

Safety Data Sheet

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

SECTION 1: Identification

1.1. Product identifier

3MTM Industrial Adhesive 4799

Product Identification Numbers

62-4799-2631-3 62-4799-2635-4 62-4799-5530-4 62-4799-6530-3 62-4799-7530-2 62-4799-8530-1 62-4799-9531-8 JS-3000-5008-0 UU-0126-6335-5

XS-0414-1121-5

1.2. Recommended use and restrictions on use

Intended Use

Adhesive

Specific Use

Adhesive for rubber to metal.

Restrictions on use

Not applicable

1.3. Supplier's details

Company: 3M Canada Company

Division: Industrial Adhesives and Tapes Division

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 / 1800 364 3577

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Flammable Liquid: Category 2. Skin Corrosion/Irritation: Category 2. Serious Eye Damage/Irritation: Category 2A.

Carcinogenicity: Category 2.

p. 1 c o

Reproductive Toxicity: Category 1B.

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

2.2. Label elements

Signal word

Danger

Symbols

Flame | Exclamation mark | Health Hazard |

Pictograms







Hazard Statements

Highly flammable liquid and vapour.

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

Causes damage to organs through prolonged or repeated exposure: cardiovascular system | kidney/urinary tract | liver | nervous system | sensory organs.

Precautionary statements

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. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment. non-sparking tools. Take action to prevent static discharges. Do not breathe vapours, dust, or spray. Wash exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves, eye protection, and respiratory protection.

Response:

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical attention. If skin irritation occurs: Get medical advice. If eye irritation persists: Get medical advice. Take off contaminated clothing and wash it before reuse. 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. Store locked up.

Disposal:

Dispose of contents and container in accordance with applicable local, regional, national, and 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
Petroleum Distillates	64741-84-0	60 - 80 Trade Secret *	Naphtha, petroleum, solvent-refined light a
			solvent extraction process. It consists
			predominantly of aliphatic hydrocarbons
			having carbon numbers predominantly in
			the range of C5 through C11 and boiling in
			the range of approximately 35.degree.C to 190.degree.C
Hexane	110-54-3	15 - 40 Trade Secret *	Hexane
Heptane	142-82-5	< 20	Heptane
2-Methylpentane	107-83-5	5 - 10 Trade Secret *	Pentane, 2-methyl-
Magnesium Resinate	68037-42-3	2 - 10	Formaldehyde, polymer with 4-(1,1-
			dimethylethyl)phenol, magnesium oxide
			complex
Talc	14807-96-6	5 - 10 Trade Secret *	Talc (Mg3H2(SiO3)4)
3-Methylpentane	96-14-0	5 - 10 Trade Secret *	Pentane, 3-methyl-
Toluene	108-88-3	1 - 8	No Data Available
Styrene-Butadiene Polymer	9003-55-8	3 - 7	Benzene, ethenyl-, polymer with 1,3-
			butadiene
Polyisoprene	9003-31-0	3 - 7	1,3-Butadiene, 2-methyl-, homopolymer
Cyclohexane	110-82-7	< 7	Cyclohexane
Hydrocarbon Resin	68478-07-9	3 - 7	Naphtha, petroleum, light steam-cracked
			arom., piperylene conc., polymd.
Calcium Zinc Resinate	68334-35-0	1 - 5	Resin acids and Rosin acids, calcium zinc
			salts
2,3-Dimethylbutane	79-29-8	< 1.5	Butane, 2,3-dimethyl-
Methyl Ethyl Ketone	78-93-3	<= 1.5	2-Butanone
Carbon Black	1333-86-4	0.1 - 1	Carbon black
Ethyl Alcohol	64-17-5	< 1	Ethanol
Benzene, ethenyl-,	9003-53-6	0.1 - 1	Benzene, ethenyl-, homopolymer
homopolymer (oligomeric)			
MIBK	108-10-1	< 0.6	2-Pentanone, 4-methyl-
Zinc Oxide	1314-13-2	< 0.25	Zinc oxide (ZnO)
Zinc Diethyldithiocarbamate	14324-55-1	< 0.01	No Data Available
Methylene Chloride	75-09-2	< 0.01	Methane, dichloro-

^{*}The concentration (exact or range) of this component 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. Unsuitable extinguishing media

None Determined

5.3. 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	<u>Condition</u>
Aldehydes	During Combustion
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Oxides of Zinc	During Combustion

5.4. Special protection 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. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS. 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.

