



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the GHS guidelines & India Hazardous substances (Classification, Labeling & Packaging) Draft Rules 2011.

SECTION 1: Identification

1.1. Product identifier

3M™ High Power Brake Cleaner, 08880

Product Identification Numbers

60-4550-8946-0

1.2. Recommended use and restrictions on use

Recommended use

Automotive., Brake Cleaner

1.3. Supplier's details

Address: 3M India Limited, plot-48-51, Electronic city, Hosur road, Bangalore-560100
Telephone: 080-39143000, contact Product EHS team
E Mail: productehs.in@mmm.com
Website: <http://solutions.3mindia.co.in>

1.4. Emergency telephone number

080-39143000 (Contact hours: 8:00 AM to 5:00 PM)

SECTION 2: Hazard identification

Under MSIHC Rules, information is noted below on flammability, acute toxicity and explosivity relevant to this product. In line with international standards, information on other hazard classes and associated precautionary statements relevant to this product are included as well.

2.1. Classification of the substance or mixture

Flammable Aerosol: Category 1.
Acute Toxicity (oral): Category 4.
Acute Toxicity (dermal): Category 5.
Acute Toxicity (inhalation): Category 5.
Serious Eye Damage/Irritation: Category 2B.
Skin Corrosion/Irritation: Category 3.
Aspiration Hazard: Category 1.
Reproductive Toxicity: Category 2.
Carcinogenicity: Category 2.

Specific Target Organ Toxicity (single exposure): Category 1.
Specific Target Organ Toxicity (single exposure): Category 3.
Specific Target Organ Toxicity (repeated exposure): Category 1.
Acute Aquatic Toxicity: Category 3.
Chronic Aquatic Toxicity: Category 3.

2.2. Label elements

Signal Word

DANGER!

Symbols

Flame | Exclamation mark | Health Hazard |

Pictograms



HAZARD STATEMENTS:

H222	Extremely flammable aerosol.
H302	Harmful if swallowed.
H313	May be harmful in contact with skin.
H333	May be harmful if inhaled.
H320	Causes eye irritation.
H316	Causes mild skin irritation.
H304	May be fatal if swallowed and enters airways.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H351	Suspected of causing cancer.
H370	Causes damage to organs: sensory organs
H372	Causes damage to organs through prolonged or repeated exposure: nervous system sensory organs
H412	Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

General:

P102 Keep out of reach of children.

Prevention:

P210A Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P280E Wear protective gloves.

Response:

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P304 + P312	IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P331	Do NOT induce vomiting.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P308 + P311	IF exposed or concerned: Call a POISON CENTER or doctor/physician.
P312	Call a POISON CENTRE or doctor/physician if you feel unwell.

Storage:

P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50C/122F.
P405	Store locked up.

Disposal:

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.
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2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
2-Methylhexane	591-76-4	10 - 30
3-Methylhexane	589-34-4	10 - 30
Xylene	1330-20-7	10 - 30
Ethylbenzene	100-41-4	1 - 10
Methanol	67-56-1	5 - 10
2,3-Dimethylpentane	565-59-3	3 - 7
Carbon dioxide.	124-38-9	1 - 5
TRANS-1,3-DIMETHYLCYCLOPENTANE	1759-58-6	1 - 5
Heptane	142-82-5	0.5 - 2.5
3,3-Dimethylpentane	562-49-2	0.5 - 1.5
3-Ethylpentane	617-78-7	0.5 - 1.5
cis-1,3-Dimethylcyclopentane	2532-58-3	0.5 - 1.5
trans-1,2-Dimethylcyclopentane	822-50-4	0.5 - 1.5

SECTION 4: First aid measures**4.1. Description of first aid measures****Inhalation**

Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact

Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye contact

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue

rinsing. Immediately get medical attention.

If swallowed

Do not induce vomiting. Get immediate medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1 Information on toxicological effects

4.3. Indication of any immediate medical attention and special treatment required

This product contains methanol. If there is a reasonable suspicion of methanol poisoning, intravenous (IV) administration with either fomepizole (preferred) or ethanol (if fomepizole is unavailable) should be considered as part of the medical management.

SECTION 5: Fire-fighting measures

5.1. Suitable Extinguishing media

Use a fire fighting agent suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

Substance

Carbon monoxide.

