



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M brand Non-Chlorinated Brake Cleaner, P/N 08895, 38895
MANUFACTURER: 3M
DIVISION: Automotive Aftermarket

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 12/15/2004
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Product Use:

Specific Use: Solvent Blend Cleaner for Automobile Brake Systems

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
XYLENE	1330-20-7	10 - 30
HEPTANE	142-82-5	10 - 30
PROPANE	74-98-6	10 - 30
3-METHYLHEXANE	589-34-4	10 - 30
METHYL ALCOHOL	67-56-1	7 - 13
2-METHYLHEXANE	591-76-4	5 - 10
ETHYLBENZENE	100-41-4	3 - 7
2,3-DIMETHYLPENTANE	565-59-3	1 - 5
DIMETHYLCYCLOPENTANE	28729-52-4	1 - 5
3-ETHYLPENTANE	617-78-7	1 - 5
METHYLCYCLOHEXANE	108-87-2	1 - 5
TOLUENE	108-88-3	< 0.3
BENZENE	71-43-2	< 0.05

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Aerosol

Odor, Color, Grade: clear, colorless, solvent odor

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Aerosol container contains flammable material under pressure. Contains a chemical or chemicals which can cause cancer. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Delayed Dermal Irritation: Signs/symptoms may include localized redness, swelling, itching, and pain. These effects may not appear immediately following exposure.

May be absorbed through skin and cause target organ effects.

Inhalation:

May be harmful if inhaled.

Upper Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May be absorbed following inhalation and cause target organ effects.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, nausea, diarrhea and vomiting.

Chemical (Aspiration) Pneumonitis: Signs/symptoms may include coughing, gasping, choking, burning of the mouth, difficulty breathing, bluish colored skin (cyanosis), and may be fatal.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Kidney Effects: Signs/symptoms may include reduced or absent urine production, increased serum creatinine, lower back pain, increased protein in urine, and increased blood urea nitrogen (BUN).

May cause blindness.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Class Description</u>	<u>Regulation</u>
BENZENE	71-43-2	Group 1	International Agency for Research on Cancer
BENZENE	71-43-2	Known human carcinogen	National Toxicology Program Carcinogens
BENZENE	71-43-2	Cancer hazard	OSHA Carcinogens
ETHYLBENZENE	100-41-4	Group 2B	International Agency for Research on Cancer

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Wash affected area with soap and water. If signs/symptoms develop, get medical attention.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	<i>No Data Available</i>
Flash Point	-50.00 °F
Flammable Limits - LEL	<i>No Data Available</i>
Flammable Limits - UEL	<i>No Data Available</i>

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Aerosol container contains flammable material under pressure.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Cover spill area with a fire-extinguishing foam. An aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Collect the resulting residue containing solution. Place in an approved metal container. Seal the container. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

For industrial or professional use only. Aerosol container contains flammable gas under pressure. Avoid eye contact with vapors, mists, or spray. Avoid skin contact. Avoid breathing of vapors, mists or spray. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid static discharge. Do not spray near flames or sources of ignition. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. No smoking while handling this material. Do not pierce or burn container, even after use. Avoid contact with oxidizing agents.

7.2 STORAGE

Store away from areas where product may come into contact with food or pharmaceuticals. Keep container in well-ventilated area. Keep container tightly closed. Do not store containers on their sides. Store away from heat. Store out of direct sunlight. Store away from acids. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Do not use in a confined area or areas with little or no air movement. Use with functioning spray booth or local exhaust. Use with appropriate local exhaust ventilation. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Indirect Vented Goggles.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Fluoroelastomer (Viton), Polyethylene/Ethylene Vinyl Alcohol.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface supplied-air respirator. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
BENZENE	ACGIH	TWA	0.5 ppm	Skin Notation*; Table A1
BENZENE	ACGIH	STEL	2.5 ppm	Skin Notation*; Table A1
BENZENE	OSHA	TWA	1 ppm	Standard Appendix
BENZENE	OSHA	STEL	5 ppm	Standard Appendix
ETHYLBENZENE	ACGIH	TWA	100 ppm	Table A3
ETHYLBENZENE	ACGIH	STEL	125 ppm	Table A3
ETHYLBENZENE	OSHA	TWA	100 ppm	Table Z-1A
ETHYLBENZENE	OSHA	STEL	125 ppm	Table Z-1A
HEPTANE	ACGIH	TWA	400 ppm	
HEPTANE	ACGIH	STEL	500 ppm	
HEPTANE	OSHA	TWA, Vacated	400 ppm	
HEPTANE	OSHA	TWA	500 ppm	Table Z-1
HEPTANE	OSHA	STEL, Vacated	500 ppm	
METHYL ALCOHOL	ACGIH	TWA	200 ppm	Skin Notation*
METHYL ALCOHOL	ACGIH	STEL	250 ppm	Skin Notation*
METHYL ALCOHOL	OSHA	TWA	200 ppm	Skin Notation*; Table Z-1A
METHYL ALCOHOL	OSHA	STEL	250 ppm	Skin Notation*; Table Z-1A
METHYLCYCLOHEXANE	ACGIH	TWA	400 ppm	
METHYLCYCLOHEXANE	OSHA	TWA, Vacated	400 ppm	
METHYLCYCLOHEXANE	OSHA	TWA	500 ppm	Table Z-1
PROPANE	ACGIH	TWA	1000 ppm	
PROPANE	OSHA	TWA	1000 ppm	Table Z-1
TOLUENE	ACGIH	TWA	50 ppm	Skin Notation*; Table A4
TOLUENE	CMRG	STEL	75 ppm	Skin Notation*
TOLUENE	OSHA	TWA, Vacated	100 ppm	
TOLUENE	OSHA	STEL, Vacated	150 ppm	
TOLUENE	OSHA	TWA	200 ppm	Table Z-2
TOLUENE	OSHA	CEIL	300 ppm	Table Z-2
XYLENE	ACGIH	TWA	100 ppm	Table A4
XYLENE	ACGIH	STEL	150 ppm	Table A4
XYLENE	OSHA	TWA	100 ppm	Table Z-1A
XYLENE	OSHA	STEL	150 ppm	Table Z-1A