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

Page: 4 of 20

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

For industrial or professional use only. Not for consumer sale or use. 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 heat. Store away from acids. Store away from oxidizing agents. Store locked up.

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
2-Methylpentane	107-83-5	ACGIH	TWA: 200 ppm	
MIBK	108-10-1	ACGIH	TWA:20 ppm;STEL:75 ppm	
Toluene	108-88-3	ACGIH	TWA:20 ppm	
Hexane	110-54-3	ACGIH	TWA:50 ppm Danger of cutaneous absorption	
Cyclohexane	110-82-7	ACGIH	TWA:100 ppm	
Zinc Oxide	1314-13-2	ACGIH	TWA(respirable fraction):2 mg/m3;STEL(respirable fraction):10 mg/m3	
Carbon Black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m3	
Heptane	142-82-5	ACGIH	TWA:400 ppm;STEL:500 ppm	
Talc	14807-96-6	ACGIH	TWA(respirable fraction):2 mg/m3	
Ethyl Alcohol	64-17-5	ACGIH	STEL:1000 ppm	
Methylene Chloride	75-09-2	ACGIH	TWA:50 ppm	
Methyl Ethyl Ketone	78-93-3	ACGIH	TWA:75 ppm;STEL:150 ppm Danger of cutaneous absorption	
2,3-Dimethylbutane	79-29-8	ACGIH	TWA: 200 ppm	
3-Methylpentane	96-14-0	ACGIH	TWA: 200 ppm	

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

Page: 5 of 20

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. 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:

Safety Glasses with side shields

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: 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	Black	
Odour	Weak Petroleum	
Odour threshold	No Data Available	
pH	No Data Available	
Melting point/Freezing point	No Data Available	
Boiling point	60 °C	
Flash Point	-25.6 °C [Test Method:Closed Cup]	
Evaporation rate	2.5 [Ref Std:ETHER=1]	
Flammability	Flammable Liquid: Category 2.	
Flammable Limits(LEL)	1 % volume	
Flammable Limits(UEL)	7 % volume	
Vapour Pressure	15,998.6 Pa [<i>Details</i> :CONDITIONS: @ 68F]	

Page: 6 of 20

Relative Vapour Density	3 [Ref Std:AIR=1]		
Density	0.82 g/ml		
Relative density	0.82 [Ref Std:WATER=1]		
Water solubility	Slight (less than 10%)		
Solubility- non-water	No Data Available		
Partition coefficient: n-octanol/ water	No Data Available		
Autoignition temperature	No Data Available		
Decomposition temperature	No Data Available		
Kinematic Viscosity	15,549 mm2/sec		
Volatile Organic Compounds	No Data Available		
Percent volatile	Approximately 65 % weight		
VOC Less H2O & Exempt Solvents	<=572 g/l [Test Method:calculated SCAQMD rule 443.1]		
Molecular weight	No Data Available		
Solids Content	20 - 40 % weight		

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

Heat

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 regulatory 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:

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.

Eve 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. Peripheral Neuropathy: Signs/symptoms may include tingling or numbness of the extremities, incoordination, weakness of the hands and feet, tremors and muscle atrophy. 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.

