

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

RESTRICTED:
CONFIDENTIAL

MATERIAL SAFETY DATA SHEET

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Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

September, 1978

SECTION I

MANUFACTURER'S NAME PPG Industries, Inc.		EMERGENCY TELEPHONE NO. (304) 843-1300
ADDRESS (Number, Street, City, State, and ZIP Code) One Gateway Center, Pittsburgh, PA 15222		
CHEMICAL NAME AND SYNONYMS Trichloroethylene Stabilizer		TRADE NAME AND SYNONYMS Trichlor 129
CHEMICAL FAMILY Chlorinated Hydrocarbons	FORMULA Mixture of organic compounds	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)
Butylated Hydroxy Toluene				not established	
Trichloroethylene					100 ppm
Butylene Oxide				not established	
N-Propanol					200 ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	(80.2°C)	176.4°F	SPECIFIC GRAVITY (H ₂ O=1)	(20°/20°C)	1.234
VAPOR PRESSURE (mm Hg.)	20°C	68.5	PERCENT VOLATILE BY VOLUME (%)		100%
VAPOR DENSITY (AIR=1)		3.7	EVAPORATION RATE (_____ = 1)		Unknown
SOLUBILITY IN WATER		0.11%			
APPEARANCE AND ODOR	Clear to amber liquid, characteristic odor				

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	48°F (tag open cup)	FLAMMABLE LIMITS	Not determined	Lel	Uel
EXTINGUISHING MEDIA	Water spray, dry chemical or CO ₂				
SPECIAL FIRE FIGHTING PROCEDURES	Wear pressure demand, self-contained breathing apparatus to prevent possible exposure to hydrogen chloride and phosgene.				
UNUSUAL FIRE AND EXPLOSION HAZARDS	Combustion decomposition products include hydrogen chloride gas and may contain traces of phosgene.				

SECTION V - HEALTH HAZARD DATA	
THRESHOLD LIMIT VALUE	See attached sheet
EFFECTS OF OVEREXPOSURE	See attached sheet
EMERGENCY AND FIRST AID PROCEDURES	See attached sheet

SECTION VI - REACTIVITY DATA			
STABILITY	UNSTABLE		CONDITIONS TO AVOID Avoid open flames, hot glowing surfaces,
	STABLE		electric arcs.
INCOMPATIBILITY (Materials to avoid) Avoid contact with caustic soda, caustic potash, or strong acids; can create explosive compounds.			
HAZARDOUS DECOMPOSITION PRODUCTS Hydrogen chloride, hydrochloric acid, phosgene			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID None
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES	
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	See attached sheet
WASTE DISPOSAL METHOD	EPA-approved incineration or contact local chemical waste disposal contractor.

SECTION VIII - SPECIAL PROTECTION INFORMATION		
RESPIRATORY PROTECTION (Specify type)		See attached sheet
VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL (General) Sufficient to maintain workplace concentration below TLV	
PROTECTIVE GLOVES	Polyethylene, neoprene, polyvinyl alcohol	EYE PROTECTION Splash-proof goggles
OTHER PROTECTIVE EQUIPMENT Safety shoes, eye-wash fountain		

SECTION IX - SPECIAL PRECAUTIONS	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	See attached sheet
OTHER PRECAUTIONS	See attached sheet

ADDENDUM TO MATERIAL SAFETY DATA SHEET ON TRICHLOR STABILIZER CONCENTRATE
(TRICHLOR 129)

(SEPTEMBER, 1978)

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value - The threshold limit values (TLV's) for the individual components are as follows:

	<u>TLV</u>
Trichlorethylene	100 ppm
n-Propanol	200 ppm
Butylene Oxide	Not established
Butylated Hydroxy Toluene	Not established

Consult 29 CFR 1910.1000 for determination of permissible exposure limits on mixtures.

Acute Toxicity Values(1),(2)

Oral LD₅₀ (rats): 1310 mg/kg slightly toxic (1)
Dermal LD₅₀ (rabbits): 2745 mg/kg slightly toxic
Eye Irritation (rabbits): 22.3/110 moderately irritating
Primary Skin Irritation (rabbits): 5.9/8.0 severely irritating
but not corrosive
Inhalation LC₅₀ (rats): $\left. \begin{array}{l} > 2.41 \text{ mg/l air} \\ < 211.68 \text{ mg/l air} \end{array} \right\} \text{ slightly toxic}$

Effects of Overexposure

Acute: Irritant and central nervous system depressant. Inhalation can cause irritation of the respiratory tract, dizziness, nausea, headache, loss of coordination and equilibrium, unconsciousness, and even death in confined or poorly ventilated areas. Fatalities following severe acute exposure have been attributed to ventricular fibrillation resulting in cardiac failures.

Chronic: May damage the liver and kidneys upon prolonged, repeated inhalation of vapor. Trichloroethylene has been shown to cause cancer in experimental laboratory animals (mice) via chronic ingestion of liquid and chronic inhalation of vapors at 600ppm. Although no evidence presently exists showing trichloroethylene to cause cancer in rats or humans, it is strongly suggested that trichloroethylene users review their health programs, "tighten-up" their operations and institute good operating and housekeeping practices designed to limit employee exposure as much below current OSHA permissible exposure limits as possible.

Emergency and First Aid Procedures

Inhalation Overexposure: Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.

Note to Physician: Avoid use of adrenalin in any case where a person has been overcome by trichloroethylene.

Eye Contact: Flush with plenty of water for at least fifteen minutes. If irritation occurs, consult a physician.

Skin Contact: Wash thoroughly with plenty of soap and water. If irritation occurs, consult a physician.

Swallowing: If conscious, drink a quarter of water, then induce vomiting by placing a finger far back in the throat. Call a physician. If vomiting cannot be induced, take immediately to a hospital or physician. If unconscious, or in convulsions, take immediately to a hospital or physician. DO NOT induce vomiting or given anything by mouth.

SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled

Immediately evacuate area and provide maximum ventilation. Only personnel equipped with proper respiratory and skin/eye protection should be allowed in the area. Collect spilled material on sawdust or vermiculite and sweep into closed containers for disposal. Then flush area with plenty of water and maintain ventilation until vapors are eliminated.

SECTION VII - SPECIAL PROTECTION INFORMATION

Respiratory Protection

NIOSH/MHSA approved organic vapor respirator for concentrations below 1000 ppm. For 1000 ppm and above, use air-supplied respiratory protection. Consult 29 CFR 1910.134 for details.

SECTION IX - SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

- Do not use in poorly ventilated or confined spaces.
- Container and system must be electrically grounded before unloading.
- Wear goggles and protective gloves when handling this product.

- Do not store in open, unlabeled, or mislabeled containers.
- Spills should be cleaned up immediately by personnel wearing an airline mask or oxygen-supply equipment. Unprotected persons should leave the area of the spill immediately.
- In case of fire, use dry chemicals or carbon dioxide extinguisher.
- *- Fire hazard - this material, if burning, may form toxic and corrosive acid fumes.

Other Precautions

- Keep away from excessive heat, spark and flame.
- Avoid prolonged or repeated breathing of vapor.
- Avoid contact with skin, eyes and clothing.
- Use only with ventilation sufficient to limit employee exposure at or below OSHA permissible exposure limits.
- Wash thoroughly after handling.
- Do not take internally.

REFERENCES

1. Industrial Bio-Test Inc., Test Report No. 8530-08918, August 18, 1976
2. Industrial Bio-Test Inc., Test Report No. 8562-08919, June 15, 1976

*If in the presence of fire, may form toxic and corrosive acid fume.