Carbon dioxide.

Toxic vapour, gas, particulate.

Condition

During combustion.

During combustion.

During combustion.

5.3. Special protective actions for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. 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. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available. Contain spill. Cover spill area with a fire-extinguishing foam. An appropriate 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 physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. 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 Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not use in a confined area with minimal air exchange. Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators...) as required.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Do not expose to temperatures exceeding 50C/122F. Store away from heat. Store away from acids. Store away from oxidising agents.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Ethylbenzene	100-41-4	ACGIH	TWA:20 ppm	A3: Confirmed animal carcin.
Carbon dioxide.	124-38-9	ACGIH	TWA:5000 ppm;STEL:30000 ppm	
Xylene	1330-20-7	ACGIH	TWA:100 ppm;STEL:150 ppm	A4: Not class. as human carcin
Heptane	142-82-5	ACGIH	TWA:400 ppm;STEL:500 ppm	
Heptane, all isomers	562-49-2	ACGIH	TWA:400 ppm;STEL:500 ppm	
2,3-Dimethylpentane	565-59-3	ACGIH	TWA:400 ppm;STEL:500 ppm	
3-Methylhexane	589-34-4	ACGIH	TWA:400 ppm;STEL:500 ppm	
2-Methylhexane	591-76-4	ACGIH	TWA:400 ppm;STEL:500 ppm	
Heptane, all isomers	617-78-7	ACGIH	TWA:400 ppm;STEL:500 ppm	
Methanol	67-56-1	ACGIH	TWA:200 ppm;STEL:250 ppm	SKIN

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect vented goggles.

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended: Fluoroelastomer

Polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state	Liquid.
Specific Physical Form:	Aerosol
Appearance/Odour	Clear colorless; Solvent odor
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point: NA	<i>No data available.</i>
Boiling point/Initial boiling point/Boiling range	<i>No data available.</i>
Flash point	≥ -9.4 °C
Evaporation rate	<i>No data available.</i>
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	275,790.3 Pa [<i>@ 21.1 °C</i>]
Vapour density	≥ 1 [<i>Ref Std: AIR=1</i>]
Density	0.8 kg/l
Relative density	0.78 [<i>Ref Std: WATER=1</i>]
Water solubility	Nil
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	<i>No data available.</i>
Volatile organic compounds (VOC)	749 g/l [<i>Test Method:calculated SCAQMD rule 443.1</i>]
Volatile organic compounds (VOC)	96 % weight [<i>Test Method:calculated per CARB title 2</i>]
Percent volatile	96 % weight
VOC less H2O & exempt solvents	749 g/l [<i>Test Method:calculated SCAQMD rule 443.1</i>]

SECTION 10: Stability and reactivity**10.1 Reactivity**

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

Sparks and/or flames.

10.5 Incompatible materials

Strong acids.

Strong oxidising agents.

10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation

May be harmful if inhaled. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).

Skin contact

May be harmful in contact with skin.

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. May cause additional health effects (see below).

Eye contact

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

Ingestion

Harmful if swallowed.

Chemical (aspiration) pneumonitis: Signs/symptoms may include coughing, gasping, choking, burning of the mouth, difficulty breathing, bluish coloured skin (cyanosis), and may be fatal. Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:

Auditory effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears. Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness. May cause blindness.

Prolonged or repeated exposure may cause target organ effects:

Auditory effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears. Neurological effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and changes in blood pressure and heart rate.

Reproductive/Developmental Toxicity:

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

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE2,000 - 5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE300 - 2,000 mg/kg
3-Methylhexane	Dermal	Rabbit	LD50 3,000 mg/kg
3-Methylhexane	Inhalation-Vapor (4 hours)	Rat	LC50 > 80 mg/l
3-Methylhexane	Ingestion	Rat	LD50 17,000 mg/kg
Xylene	Dermal	Rabbit	LD50 > 4,200 mg/kg
Xylene	Inhalation-Vapor (4 hours)	Rat	LC50 29 mg/l
Xylene	Ingestion	Rat	LD50 3,523 mg/kg
2-Methylhexane	Dermal	Rabbit	LD50 3,000 mg/kg
2-Methylhexane	Inhalation-Vapor (4 hours)	Rat	LC50 > 80 mg/l
2-Methylhexane	Ingestion	Rat	LD50 17,000 mg/kg
Methanol	Dermal		LD50 estimated to be 1,000 - 2,000 mg/kg
Methanol	Inhalation-Vapor		LC50 estimated to be 10 - 20 mg/l
Methanol	Ingestion		LD50 estimated to be 50 - 300 mg/kg
Ethylbenzene	Dermal	Rabbit	LD50 15,433 mg/kg
Ethylbenzene	Inhalation-Vapor (4 hours)	Rat	LC50 17.4 mg/l
Ethylbenzene	Ingestion	Rat	LD50 4,769 mg/kg
2,3-Dimethylpentane	Dermal	Rabbit	LD50 > 2,000 mg/kg
2,3-Dimethylpentane	Inhalation-Vapor (4 hours)	Rat	LC50 > 73.5 mg/l
2,3-Dimethylpentane	Ingestion	Rat	LD50 > 5,000 mg/kg
Carbon dioxide.	Inhalation-Gas (4 hours)	Rat	LC50 > 53,000 ppm
Heptane	Dermal	Rabbit	LD50 3,000 mg/kg
Heptane	Inhalation-Vapor (4 hours)	Rat	LC50 103 mg/l

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Heptane	Ingestion	Rat	LD50 > 15,000 mg/kg
3,3-Dimethylpentane	Dermal	Rabbit	LD50 > 2,000 mg/kg
3,3-Dimethylpentane	Inhalation-Vapor (4 hours)	Rat	LC50 > 73.5 mg/l
3,3-Dimethylpentane	Ingestion	Rat	LD50 > 5,000 mg/kg
cis-1,3-Dimethylcyclopentane	Ingestion		LD50 estimated to be 300 - 2,000 mg/kg
3-Ethylpentane	Dermal		estimated to be > 5,000 mg/kg
3-Ethylpentane	Inhalation-Dust/Mist		estimated to be > 12.5 mg/l
3-Ethylpentane	Inhalation-Vapor		estimated to be > 50 mg/l
3-Ethylpentane	Ingestion		estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
3-Methylhexane	Rabbit	Minimal irritation
Xylene	Rabbit	Mild irritant
2-Methylhexane	Rabbit	Minimal irritation
Methanol	Rabbit	Mild irritant
Ethylbenzene	Rabbit	Mild irritant
2,3-Dimethylpentane	Rabbit	Mild irritant
Heptane	Human	Mild irritant
3,3-Dimethylpentane	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
3-Methylhexane	Rabbit	No significant irritation
Xylene	Rabbit	Mild irritant
2-Methylhexane	Rabbit	No significant irritation
Methanol	Rabbit	Moderate irritant
Ethylbenzene	Rabbit	Moderate irritant
2,3-Dimethylpentane	Rabbit	Mild irritant
Heptane	Professional judgement	Moderate irritant
3,3-Dimethylpentane	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
Methanol	Guinea pig	Not classified
Ethylbenzene	Human	Not classified

Respiratory Sensitisation

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Xylene	In Vitro	Not mutagenic
Xylene	In vivo	Not mutagenic
Methanol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Methanol	In vivo	Some positive data exist, but the data are not sufficient for classification
Ethylbenzene	In vivo	Not mutagenic

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Ethylbenzene	In Vitro	Some positive data exist, but the data are not sufficient for classification
Heptane	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Xylene	Dermal	Rat	Not carcinogenic
Xylene	Ingestion	Multiple animal species	Not carcinogenic
Xylene	Inhalation	Human	Some positive data exist, but the data are not sufficient for classification
Methanol	Inhalation	Multiple animal species	Not carcinogenic
Ethylbenzene	Inhalation	Multiple animal species	Carcinogenic.