The Hazardous Substance Assessment for toluene published by Health Canada concludes that toluene also causes target organ toxicity through prolonged or repeated exposure to the cardiovascular system (heart), respiratory system (lung), kidney, and liver. Cardiac Effects: Signs/symptoms may include irregular heartbeat (arrhythmia), changes in heart rate, damage to heart muscle, heart attack, and may be fatal. Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure. Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination. Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

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>	CAS No.	Class Description	Regulation
Carbon black	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
METHYLENE CHLORIDE	75-09-2	Cancer hazard	OSHA Carcinogens
Dichloromethane (Methylene Chloride)	75-09-2	Anticipated human carcinogen	National Toxicology Program Carcinogens
Dichloromethane (methylene chloride)	75-09-2	Grp. 2A: Probable human carc.	International Agency for Research on Cancer
Methyl isobutyl ketone	108-10-1	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

Additional Information:

This product contains ethanol. Alcoholic beverages and ethanol in alcoholic beverages have been classified by the International Agency for Research on Cancer as carcinogenic to humans. There are also data associating human consumption of alcoholic beverages with developmental toxicity and liver toxicity. Exposure to ethanol during the

Page: 8 of 20

foreseeable use of this product is not expected to cause cancer, developmental toxicity, or liver toxicity.

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 >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Petroleum Distillates	Dermal	Rat	LD50 > 2,800 mg/kg
Petroleum Distillates	Inhalation- Vapor (4 hours)	Rat	LC50 > 25.2 mg/l
Petroleum Distillates	Ingestion	Rat	LD50 > 5,840 mg/kg
Hexane	Dermal	Rabbit	LD50 > 2,000 mg/kg
Hexane	Inhalation- Vapor (4 hours)	Rat	LC50 170 mg/l
Hexane	Ingestion	Rat	LD50 > 28,700 mg/kg
Heptane	Dermal	similar compoun ds	LD50 > 2,000 mg/kg
Heptane	Inhalation- Vapor (4 hours)	similar compoun ds	LC50 > 33.5 mg/l
Heptane	Ingestion	similar compoun ds	LD50 > 5,000 mg/kg
2-Methylpentane	Dermal		LD50 estimated to be > 5,000 mg/kg
2-Methylpentane	Inhalation- Vapor		LC50 estimated to be > 50 mg/l
2-Methylpentane	Ingestion		LD50 estimated to be > 5,000 mg/kg
3-Methylpentane	Dermal		LD50 estimated to be > 5,000 mg/kg
3-Methylpentane	Inhalation- Vapor		LC50 estimated to be > 50 mg/l
3-Methylpentane	Ingestion		LD50 estimated to be > 5,000 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation- Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg
Talc	Dermal		LD50 estimated to be > 5,000 mg/kg
Talc	Ingestion		LD50 estimated to be > 5,000 mg/kg
Cyclohexane	Dermal	Rat	LD50 > 2,000 mg/kg
Cyclohexane	Inhalation- Vapor (4 hours)	Rat	LC50 > 32.9 mg/l
Cyclohexane	Ingestion	Rat	LD50 6,200 mg/kg
Polyisoprene	Dermal		LD50 estimated to be > 5,000 mg/kg
Polyisoprene	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Hydrocarbon Resin	Dermal	Rabbit	LD50 > 3,160 mg/kg
Styrene-Butadiene Polymer	Dermal	Rabbit	LD50 > 2,000 mg/kg
Hydrocarbon Resin	Ingestion	Rat	LD50 > 5,000 mg/kg
Styrene-Butadiene Polymer	Ingestion	Rat	LD50 > 5,000 mg/kg
Magnesium Resinate	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
Magnesium Resinate	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Methyl Ethyl Ketone	Dermal	Rabbit	LD50 > 8,050 mg/kg
Methyl Ethyl Ketone	Inhalation- Vapor (4	Rat	LC50 34.5 mg/l

