

MATERIAL SAFETY
 DATA SHEET



DIVISION: AUTOMOTIVE TRADES

TRADE NAME:

3M Brake Cleaner Part No. 08906

3M I.D. NUMBER: CS-0406-1920-0 62-4900-9909-0 62-4970-4909-8 62-4970-9909-3

ISSUED: APRIL 12, 1990

SUPERSEDES: DECEMBER 30, 1989

DOCUMENT: 10-9129-7

1. INGREDIENT	C.A.S. NO.	PERCENT	EXPOSURE		LIMITS	
			VALUE	UNIT	TYPE	AUTH
1,1,1-trichloroethane	71-55-6	40.0 - 50.0	350	ppm	TWA	ACGIH
perchloroethylene	127-18-4	40.0 - 50.0	25	ppm	TWA	OSHA
propane	74-98-6	10.0 - 20.0	1000	ppm	TWA	OSHA
1,4-dioxane	123-91-1	0.1 - 1.0	25	ppm	TWA	ACGIH

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- OSHA: Occupational Safety and Health Administration

THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICAL OR CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372:

- 1,1,1-trichloroethane
- perchloroethylene
- 1,4-dioxane

2. PHYSICAL DATA

BOILING POINT:..... Compressed gas
VAPOR PRESSURE:..... Compressed gas
VAPOR DENSITY:..... ca. 5.00 Air = 1
EVAPORATION RATE:..... < 5.00 Ether = 1
SOLUBILITY IN WATER:..... Very slight
SP. GRAVITY:..... N/A
PERCENT VOLATILE:..... 100.00 %
VOLATILE ORGANICS:..... 659.00 gm/l
pH:..... N/D
VISCOSITY:..... N/A
APPEARANCE AND ODOR: Colorless, liquid, sweet odor

3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:..... -50.00 F
FLAMMABLE LIMITS - LEL:..... N/A
FLAMMABLE LIMITS - UEL:..... Flammable Gas
AUTOIGNITION TEMPERATURE:... N/D
EXTINGUISHING MEDIA:
 CO2, foam, dry chemical
SPECIAL FIRE FIGHTING PROCEDURES:
 Fire fighters should be equipped with self-contained breathing apparatus when fighting fires involving this material.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
 Extremely Flammable. Overheated, closed containers adjacent to fire could explode due to pressure buildup. (Treat as a pressurized product.)
NFPA-HAZARD-CODES: HEALTH 3 FIRE 4 REACTIVITY 0
UNUSUAL REACTION HAZARD: None

Abbreviations: N/D - Not Determined N/A - Not Applicable

3M General Offices
3M Center
St. Paul, Minnesota 55144-1000
612/733-1110
Duns No.: 00-617-3082

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4. REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY - MATERIALS TO AVOID:

N/A

CONDITIONS TO AVOID: Do not puncture or incinerate. Do not store at temperatures above 120F.

HAZARDOUS POLYMERIZATION: Will Not Occur

HAZARDOUS DECOMPOSITION PRODUCTS:

CO, CO₂, HF, HCl and possible trace amounts of chlorene and phosgene when subjected to excessive heat or flame.

5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:

If cans rupture, observe precautions from other sections. Extinguish all ignition sources and ventilate area. Use inorganic absorbent to absorb spill, place absorbed product and partially full cans in a U.S. Dept. of Transportation approved metal container and seal.

RECOMMENDED DISPOSAL:

Incinerate absorbed product and partially full cans in a hazardous waste facility. Dispose of empty cans in a sanitary landfill or incinerate in a commercial facility capable of handling aerosol cans. Consult applicable regulations or authorities before disposal as the product contains halogens. U.S. EPA HAZARDOUS WASTE NO.: D001 (Ignitable).

ENVIRONMENTAL DATA:

CAS #71-55-6 is listed as a priority pollutant by USEPA. Clean Water Act, Section 307.

Volatile Organic Compound (VOC):

Maximum VOC = 659 grams/liter.

Maximum VOC minus Water minus Exempt Solvents = 1005 grams/liter.

VOC's were calculated according to Rule 443.1 of the South Coast

Air Quality Management District (SCAQMD).

SARA HAZARD CLASS:

FIRE HAZARD: Yes **PRESSURE:** Yes **REACTIVITY:** No **ACUTE:** Yes **CHRONIC:** Yes

6. SUGGESTED FIRST AID

EYE CONTACT:

Immediately flush eyes with large amounts of water for at least 10 minutes, while holding eyelids open. Call a physician. Flushing with water may not prevent eye injury.

SKIN CONTACT:

Wash affected area with soap and water.

INHALATION:

Move affected person to fresh air at once. If breathing difficulties persist, call a physician.