Reproductive Toxicity**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
Xylene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Xylene	Ingestion	Not classified for development	Mouse	NOAEL Not available	during organogenesis
Xylene	Inhalation	Not classified for development	Multiple animal species	NOAEL Not available	during gestation
Methanol	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,600 mg/kg/day	21 days
Methanol	Ingestion	Toxic to development	Mouse	LOAEL 4,000 mg/kg/day	during organogenesis
Methanol	Inhalation	Toxic to development	Mouse	NOAEL 1.3 mg/l	during organogenesis
Ethylbenzene	Inhalation	Not classified for development	Rat	NOAEL 4.3 mg/l	premating & during gestation
Carbon dioxide.	Inhalation	Not classified for male reproduction	Mouse	LOAEL 350,000 ppm	not available
Carbon dioxide.	Inhalation	Not classified for development	Rat	LOAEL 60,000 ppm	24 hours

Lactation

Name	Route	Species	Value
Xylene	Ingestion	Mouse	Not classified for effects on or via lactation

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
3-Methylhexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Rat	NOAEL 4 mg/l	4 hours
3-Methylhexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not available	not available
3-Methylhexane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Not available	NOAEL Not available	

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Xylene	Inhalation	auditory system	Causes damage to organs	Rat	LOAEL 6.3 mg/l	8 hours
Xylene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Xylene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Xylene	Inhalation	eyes	Not classified	Rat	NOAEL 3.5 mg/l	not available
Xylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	eyes	Not classified	Rat	NOAEL 250 mg/kg	not applicable
2-Methylhexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Rat	NOAEL 4 mg/l	4 hours
2-Methylhexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not available	not available
2-Methylhexane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Not available	NOAEL Not available	
Methanol	Inhalation	blindness	Causes damage to organs	Human	NOAEL Not available	occupational exposure
Methanol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	not available
Methanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	6 hours
Methanol	Ingestion	blindness	Causes damage to organs	Human	NOAEL Not available	poisoning and/or abuse
Methanol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Ethylbenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Ethylbenzene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
Ethylbenzene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
2,3-Dimethylpentane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Heptane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Heptane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Heptane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
3,3-Dimethylpentane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Xylene	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.4 mg/l	4 weeks
Xylene	Inhalation	auditory system	May cause damage to organs through prolonged or repeated exposure	Rat	LOAEL 7.8 mg/l	5 days
Xylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL Not available	

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Xylene	Inhalation	heart endocrine system gastrointestinal tract hematopoietic system muscles kidney and/or bladder respiratory system	Not classified	Multiple animal species	NOAEL 3.5 mg/l	13 weeks
Xylene	Ingestion	auditory system	Not classified	Rat	NOAEL 900 mg/kg/day	2 weeks
Xylene	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 1,500 mg/kg/day	90 days
Xylene	Ingestion	liver	Not classified	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	heart skin endocrine system bone, teeth, nails, and/or hair hematopoietic system immune system nervous system respiratory system	Not classified	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
Methanol	Inhalation	liver	Not classified	Rat	NOAEL 6.55 mg/l	4 weeks
Methanol	Inhalation	respiratory system	Not classified	Rat	NOAEL 13.1 mg/l	6 weeks
Methanol	Ingestion	liver nervous system	Not classified	Rat	NOAEL 2,500 mg/kg/day	90 days
Ethylbenzene	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.1 mg/l	2 years
Ethylbenzene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1.1 mg/l	103 weeks
Ethylbenzene	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 3.4 mg/l	28 days
Ethylbenzene	Inhalation	auditory system	Not classified	Rat	NOAEL 2.4 mg/l	5 days
Ethylbenzene	Inhalation	endocrine system	Not classified	Mouse	NOAEL 3.3 mg/l	103 weeks
Ethylbenzene	Inhalation	gastrointestinal tract	Not classified	Rat	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Inhalation	bone, teeth, nails, and/or hair muscles	Not classified	Multiple animal species	NOAEL 4.2 mg/l	90 days
Ethylbenzene	Inhalation	heart immune system respiratory system	Not classified	Multiple animal species	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Ingestion	liver kidney and/or bladder	Not classified	Rat	NOAEL 680 mg/kg/day	6 months
Carbon dioxide.	Inhalation	heart bone, teeth, nails, and/or hair liver nervous system kidney and/or bladder respiratory system	Not classified	Rat	LOAEL 60,000 ppm	166 days
Heptane	Inhalation	liver nervous system kidney and/or bladder	Not classified	Rat	NOAEL 12 mg/l	26 weeks

Aspiration Hazard

Name	Value
3-Methylhexane	Aspiration hazard

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Xylene	Aspiration hazard
2-Methylhexane	Aspiration hazard
Ethylbenzene	Aspiration hazard
2,3-Dimethylpentane	Aspiration hazard
Heptane	Aspiration hazard
3,3-Dimethylpentane	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity**Acute aquatic hazard:**

GHS Acute 3: Harmful to aquatic life.