Methyl Ethyl Ketone 2,3-Dimethylbutane 2,3-Dimethylbutane 2,3-Dimethylbutane Ethyl Alcohol Ethyl Alcohol	Ingestion Dermal Inhalation- Vapor Ingestion Dermal	Rat	LD50 2,737 mg/kg LD50 estimated to be > 5,000 mg/kg LC50 estimated to be > 50 mg/l
2,3-Dimethylbutane 2,3-Dimethylbutane Ethyl Alcohol	Inhalation- Vapor Ingestion Dermal		LC50 estimated to be > 50 mg/l
2,3-Dimethylbutane Ethyl Alcohol	Vapor Ingestion Dermal		
Ethyl Alcohol	Dermal		
· ·			LD50 estimated to be > 5,000 mg/kg
Ethyl Alcohol		Rabbit	LD50 > 15,800 mg/kg
	Inhalation- Vapor (4 hours)	Rat	LC50 124.7 mg/l
Ethyl Alcohol	Ingestion	Rat	LD50 17,800 mg/kg
MIBK	Dermal	Rabbit	LD50 > 16,000 mg/kg
MIBK	Inhalation- Vapor (4 hours)	Rat	LC50 11 mg/l
MIBK	Ingestion	Rat	LD50 3,038 mg/kg
Carbon Black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon Black	Ingestion	Rat	LD50 > 8,000 mg/kg
Zinc Oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Zinc Oxide	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 5.7 mg/l
Zinc Oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Zinc Diethyldithiocarbamate	Dermal	Rabbit	LD50 > 2,000 mg/kg
Zinc Diethyldithiocarbamate	Ingestion	Rat	LD50 1,960 mg/kg
Methylene Chloride	Dermal	Rat	LD50 > 2,000 mg/kg
Methylene Chloride	Inhalation- Vapor (4 hours)	Rat	LC50 63.7 mg/l
Methylene Chloride	Ingestion	Rat	LD50 1,410 mg/kg

 \overline{ATE} = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Petroleum Distillates	Rabbit	Irritant
Hexane	Human	Mild irritant
	and	
YY .	animal	ACITY III
Heptane	Professio	Mild irritant
	nal	
	judgeme	
	nt .	ACITY III
2-Methylpentane	Professio	Mild irritant
	nal	
	judgeme	
	nt	2011
3-Methylpentane	Professio	Mild irritant
	nal	
	judgeme	
	nt	
Toluene	Rabbit	Irritant
Talc	Rabbit	No significant irritation
Cyclohexane	Rabbit	Mild irritant
Hydrocarbon Resin	similar	No significant irritation
	compoun	
	ds	
Polyisoprene	Professio	No significant irritation
	nal	
	judgeme	
	nt	
Styrene-Butadiene Polymer	Professio	No significant irritation
	nal	
	judgeme	
	nt	

Page: 10 of 20

Methyl Ethyl Ketone	Rabbit	Minimal irritation
2,3-Dimethylbutane	Professio	Mild irritant
	nal	
	judgeme	
	nt	
Ethyl Alcohol	Rabbit	No significant irritation
MIBK	Rabbit	Mild irritant
Carbon Black	Rabbit	No significant irritation
Zinc Oxide	Human	No significant irritation
	and	
	animal	
Zinc Diethyldithiocarbamate	official	Irritant
	classifica	
	tion	
Methylene Chloride	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Petroleum Distillates	Rabbit	Mild irritant
Hexane	Rabbit	Mild irritant
	similar	Mild irritant
Heptane		Mild irritant
	compoun ds	
2-Methylpentane	Professio	Moderate irritant
2-Methylpentane	nal	Wioderate Iffiant
	judgeme	
	nt	
3-Methylpentane	Professio	Moderate irritant
3-ivietify ipentane	nal	Wioderate irritant
	judgeme	
	nt	
Toluene	Rabbit	Moderate irritant
Talc	Rabbit	No significant irritation
Cyclohexane	Rabbit	Mild irritant
Hydrocarbon Resin	similar	Mild irritant
Try droedroom Nessin	compoun	Tille III talle
	ds	
Polyisoprene	Professio	No significant irritation
7 1	nal	
	judgeme	
	nt	
Methyl Ethyl Ketone	Rabbit	Severe irritant
2,3-Dimethylbutane	Professio	Moderate irritant
•	nal	
	judgeme	
	nt	
Ethyl Alcohol	Rabbit	Severe irritant
MIBK	Rabbit	Mild irritant
Carbon Black	Rabbit	No significant irritation
Zinc Oxide	Rabbit	Mild irritant
Zinc Diethyldithiocarbamate	Rabbit	Severe irritant
Methylene Chloride	Rabbit	Severe irritant