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Aerosol
Odor, Color, Grade:	clear, colorless, solvent odor
General Physical Form:	Liquid
Autoignition temperature	No Data Available
Flash Point	-50.00 °F
Flammable Limits - LEL	No Data Available
Flammable Limits - UEL	No Data Available
Boiling point	No Data Available
Vapor Density	>=1.0 [Ref Std: AIR=1]
Vapor Pressure	40 psi [Details: CONDITIONS: @ 70 F]
Specific Gravity	0.699 [Ref Std: WATER=1]
pH	Not Applicable
Melting point	No Data Available
Solubility in Water	Nil
Evaporation rate	No Data Available
Volatile Organic Compounds	699 g/l [Test Method: South Cost Air Qual Mgmt Dist] [Details: CONDITIONS: Rule 443.1, calculated; 100% VOC by wt.]
Percent volatile	100 %
VOC Less H2O & Exempt Solvents	699 g/l [Test Method: South Cost Air Qual Mgmt Dist] [Details: CONDITIONS: Rule 443.1, calculated; 100% VOC by wt.]
Viscosity	No Data Available

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Heat

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified
Toxic Vapor, Gas, Particulate	Not Specified

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL INFORMATION**

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

The facility should be equipped to handle gaseous waste.

Facility must be capable of handling aerosol cans. Dispose of empty product containers in a sanitary landfill.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable), D018 (Benzene)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

60-9800-2623-5, 60-9800-2645-8

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION**US FEDERAL REGULATIONS**

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
METHYL ALCOHOL	67-56-1	7 - 13
ETHYLBENZENE	100-41-4	3 - 7
XYLENE	1330-20-7	10 - 30

This material contains a chemical which requires export notification under TSCA Section 12[b]:

<u>Ingredient (Category if applicable)</u>	<u>C.A.S. No</u>	<u>Regulation</u>	<u>Status</u>
HEPTANE	142-82-5	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable

STATE REGULATIONS

Contact 3M for more information.

CALIFORNIA PROPOSITION 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
BENZENE	71-43-2	*Male reproductive toxin
BENZENE	71-43-2	**Carcinogen
BENZENE	71-43-2	*Developmental Toxin
TOLUENE	108-88-3	*Developmental Toxin

* WARNING: contains a chemical or chemicals which can cause birth defects or other reproductive harm.

** WARNING: contains a chemical which can cause cancer.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 4 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

Section 16: NFPA hazard classification heading was modified.
Section 3: Carcinogenicity heading was modified.
Section 3: Other potential health effects heading was modified.
Section 8: Exposure guidelines data source legend was modified.
Section 3: Immediate physical hazard(s) was modified.
Section 5: Unusual fire and explosion hazard information was modified.
Section 15: 311/312 hazard categories heading was modified.
Section 15: International regulations information was modified.
Section 15: State regulations information was modified.
Section 15: US federal regulations information was modified.
Section 10: Hazardous polymerization heading was modified.
Section 3: Carcinogenicity phrase was modified.
Section 3: Immediate other hazard(s) was modified.
Section 3: Other health effects information was modified.
Section 16: NFPA explanation was modified.
Section 15: Inventories information was modified.
Section 15: EPCRA 313 text was modified.
Section 15: California proposition 65 heading was modified.
Section 15: California proposition 65 reproductive harm warning was modified.
Section 15: California proposition 65 cancer warning was modified.
Section 12: Ecotoxicological information heading was modified.
Section 12: Chemical fate information heading was modified.
Section 8: Exposure guidelines ingredient information was modified.
Section 8: Exposure guidelines legend was modified.
Section 8: Exposure guideline note was modified.
Section 16: NFPA hazard classification for special hazards was modified.
Section 3: Other health effects information (reproductive hazards) was modified.
Section 12: Ecotoxicological phrase was modified.
Section 12: Chemical Fate phrase was modified.
Section 15: TSCA section 12[b] text was added.
Section 2: Ingredient phrase was added.
Section 15: TSCA section 12[b] information was added.
Section 16: Reason for reissue heading was deleted.
Section 16: Reason for reissue phrase was deleted.

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