Chronic aquatic hazard:

GHS Chronic 3: Harmful to aquatic life with long lasting effects.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
2-Methylhexane	591-76-4		Data not available or insufficient for classification			
3-Methylhexane	589-34-4		Data not available or insufficient for classification			
Xylene	1330-20-7		Data not available or insufficient for classification			
Ethylbenzene	100-41-4	Atlantic Silverside	Experimental	96 hours	LC50	5.1 mg/l
Ethylbenzene	100-41-4	Green Algae	Experimental	96 hours	EC50	3.6 mg/l
Ethylbenzene	100-41-4	Mysid Shrimp	Experimental	96 hours	LC50	2.6 mg/l
Ethylbenzene	100-41-4	Rainbow trout	Experimental	96 hours	LC50	4.2 mg/l
Ethylbenzene	100-41-4	Water flea	Experimental	48 hours	EC50	1.8 mg/l
Ethylbenzene	100-41-4	Water flea	Experimental	7 days	NOEC	0.96 mg/l
Methanol	67-56-1	Algae or other aquatic plants	Experimental	96 hours	EC50	16.9 mg/l
Methanol	67-56-1	Bluegill	Experimental	96 hours	LC50	15,400 mg/l
Methanol	67-56-1	Green Algae	Experimental	96 hours	EC50	22,000 mg/l
Methanol	67-56-1	Water flea	Experimental	24 hours	EC50	20,803 mg/l
Methanol	67-56-1	Algae or other aquatic plants	Experimental	96 hours	NOEC	9.96 mg/l

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Methanol	67-56-1	Water flea	Experimental	21 days	NOEC	122 mg/l
2,3-Dimethylpentane	565-59-3		Data not available or insufficient for classification			
Carbon dioxide.	124-38-9	Fish	Experimental	96 hours	LC50	112.2 mg/l
Carbon dioxide.	124-38-9	Atlantic Salmon	Experimental	43 days	NOEC	26 mg/l
TRANS-1,3-DIMETHYLCYCLOPENTANE	1759-58-6		Data not available or insufficient for classification			
Heptane	142-82-5	Water flea	Experimental	48 hours	EC50	1.5 mg/l
Heptane	142-82-5	Water flea	Estimated	21 days	NOEC	0.17 mg/l
3,3-Dimethylpentane	562-49-2		Data not available or insufficient for classification			
3-Ethylpentane	617-78-7		Data not available or insufficient for classification			
cis-1,3-Dimethylcyclopentane	2532-58-3		Data not available or insufficient for classification			
trans-1,2-Dimethylcyclopentane	822-50-4		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
2-Methylhexane	591-76-4	Estimated Photolysis		Photolytic half-life (in air)	4.3 days (t 1/2)	Other methods
3-Methylhexane	589-34-4	Estimated Photolysis		Photolytic half-life (in air)	4.2 days (t 1/2)	Other methods
Xylene	1330-20-7	Data not available-insufficient			N/A	
Ethylbenzene	100-41-4	Experimental Photolysis		Photolytic half-life (in air)	4.26 days (t 1/2)	Other methods
Ethylbenzene	100-41-4	Experimental Biodegradation	28 days	CO2 evolution	70-80 % weight	Other methods
Methanol	67-56-1	Experimental Biodegradation	14 days	BOD	92 % BOD/ThBOD	OECD 301C - MITI test (I)
2,3-Dimethylpentane	565-59-3	Estimated Photolysis		Photolytic half-life (in air)	4.25 days (t 1/2)	Other methods
2,3-Dimethylpentane	565-59-3	Data not available-insufficient			N/A	