Skin Sensitization

SAIN SCHSICIZATION		
Name	Species	Value
Petroleum Distillates	Guinea	Not classified
	pig	
Hexane	Human	Not classified
Heptane	similar	Not classified
	compoun	
	ds	
Toluene	Guinea	Not classified
	pig	
Polyisoprene	Human	Not classified
Ethyl Alcohol	Human	Not classified

Page: 11 of 20

MIBK	Guinea	Not classified
	pig	
Zinc Oxide	Guinea	Not classified
	pig	
Zinc Diethyldithiocarbamate	Mouse	Sensitizing

Respiratory Sensitization

Name	Species	Value
Talc	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
Hexane	In Vitro	Not mutagenic
Hexane	In vivo	Not mutagenic
Heptane	In Vitro	Not mutagenic
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic
Talc	In Vitro	Not mutagenic
Talc	In vivo	Not mutagenic
Cyclohexane	In Vitro	Not mutagenic
Cyclohexane	In vivo	Some positive data exist, but the data are not sufficient for classification
Methyl Ethyl Ketone	In Vitro	Not mutagenic
Ethyl Alcohol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Ethyl Alcohol	In vivo	Some positive data exist, but the data are not sufficient for classification
MIBK	In Vitro	Not mutagenic
Carbon Black	In Vitro	Not mutagenic
Carbon Black	In vivo	Some positive data exist, but the data are not sufficient for classification
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
Zinc Diethyldithiocarbamate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Zinc Diethyldithiocarbamate	In vivo	Some positive data exist, but the data are not sufficient for classification
Methylene Chloride	In vivo	Not mutagenic
Methylene Chloride	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Hexane	Dermal	Mouse	Not carcinogenic
Hexane	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
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
Talc	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Methyl Ethyl Ketone	Inhalation	Human	Not carcinogenic
Ethyl Alcohol	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
MIBK	Inhalation	Multiple animal	Carcinogenic

Page: 12 of 20

		species	
Carbon Black	Dermal	Mouse	Not carcinogenic
Carbon Black	Ingestion	Mouse	Not carcinogenic
Carbon Black	Inhalation	Rat	Carcinogenic
Zinc Diethyldithiocarbamate	Ingestion	Rat	Not carcinogenic
Methylene Chloride	Inhalation	Multiple	Carcinogenic
		animal	
		species	

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Petroleum Distillates	Ingestion	Toxic to male reproduction	similar compoun ds	NOAEL not available	not available
Petroleum Distillates	Inhalation	Toxic to male reproduction	similar compoun ds	NOAEL not available	not available
Hexane	Ingestion	Not classified for development	Mouse	NOAEL 2,200 mg/kg/day	during organogenesi s
Hexane	Inhalation	Not classified for development	Rat	NOAEL 0.7 mg/l	during gestation
Hexane	Ingestion	Toxic to male reproduction	Rat	NOAEL 1,140 mg/kg/day	90 days
Hexane	Inhalation	Toxic to male reproduction	Rat	LOAEL 3.52 mg/l	28 days
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
Talc	Ingestion	Not classified for development	Rat	NOAEL 1,600 mg/kg	during organogenesi s
Cyclohexane	Inhalation	Not classified for female reproduction	Rat	NOAEL 24 mg/l	2 generation
Cyclohexane	Inhalation	Not classified for male reproduction	Rat	NOAEL 24 mg/l	2 generation
Cyclohexane	Inhalation	Not classified for development	Rat	NOAEL 6.9 mg/l	2 generation
Methyl Ethyl Ketone	Inhalation	Not classified for development	Rat	LOAEL 8.8 mg/l	during gestation
Ethyl Alcohol	Inhalation	Not classified for development	Rat	NOAEL 38 mg/l	during gestation
Ethyl Alcohol	Ingestion	Not classified for development	Rat	NOAEL 5,200 mg/kg/day	premating & during gestation
MIBK	Inhalation	Not classified for female reproduction	Multiple animal species	NOAEL 8.2 mg/l	2 generation
MIBK	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	13 weeks
MIBK	Inhalation	Not classified for male reproduction	Multiple animal species	NOAEL 8.2 mg/l	2 generation
MIBK	Inhalation	Not classified for development	Mouse	NOAEL 12.3 mg/l	during organogenesi s
Benzene, ethenyl-, homopolymer (oligomeric)	Ingestion	Toxic to female reproduction	Rat	NOAEL 5 mg/kg/day	premating into lactation

