



Safety Data Sheet

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Document group:	10-5259-6	Version number:	19.01
Issue Date:	2021/04/13	Supersedes Date:	2021/04/06

This Safety Data Sheet has been prepared in accordance with the Canadian Hazardous Products Regulations.

SECTION 1: Identification

1.1. Product identifier

3M™ Heavy Drip-Chek™ Sealer, PN 08531

Product Identification Numbers

41-0003-6740-3 60-9800-2709-2 CS-0406-1708-9

1.2. Recommended use and restrictions on use

Intended Use

Automotive

Specific Use

Sealant

Restrictions on use

Not applicable

1.3. Supplier's details

Company:	3M Canada Company
Division:	Automotive Aftermarket
Address:	1840 Oxford Street East, Post Office Box 5757, London, Ontario N6A 4T1
Telephone:	(800) 364-3577
Website:	www.3M.ca

1.4. Emergency telephone number

Medical Emergency Telephone:1-800-3M HELPS / 1-800-364-3577; Transportation Emergency Telephone (CANUTEC): (613) 996-6666

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Flammable Liquid: Category 2.
Serious Eye Damage/Irritation: Category 2A.
Skin Corrosion/Irritation: Category 2.
Reproductive Toxicity: Category 1B.
Carcinogenicity: Category 2.

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

2.2. Label elements

Signal word

Danger

Symbols

Flame | Exclamation mark | Health Hazard |

Pictograms



Hazard statements

Highly flammable liquid and vapour.

Causes serious eye irritation. Causes skin irritation. May cause drowsiness or dizziness. May damage fertility or the unborn child. Suspected of causing cancer.

Causes damage to organs through prolonged or repeated exposure: nervous system | sensory organs |

Precautionary statements

General:

Keep out of reach of children.

Prevention:

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond container and receiving equipment. Use non-sparking tools. Take action to prevent static discharges. Use explosion-proof electrical/ventilating/lighting equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves and eye/face protection. Do not eat, drink or smoke when using this product. Wash exposed skin thoroughly after handling.

Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Get medical advice/attention if you feel unwell. In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage:

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Disposal:

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

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt	Common Name
Toluene	108-88-3	30 - 60 Trade Secret *	No Data Available
Acrylonitrile-Butadiene Polymer	9003-18-3	10 - 30	2-Propenenitrile, polymer with 1,3-butadiene
FORMALDEHYDE, POLYMER WITH 4-(1,1-DIMETHYLETHYL)PHENOL, MAGNESIUM OXIDE COMPLEX	68037-42-3	5 - 15	Formaldehyde, polymer with 4-(1,1-dimethylethyl)phenol, magnesium oxide complex
N-AMYL ACETATE	628-63-7	7 - 13	Acetic acid, pentyl ester
2-METHYLBUTYL ACETATE	624-41-9	3 - 7	1-Butanol, 2-methyl-, acetate
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	3 - 7	Fumed amorphous silica, crystalline-free
Salicylic Acid	69-72-7	1 - 5 Trade Secret *	Benzoic acid, 2-hydroxy-
Zinc Oxide	1314-13-2	0 - 3	Zinc oxide (ZnO)
Titanium Dioxide	13463-67-7	0.5 - 1.5 Trade Secret *	Titanium oxide (TiO ₂)
2,2'-Methylenebis[6-tert-Butyl-p-Cresol]	119-47-1	0.1 - 1 Trade Secret *	Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-
Ethylbenzene	100-41-4	0.1 - 1 Trade Secret *	Benzene, ethyl-
Methyl isobutyl ketone	108-10-1	0 - 0.2	2-Pentanone, 4-methyl-

*The actual concentration of this ingredient has been withheld as a trade secret.

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:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

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

Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness). Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

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

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Toxic Vapor, Gas, Particulate	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 vapours, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapours 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

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Cover spill area with a fire-extinguishing foam. 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 SDS. 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

Avoid breathing of vapours created during cure cycle. 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. Use only non-sparking tools. Take precautionary measures against static discharge. 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 release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from acids. Store away from oxidizing 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	C.A.S. No.	Agency	Limit type	Additional Comments
Ethylbenzene	100-41-4	ACGIH	TWA:20 ppm	
Methyl isobutyl ketone	108-10-1	ACGIH	TWA:20 ppm;STEL:75 ppm	
Toluene	108-88-3	ACGIH	TWA:20 ppm	
Zinc Oxide	1314-13-2	ACGIH	TWA(respirable fraction):2 mg/m ³ ;STEL(respirable fraction):10 mg/m ³	
Titanium Dioxide	13463-67-7	ACGIH	TWA:10 mg/m ³	
2-METHYLBUTYL ACETATE	624-41-9	ACGIH	TWA:50 ppm;STEL:100 ppm	
N-AMYL ACETATE	628-63-7	ACGIH	TWA:50 ppm;STEL:100 ppm	

