmospheres, use positive pressure air-supplied respirator.

Ventilation

Ventilate low-lying areas such as sumps or pits where dense vapors may collect. Provide local exhaust if TLV is exceeded.

Protective Gloves

Impervious gloves. Viton gloves are recommended by some manufacturers.

Eye Protection

Chemical tight goggles and full faceshield.

Other Protective Clothing or Equipment

Impervious apron. Eyewash station and safety shower in work area.

Section VIII - Regulatory Information

TSCA (Toxic Substances Control Act) Regulations, 40 CFR 710

All ingredients are on the TSCA Chemical Substance Inventory.

CERCLA and SARA Regulations (40 CFR 355, 370, and 372)

Section 313 Supplier Notification. This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning Community Right-To-Know Act of 1986 and of 40 CFR 372:

<100% Trichloroethylene (CAS 79-01-6)

State Regulations

California Proposition 65: WARNING. This product contains a chemical known to the state of California to cause cancer.

The information herein is given in good faith but no warranty, expressed or implied, is made.