Zinc Oxide	Ingestion	Not classified for reproduction and/or development	Multiple animal	NOAEL 125 mg/kg/day	premating & during
			species		gestation
Zinc Diethyldithiocarbamate	Ingestion	Not classified for development	Rabbit	NOAEL 20 mg/kg/day	during gestation
Methylene Chloride	Inhalation	Not classified for female reproduction	Rat	NOAEL 5.2 mg/l	2 generation
Methylene Chloride	Inhalation	Not classified for male reproduction	Rat	NOAEL 5.2 mg/l	2 generation
Methylene Chloride	Inhalation	Not classified for development	Multiple animal species	NOAEL 4.3 mg/l	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Petroleum Distillates	Inhalation	central nervous system depression	May cause drowsiness or dizziness	similar compoun ds	NOAEL not available	not available
Petroleum Distillates	Ingestion	central nervous system depression	May cause drowsiness or dizziness	similar compoun ds	NOAEL not available	not available
Hexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	not available
Hexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rabbit	NOAEL Not available	8 hours
Hexane	Inhalation	respiratory system	Not classified	Rat	NOAEL 24.6 mg/l	8 hours
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	similar health hazards	NOAEL Not available	
Heptane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
2-Methylpentane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL Not available	
2-Methylpentane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
2-Methylpentane	Inhalation	cardiac sensitization	Not classified	Dog	NOAEL Not available	
2-Methylpentane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL Not available	
3-Methylpentane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL Not available	
3-Methylpentane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
3-Methylpentane	Inhalation	cardiac sensitization	Not classified	Dog	NOAEL Not available	
3-Methylpentane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL Not available	
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	

Page: 14 of 20

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
Cyclohexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Cyclohexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
Cyclohexane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL Not available	
Methyl Ethyl Ketone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	official classifica tion	NOAEL Not available	
Methyl Ethyl Ketone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Methyl Ethyl Ketone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL Not available	
Methyl Ethyl Ketone	Ingestion	liver	Not classified	Rat	NOAEL Not available	not applicable
Methyl Ethyl Ketone	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 1,080 mg/kg	not applicable
2,3-Dimethylbutane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL Not available	
2,3-Dimethylbutane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
2,3-Dimethylbutane	Inhalation	cardiac sensitization	Not classified	Dog	NOAEL Not available	
2,3-Dimethylbutane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL Not available	
Ethyl Alcohol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	LOAEL 9.4 mg/l	not available
Ethyl Alcohol	Inhalation	central nervous system depression	Not classified	Human and animal	NOAEL not available	
Ethyl Alcohol	Ingestion	central nervous system depression	Not classified	Multiple animal species	NOAEL not available	
Ethyl Alcohol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg	
MIBK	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	LOAEL 0.1 mg/l	2 hours
MIBK	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
MIBK	Inhalation	vascular system	Not classified	Dog	NOAEL Not available	not available
MIBK	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Rat	LOAEL 900 mg/kg	not applicable
Zinc Diethyldithiocarbamate	Inhalation	respiratory irritation	May cause respiratory irritation	official classifica tion	NOAEL Not available	
Methylene Chloride	Dermal	blood	Some positive data exist, but the	Rat	NOAEL Not	4 hours