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

Provide ventilated enclosure for curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device. 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. Use explosion-proof ventilation 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: Polyvinyl Alcohol (PVA)

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 and particulates

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
Colour	Gray
Odour	Solvent
Odour threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>
Melting point/Freezing point	<i>No Data Available</i>
Boiling point	111.1 °C [<i>Details: Toluene</i>]
Flash Point	4.4 °C [<i>Test Method: Tagliabue Closed Cup</i>]
Evaporation rate	6 [<i>Ref Std: ETHER=1</i>]
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	1 % volume
Flammable Limits(UEL)	7 % volume
Vapour Pressure	3,358.4 Pa [<i>@ 20 °C</i>]
Vapour Density and/or Relative Vapour Density	4 [<i>Ref Std: AIR=1</i>]
Density	0.97 g/ml
Relative density	0.97 [<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/Kinematic Viscosity	Approximately 100,000 mPa-s [<i>@ 23 °C</i>]
Volatile Organic Compounds	649 g/l [<i>Test Method: calculated SCAQMD rule 443.1</i>]
Volatile Organic Compounds	66.9 % weight [<i>Test Method: calculated per CARB title 2</i>]
Percent volatile	66.9 % weight
VOC Less H ₂ O & Exempt Solvents	649 g/l [<i>Test Method: calculated SCAQMD rule 443.1</i>]
Molecular weight	<i>No Data Available</i>
Solids Content	33.9 % weight

Nanoparticles

This material contains nanoparticles.

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 polymerization will not occur.

10.4. Conditions to avoid

Sparks and/or flames

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

Substance

None known.

Condition

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 labeling, 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:

Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.

Eye Contact:

Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea. May cause additional health effects (see below).

Additional Health Effects:**Single exposure may cause target organ effects:**

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

Prolonged or repeated exposure may cause target organ effects:

Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision. Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears. Olfactory Effects: Signs/symptoms may include decreased ability to detect odours and/or complete loss of smell. Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or 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.

<u>Ingredient</u>	<u>CAS No.</u>	<u>Class Description</u>	<u>Regulation</u>
Benzene	71-43-2	Grp. 1: Carcinogenic to humans	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	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Formaldehyde	50-00-0	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Formaldehyde	50-00-0	Known human carcinogen	National Toxicology Program Carcinogens
Formaldehyde	50-00-0	Cancer hazard	OSHA Carcinogens
Methyl isobutyl ketone	108-10-1	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Titanium Dioxide	13463-67-7	Grp. 2B: Possible human carc.	International Agency for Research on 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 ATE >5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE ₂₀ - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Toluene	Dermal	Rat	LD ₅₀ 12,000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	LC ₅₀ 30 mg/l
Toluene	Ingestion	Rat	LD ₅₀ 5,550 mg/kg
Acrylonitrile-Butadiene Polymer	Dermal	Rabbit	LD ₅₀ > 15,000 mg/kg
Acrylonitrile-Butadiene Polymer	Ingestion	Rat	LD ₅₀ > 30,000 mg/kg
FORMALDEHYDE, POLYMER WITH 4-(1,1-DIMETHYLETHYL)PHENOL, MAGNESIUM OXIDE COMPLEX	Dermal		LD ₅₀ estimated to be 2,000 - 5,000 mg/kg
FORMALDEHYDE, POLYMER WITH 4-(1,1-DIMETHYLETHYL)PHENOL, MAGNESIUM OXIDE COMPLEX	Ingestion		LD ₅₀ estimated to be 2,000 - 5,000 mg/kg
N-AMYL ACETATE	Dermal	Rabbit	LD ₅₀ 8,200 mg/kg
N-AMYL ACETATE	Inhalation-Vapor (4 hours)	Rat	LC ₅₀ > 24.1 mg/l
N-AMYL ACETATE	Ingestion	Rat	LD ₅₀ 5,000 mg/kg
Synthetic amorphous silica, fumed, crystalline-free	Dermal	Rabbit	LD ₅₀ > 5,000 mg/kg
Synthetic amorphous silica, fumed, crystalline-free	Inhalation-Dust/Mist (4 hours)	Rat	LC ₅₀ > 0.691 mg/l
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Rat	LD ₅₀ > 5,110 mg/kg
2-METHYLBUTYL ACETATE	Dermal	Rabbit	LD ₅₀ 8,200 mg/kg
2-METHYLBUTYL ACETATE	Inhalation-Vapor (4 hours)	Rat	LC ₅₀ > 24.1 mg/l
2-METHYLBUTYL ACETATE	Ingestion	Rat	LD ₅₀ 5,000 mg/kg
Zinc Oxide	Dermal		LD ₅₀ estimated to be > 5,000 mg/kg
Zinc Oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC ₅₀ > 5.7 mg/l
Zinc Oxide	Ingestion	Rat	LD ₅₀ > 5,000 mg/kg
Salicylic Acid	Dermal	Rat	LD ₅₀ > 2,000 mg/kg
Salicylic Acid	Ingestion	Rat	LD ₅₀ 891 mg/kg
Titanium Dioxide	Dermal	Rabbit	LD ₅₀ > 10,000 mg/kg
Titanium Dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC ₅₀ > 6.82 mg/l
Titanium Dioxide	Ingestion	Rat	LD ₅₀ > 10,000 mg/kg
Ethylbenzene	Dermal	Rabbit	LD ₅₀ 15,433 mg/kg
Ethylbenzene	Inhalation-Vapor (4 hours)	Rat	LC ₅₀ 17.4 mg/l
Ethylbenzene	Ingestion	Rat	LD ₅₀ 4,769 mg/kg