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6. SUGGESTED FIRST AID (continued)

IF SWALLOWED:

Do not induce vomiting. Immediately call a physician or poison control center.

OTHER FIRST AID:

NOTE TO PHYSICIANS: Exposure to 1,1,1-trichloroethane may increase "myocardial irritability." Do not administer sympathomimetic drugs (i.e. adrenaline) unless absolutely necessary. No specific antidote. Supportive care and treatment based on judgement of physician in response to the patient recommended.

7. PRECAUTIONARY INFORMATION

Keep away from all sources of ignition. The vapors released by the product can be ignited easily and burn explosively. Use only in areas with sufficient ventilation to maintain vapor and spray concentrations below the recommended exposure limits. Provide local exhaust ventilation, if necessary. Avoid prolonged breathing of vapor and mist. Avoid vapor contact with open flame, welding arcs or other high temperature sources which can cause vapor decomposition and harmful gases. Prevent contact with eyes and skin; wear appropriate eye protection such as chemical goggles and impervious gloves when handling the product. Keep out of the reach of children. Do not take internally. Deliberate concentration and inhalation or swallowing may be harmful or fatal. Do not puncture or incinerate can. Do not store at temperatures above 120F.

ADDITIONAL EXPOSURE LIMITS

INGREDIENTS	EXPOSURE LIMITS		LIMITS	
	VALUE	UNIT	TYPE	AUTH
1,1,1-trichloroethane	1900	mg/m3	TWA	ACGIH
1,1,1-trichloroethane	450	ppm	STEL	ACGIH
1,1,1-trichloroethane	2450	mg/m3	STEL	ACGIH
1,1,1-trichloroethane	350	ppm	TWA	OSHA
1,1,1-trichloroethane	1900	mg/m3	TWA	OSHA
1,1,1-trichloroethane	450	ppm	STEL	OSHA
1,1,1-trichloroethane	2450	mg/m3	STEL	OSHA
perchloroethylene	50	ppm	TWA	ACGIH
perchloroethylene	335	mg/m3	TWA	ACGIH
perchloroethylene	200	ppm	STEL	ACGIH
perchloroethylene	1340	mg/m3	STEL	ACGIH
perchloroethylene	170	mg/m3	TWA	OSHA
propane	1800	mg/m3	TWA	OSHA
1,4-dioxane	90	mg/m3	TWA	ACGIH
1,4-dioxane	25	ppm	TWA	OSHA
1,4-dioxane	90	mg/m3	TWA	OSHA

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
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8. HEALTH HAZARD DATA

EYE CONTACT: Spray particulate may cause severe eye irritation and vapor may cause eye irritation.

SKIN CONTACT: May cause skin irritation on prolonged or repeated contact. Perchloroethylene may be absorbed through the skin in harmful amounts.

INHALATION: Overexposures to vapor concentrations exceeding recommended exposure limits may cause respiratory system irritation and temporary nervous system impairment (light-headedness). Prolonged or repeated overexposures to 1,1,1-trichloroethane vapors may cause mild liver and kidney injury and heart rhythm disturbances. Prolonged or repeated overexposures to perchloroethylene vapors may cause liver and kidney injury. Symptoms of overexposure may include headache, dizziness, weakness, fatigue, and on extreme overexposure, unconsciousness. Deliberate misuse by concentration and inhalation of vapor may cause sudden death.

INGESTION: Accidental swallowing is not an anticipated route of exposure due to the aerosol nature of the product. Intentional concentration and ingestion may cause digestive system irritation and light-headedness. Ingestion of large amounts of 1,1,1-trichloroethane may cause burns, nausea, vomiting, lowered blood pressure, heart rhythm disturbances and mild liver and kidney damage. Ingestion of perchloroethylene may cause lung damage and liver disorders.

NOTE: 1,1,1-trichloroethane contains stabilizers, including 1,4-dioxane, a potential cancer hazard. No carcinogenic potential was revealed from studies in which laboratory animals were exposed by inhalation or ingestion to 1,1,1-trichloroethane containing 2.0% 1,4-dioxane. No birth defects or reproductive disorders were observed among exposed laboratory animals.

NOTE: Perchloroethylene is a potential cancer hazard causing liver tumors and leukemia by the oral and inhalation routes of exposure in laboratory animal studies (IARC possible human exposure 2B).

SECTION CHANGE DATES

HEADING

SECTION CHANGED SINCE DECEMBER 30, 1989 ISSUE

Abbreviations: N/D - Not Determined N/A - Not Applicable

The information on this Data Sheet represents our current data and best opinion as to the proper use in handling of this material under normal conditions. Any use of the material which is not in conformance with this Data Sheet or which involves using the material in combination with any other material or any other process is the responsibility of the user.