Page: 15 of 20

			data are not sufficient for classification		available	
Methylene Chloride	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	occupational exposure
Methylene Chloride	Inhalation	blood	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Methylene Chloride	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Petroleum Distillates	Inhalation	peripheral nervous system	May cause damage to organs though prolonged or repeated exposure	similar compoun ds	NOAEL not available	not available
Hexane	Inhalation	peripheral nervous system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Hexane	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Mouse	LOAEL 1.76 mg/l	13 weeks
Hexane	Inhalation	liver	Not classified	Rat	NOAEL Not available	6 months
Hexane	Inhalation	kidney and/or bladder	Not classified	Rat	LOAEL 1.76 mg/l	6 months
Hexane	Inhalation	hematopoietic system	Not classified	Mouse	NOAEL 35.2 mg/l	13 weeks
Hexane	Inhalation	auditory system immune system eyes	Not classified	Human	NOAEL Not available	occupational exposure
Hexane	Inhalation	heart skin endocrine system	Not classified	Rat	NOAEL 1.76 mg/l	6 months
Hexane	Ingestion	peripheral nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,140 mg/kg/day	90 days
Hexane	Ingestion	endocrine system hematopoietic system liver immune system kidney and/or bladder	Not classified	Rat	NOAEL Not available	13 weeks
Heptane	Inhalation	nervous system	Not classified	Rat	NOAEL 6.15 mg/l	30 weeks
Heptane	Inhalation	peripheral nervous system	Not classified	Rat	NOAEL 12.5 mg/l	16 weeks
Heptane	Inhalation	hematopoietic system kidney and/or bladder	Not classified	Rat	NOAEL 12.2 mg/l	26 weeks
2-Methylpentane	Inhalation	peripheral nervous system	Not classified	Rat	NOAEL 5.3 mg/l	14 weeks
2-Methylpentane	Ingestion	peripheral nervous system	Not classified	Rat	NOAEL Not available	8 weeks
2-Methylpentane	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 2,000 mg/kg	28 days
3-Methylpentane	Inhalation	peripheral nervous system	Not classified	Rat	NOAEL 5.3 mg/l	14 weeks
3-Methylpentane	Ingestion	peripheral nervous system	Not classified	Rat	NOAEL Not available	8 weeks
3-Methylpentane	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 2,000 mg/kg	28 days
Toluene	Inhalation	auditory system nervous system eyes olfactory system	Causes damage to organs through 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	Rat	LOAEL 2.3 mg/l	15 months

Page: 16 of 20

			classification			
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
Talc	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Talc	Inhalation	pulmonary fibrosis respiratory system	Not classified	Rat	NOAEL 18 mg/m3	113 weeks
Cyclohexane	Inhalation	liver	Not classified	Rat	NOAEL 24 mg/l	90 days
Cyclohexane	Inhalation	auditory system	Not classified	Rat	NOAEL 1.7 mg/l	90 days
Cyclohexane	Inhalation	kidney and/or bladder	Not classified	Rabbit	NOAEL 2.7 mg/l	10 weeks
Cyclohexane	Inhalation	hematopoietic system	Not classified	Mouse	NOAEL 24 mg/l	14 weeks
Cyclohexane	Inhalation	peripheral nervous system	Not classified	Rat	NOAEL 8.6 mg/l	30 weeks
Methyl Ethyl Ketone	Dermal	nervous system	Not classified	Guinea pig	NOAEL Not available	31 weeks
Methyl Ethyl Ketone	Inhalation	liver kidney and/or bladder heart endocrine system gastrointestinal tract bone, teeth, nails, and/or hair hematopoietic system immune system muscles		Rat	NOAEL 14.7 mg/l	
Methyl Ethyl Ketone	Ingestion	liver	Not classified	Rat	NOAEL Not available	7 days
Methyl Ethyl Ketone	Ingestion	nervous system	Not classified	Rat	NOAEL 173 mg/kg/day	90 days
2,3-Dimethylbutane	Inhalation	peripheral nervous system	Not classified	Rat	NOAEL 5.3 mg/l	14 weeks
2,3-Dimethylbutane	Ingestion	peripheral nervous system	Not classified	Rat	NOAEL Not available	8 weeks
2,3-Dimethylbutane	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 2,000 mg/kg	28 days
Ethyl Alcohol	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rabbit	LOAEL 124 mg/l	365 days