2,2'-Methylenebis[6-tert-Butyl-p-Cresol]	Dermal	Rabbit	LD50 > 10,000 mg/kg
2,2'-Methylenebis[6-tert-Butyl-p-Cresol]	Ingestion	Rat	LD50 > 5,000 mg/kg
Methyl isobutyl ketone	Dermal	Rabbit	LD50 > 16,000 mg/kg
Methyl isobutyl ketone	Inhalation-Vapor (4 hours)	Rat	LC50 >8.2,<16.4 mg/l
Methyl isobutyl ketone	Ingestion	Rat	LD50 3,038 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Toluene	Rabbit	Irritant
Acrylonitrile-Butadiene Polymer	Professional judgement	No significant irritation
N-AMYL ACETATE	Rabbit	Mild irritant
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation
2-METHYLBUTYL ACETATE	Rabbit	Mild irritant
Zinc Oxide	Human and animal	No significant irritation
Salicylic Acid	Rabbit	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
Ethylbenzene	Rabbit	Mild irritant
Methyl isobutyl ketone	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Toluene	Rabbit	Moderate irritant
Acrylonitrile-Butadiene Polymer	Professional judgement	No significant irritation
N-AMYL ACETATE	Rabbit	Moderate irritant
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation
2-METHYLBUTYL ACETATE	Rabbit	Moderate irritant
Zinc Oxide	Rabbit	Mild irritant
Salicylic Acid	Rabbit	Corrosive
Titanium Dioxide	Rabbit	No significant irritation
Ethylbenzene	Rabbit	Moderate irritant
Methyl isobutyl ketone	Rabbit	Mild irritant

Skin Sensitization

Name	Species	Value
Toluene	Guinea pig	Not classified
N-AMYL ACETATE	Human	Not classified
Synthetic amorphous silica, fumed, crystalline-free	Human and animal	Not classified
2-METHYLBUTYL ACETATE	Human	Not classified
Zinc Oxide	Guinea pig	Not classified
Salicylic Acid	Mouse	Not classified
Titanium Dioxide	Human and animal	Not classified
Ethylbenzene	Human	Not classified
Methyl isobutyl ketone	Guinea pig	Not classified

Photosensitization

Name	Species	Value
N-AMYL ACETATE	Human	Not sensitizing
2-METHYLBUTYL ACETATE	Human	Not sensitizing
Salicylic Acid	Mouse	Not sensitizing

Respiratory Sensitization

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

Germ Cell Mutagenicity

Name	Route	Value
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic
N-AMYL ACETATE	In Vitro	Not mutagenic
Synthetic amorphous silica, fumed, crystalline-free	In Vitro	Not mutagenic
2-METHYLBUTYL ACETATE	In Vitro	Not mutagenic
Zinc Oxide	In Vitro	Some positive data exist, but the data are not sufficient for classification
Zinc Oxide	In vivo	Some positive data exist, but the data are not sufficient for classification
Salicylic Acid	In Vitro	Not mutagenic
Salicylic Acid	In vivo	Not mutagenic
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic
Ethylbenzene	In vivo	Not mutagenic
Ethylbenzene	In Vitro	Some positive data exist, but the data are not sufficient for classification
Methyl isobutyl ketone	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Toluene	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
Synthetic amorphous silica, fumed, crystalline-free	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Titanium Dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium Dioxide	Inhalation	Rat	Carcinogenic
Ethylbenzene	Inhalation	Multiple animal species	Carcinogenic
Methyl isobutyl ketone	Inhalation	Multiple animal species	Carcinogenic

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

Name	Route	Value	Species	Test result	Exposure Duration
Toluene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation

Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse
N-AMYL ACETATE	Inhalation	Not classified for development	Rat	NOAEL 2.7 mg/l	during organogenesis
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
2-METHYLBUTYL ACETATE	Inhalation	Not classified for development	Rat	NOAEL 2.7 mg/l	during organogenesis
Zinc Oxide	Ingestion	Not classified for reproduction and/or development	Multiple animal species	NOAEL 125 mg/kg/day	premating & during gestation
Salicylic Acid	Ingestion	Toxic to development	Rat	NOAEL 75 mg/kg/day	during organogenesis
Ethylbenzene	Inhalation	Not classified for development	Rat	NOAEL 4.3 mg/l	premating & during gestation
2,2'-Methylenebis[6-tert-Butyl-p-Cresol]	Ingestion	Not classified for female reproduction	Rat	NOAEL 50 mg/kg/day	premating & during gestation
2,2'-Methylenebis[6-tert-Butyl-p-Cresol]	Ingestion	Toxic to male reproduction	Rat	NOAEL 12.5 mg/kg/day	50 days
Methyl isobutyl ketone	Inhalation	Not classified for female reproduction	Multiple animal species	NOAEL 8.2 mg/l	2 generation
Methyl isobutyl ketone	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Methyl isobutyl ketone	Inhalation	Not classified for male reproduction	Multiple animal species	NOAEL 8.2 mg/l	2 generation
Methyl isobutyl ketone	Inhalation	Not classified for development	Mouse	NOAEL 12.3 mg/l	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
N-AMYL ACETATE	Inhalation	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
N-AMYL ACETATE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL not available	
N-AMYL ACETATE	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
2-METHYLBUTYL ACETATE	Inhalation	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	

2-METHYLBUTYL ACETATE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
2-METHYLBUTYL ACETATE	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
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	
Methyl isobutyl ketone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	LOAEL 0.1 mg/l	2 hours
Methyl isobutyl ketone	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL 0.9 mg/l	7 minutes
Methyl isobutyl ketone	Inhalation	vascular system	Not classified	Dog	NOAEL Not available	not available
Methyl isobutyl ketone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Rat	LOAEL 900 mg/kg	not applicable

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Toluene	Inhalation	auditory system eyes olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	nervous system	May cause damage to organs though prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart liver kidney and/or bladder	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Not classified	Rat	NOAEL 1.1 mg/l	4 weeks
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system vascular system	Not classified	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	gastrointestinal tract	Not classified	Multiple animal species	NOAEL 11.3 mg/l	15 weeks
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	liver kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Not classified	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Not classified	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Not classified	Mouse	NOAEL 105 mg/kg/day	4 weeks
Synthetic amorphous	Inhalation	respiratory system	Not classified	Human	NOAEL Not	occupational

silica, fumed, crystalline-free		silicosis			available	exposure
Zinc Oxide	Ingestion	nervous system	Not classified	Rat	NOAEL 600 mg/kg/day	10 days
Zinc Oxide	Ingestion	endocrine system hematopoietic system kidney and/or bladder	Not classified	Other	NOAEL 500 mg/kg/day	6 months
Salicylic Acid	Ingestion	liver	Not classified	Rat	NOAEL 500 mg/kg/day	3 days
Titanium Dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium Dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
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
Methyl isobutyl ketone	Inhalation	liver	Not classified	Rat	NOAEL 0.41 mg/l	13 weeks
Methyl isobutyl ketone	Inhalation	heart	Not classified	Multiple animal species	NOAEL 0.8 mg/l	2 weeks
Methyl isobutyl ketone	Inhalation	kidney and/or bladder	Not classified	Multiple animal species	NOAEL 0.4 mg/l	90 days
Methyl isobutyl ketone	Inhalation	respiratory system	Not classified	Multiple animal species	NOAEL 4.1 mg/l	14 weeks
Methyl isobutyl ketone	Inhalation	endocrine system hematopoietic system	Not classified	Multiple animal species	NOAEL 0.41 mg/l	90 days
Methyl isobutyl ketone	Inhalation	nervous system	Not classified	Multiple animal species	NOAEL 0.41 mg/l	13 weeks
Methyl isobutyl ketone	Ingestion	endocrine system hematopoietic system liver kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Methyl isobutyl ketone	Ingestion	heart immune system muscles nervous system respiratory system	Not classified	Rat	NOAEL 1,040 mg/kg/day	120 days

Aspiration Hazard

Name	Value
Toluene	Aspiration hazard

Ethylbenzene	Aspiration hazard
Methyl isobutyl ketone	Some positive data exist, but the data are not sufficient for classification

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

No data 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. 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

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

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 material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

SECTION 16: Other information

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.

Health: 2 Flammability: 3 Instability: 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.

Document group:	10-5259-6	Version number:	19.01
Issue Date:	2021/04/13	Supersedes Date:	2021/04/06

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