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Carbon dioxide.	124-38-9	Data not available-insufficient			N/A	
TRANS-1,3-DIMETHYLCYCLOPENTANE	1759-58-6	Data not available-insufficient			N/A	
Heptane	142-82-5	Experimental Photolysis		Photolytic half-life (in air)	4.24 days (t _{1/2})	Other methods
Heptane	142-82-5	Experimental Biodegradation	28 days	BOD	101 % BOD/ThBOD	OECD 301C - MITI test (I)
3,3-Dimethylpentane	562-49-2	Estimated Photolysis		Photolytic half-life (in air)	10.4 days (t _{1/2})	Other methods
3,3-Dimethylpentane	562-49-2	Data not available-insufficient			N/A	
3-Ethylpentane	617-78-7	Data not available-insufficient			N/A	
cis-1,3-Dimethylcyclopentane	2532-58-3	Data not available-insufficient			N/A	
trans-1,2-Dimethylcyclopentane	822-50-4	Data not available-insufficient			N/A	

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
2-Methylhexane	591-76-4	Estimated Bioconcentration		Bioaccumulation factor	136	Estimated: Bioconcentration factor
3-Methylhexane	589-34-4	Estimated Bioconcentration		Bioaccumulation factor	149	Other methods
Xylene	1330-20-7	Experimental BCF - Rainbow Tr	56 days	Bioaccumulation factor	14	Other methods
Ethylbenzene	100-41-4	Experimental BCF - Other	42 days	Bioaccumulation factor	1	Other methods
Methanol	67-56-1	Experimental Bioconcentration		Log Kow	-0.77	Other methods
2,3-Dimethylpentane	565-59-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Carbon dioxide.	124-38-9	Experimental Bioconcentration		Log Kow	0.83	Other methods
TRANS-1,3-DIMETHYLCYCLOPENTANE	1759-58-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

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Heptane	142-82-5	Estimated Bioconcentration		Bioaccumulation factor	105	Estimated: Bioconcentration factor
3,3-Dimethylpentane	562-49-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
3-Ethylpentane	617-78-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
cis-1,3-Dimethylcyclopentane	2532-58-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
trans-1,2-Dimethylcyclopentane	822-50-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil

Please contact manufacturer for more details

12.5 Other Adverse effects

No information available.

SECTION 13: Disposal considerations**13.1. Disposal methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. Facility must be capable of handling aerosol cans. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information**Air Transport (IATA) Regulations**

UN No UN1950

Proper Shipping Name AEROSOLS, FLAMMABLE

Hazard Class/Division 2.1

Subsidiary Risk Not applicable

Packing Group: Not applicable

Marine Transport (IMDG)

UN No Not applicable

Proper Shipping Name Not applicable

Hazard Class/Division Not applicable

Subsidiary Risk Not applicable

Packing Group: Not applicable

Environmental Hazards: Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Global inventory status

Contact 3M for more information. The components of this product are in compliance with the new substance notification requirements of CEPA. The components of this product are in compliance with the chemical notification requirements of TSCA.

Applicable Environmental, Health and Safety Regulations

The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989
Hazardous Waste(Management , Handling & Transboundary) Rules, 2008
Hazardous Chemicals (Classification, Packaging and Labelling Draft Rules), 2011
Central Motor Vehicle Rules, 1989

The following ingredients are listed as hazardous on Part II of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules

Ethylbenzene
Methanol

The following ingredients are classified as hazardous based on the criteria listed under Part I of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules:
Product is classified as extremely flammable liquid

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 **Flammability:** 4 **Instability:** 0 **Special Hazards:** None
Aerosol Storage Code: 3

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 information:

Section 14: Packing group (IMO) information was added.
Label: GHS Precautionary - Prevention information was modified.
Label: GHS Precautionary - Response information was modified.
Label: GHS Target Organ Hazard Statement information was modified.
Section 6: Accidental release clean-up information information was modified.
Section 6: Accidental release environmental information information was modified.
Section 7: Precautions safe handling information information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12: Biocumulative potential information information was modified.
Section 13: 13.1. Waste disposal note information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 14: Environmental hazards information was added.
Section 14: IMO Subsidiary Risk information was added.
Section 14: IMO transport hazard classes information was added.
Section 14: Proper Shipping Name (IMO) information was added.
Section 14: UN Number (IMO) information was added.

Section 15: Applicable Environmental, Health and Safety Regulations information was modified.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

3M India SDSs are available at <http://solutions.3mindia.co.in>