Page: 17 of 20

Ethyl Alcohol	Inhalation	hematopoietic system immune system	Not classified	Rat	NOAEL 25 mg/l	14 days
Ethyl Alcohol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 8,000 mg/kg/day	4 months
Ethyl Alcohol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg/day	7 days
MIBK	Inhalation	liver	Not classified	Rat	NOAEL 0.41 mg/l	13 weeks
MIBK	Inhalation	heart	Not classified	Multiple animal species	NOAEL 0.8 mg/l	2 weeks
MIBK	Inhalation	kidney and/or bladder	Not classified	Multiple animal species	NOAEL 0.4 mg/l	90 days
MIBK	Inhalation	respiratory system	Not classified	Multiple animal species	NOAEL 4.1 mg/l	14 weeks
MIBK	Inhalation	endocrine system hematopoietic system	Not classified	Multiple animal species	NOAEL 0.41 mg/l	90 days
MIBK	Inhalation	nervous system	Not classified	Multiple animal species	NOAEL 0.41 mg/l	13 weeks
MIBK	Ingestion	endocrine system hematopoietic system liver kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
MIBK	Ingestion	heart immune system muscles nervous system respiratory system	Not classified	Rat	NOAEL 1,040 mg/kg/day	120 days
Carbon Black	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational 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
Zinc Diethyldithiocarbamate	Ingestion	endocrine system hematopoietic system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 125 mg/kg/day	13 weeks
Zinc Diethyldithiocarbamate	Ingestion	heart immune system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 125 mg/kg/day	13 weeks
Zinc Diethyldithiocarbamate	Ingestion	liver skin gastrointestinal tract bone, teeth, nails, and/or hair muscles nervous system eyes kidney and/or bladder respiratory system vascular system	Not classified	Rat	NOAEL 125 mg/kg/day	13 weeks
Methylene Chloride	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 6.95 mg/l	2 years
Methylene Chloride	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.17 mg/l	2 years
Methylene Chloride	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	LOAEL 35 mg/l	8 weeks

Page: 18 of 20

Methylene Chloride	Inhalation	heart	Not classified	Human	NOAEL Not available	
Methylene Chloride	Inhalation	immune system	Not classified	Rat	NOAEL 18 mg/l	28 days
Methylene Chloride	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 1,200 mg/kg/day	3 months
Methylene Chloride	Ingestion	blood	Not classified	Rat	NOAEL 249 mg/kg/day	2 years
Methylene Chloride	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 1,469 mg/kg/day	3 months
Methylene Chloride	Ingestion	eyes	Not classified	Rat	NOAEL 249 mg/kg/day	104 weeks

The Hazardous Substance Assessment for toluene published by Health Canada concludes that toluene also causes adverse effects to the cardiovascular system (heart), respiratory system (lung), kidney, and liver following repeated chronic inhalation exposure to humans.

Aspiration Hazard

115pii ation 11azai u	
Name	Value
Petroleum Distillates	Aspiration hazard
Hexane	Aspiration hazard
Heptane	Aspiration hazard
2-Methylpentane	Aspiration hazard
3-Methylpentane	Aspiration hazard
Toluene	Aspiration hazard
Cyclohexane	Aspiration hazard
2,3-Dimethylbutane	Aspiration hazard
MIBK	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

Page: 19 of 20

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 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. 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.

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Page: 20 of 20