

Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3M[™] Scotch-Weld[™] Neoprene High Performance Rubber and Gasket Adhesive EC-1300L, Yellow

Product Identification Numbers

ID Number UPC ID Number UPC

41-3588-1677-9 62-1403-6543-8 00-21200-19928-8

87-2500-0424-6 00048011986609 87-2500-0425-3 00048011986616

7000028564, 7010399433, 7010321070

1.2. Recommended use and restrictions on use

Recommended use

Adhesive

1.3. Supplier's details

MANUFACTURER: 3M

DIVISION: Automotive and Aerospace Solutions Division **ADDRESS:** 3M Center, St. Paul, MN 55144-1000, USA

Telephone: 1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

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

SECTION 2: Hazard identification

2.1. Hazard classification

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

Carcinogenicity: Category 2.

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 vapor.

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: 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.

Use non-sparking tools.

Take action to prevent static discharges.

Do not breathe vapors.

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, face protection, and if needed, respiratory protection (see SDS Section 8).

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: Call a POISON CENTER or doctor.

Get medical attention if you feel unwell.

If eye irritation persists or if skin irritation occurs: 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.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Naphtha (petroleum), solvent-refined light	64741-84-0	15 - 40 Trade Secret *
HEXANE	110-54-3	7 - 30 Trade Secret *
Methyl Ethyl Ketone	78-93-3	10 - 30 Trade Secret *
FORMALDEHYDE, POLYMER WITH 4-(1,1-	68037-42-3	15 - 20
DIMETHYLETHYL)PHENOL, MAGNESIUM OXIDE		
COMPLEX		
POLYCHLOROPRENE	9010-98-4	5 - 15
Heptane	142-82-5	3 - 10 Trade Secret *
Toluene	108-88-3	3 - 10 Trade Secret *
2-METHYLPENTANE	107-83-5	1 - 5 Trade Secret *
3-METHYLPENTANE	96-14-0	1 - 5 Trade Secret *
CYCLOHEXANE	110-82-7	< 3.5
Acetone	67-64-1	< 2.1
ROSIN	8050-09-7	< 1
Zinc Oxide	1314-13-2	< 1
Ethylbenzene	100-41-4	< 0.5
p-Tert-Butylphenol	98-54-4	< 0.2
Benzene	71-43-2	< 0.05
Formaldehyde	50-00-0	< 0.015

^{*}The specific chemical identity and/or exact percentage (concentration) of this composition 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

Substance	<u>Condition</u>
Aldehydes	During Combustion
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Chloride	During Combustion
Ketones	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. 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 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.

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

For industrial/occupational 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/vapors/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.

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	A3: Confirmed animal carcin.,Ototoxicant
Ethylbenzene	100-41-4	OSHA	TWA:435 mg/m3(100 ppm)	
Branched Hexane Isomers	107-83-5	ACGIH	TWA:200 ppm	A3: Confirmed animal carcin.
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcin,Ototoxicant
Toluene	108-88-3	OSHA	TWA:200 ppm;CEIL:300 ppm	
HEXANE	110-54-3	ACGIH	TWA:50 ppm	Danger of cutaneous absorption
HEXANE	110-54-3	OSHA	TWA:1800 mg/m3(500 ppm)	
CYCLOHEXANE	110-82-7	ACGIH	TWA:100 ppm	
CYCLOHEXANE	110-82-7	OSHA	TWA:1050 mg/m3(300 ppm)	
Zinc Oxide	1314-13-2	ACGIH	TWA(respirable fraction):2 mg/m3;STEL(respirable fraction):10 mg/m3	
Zinc Oxide	1314-13-2	OSHA	TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3;TWA(as fume):5 mg/m3	
Heptane	142-82-5	OSHA	TWA:2000 mg/m3(500 ppm)	
Heptane, straight and branched isomers	142-82-5	ACGIH	TWA:200 ppm;STEL:400 ppm	Ototoxicant
Formaldehyde	50-00-0	ACGIH	TWA:0.1 ppm;STEL:0.3 ppm	A1: Confirmed human carcin.,Dermal/Respirato ry Sensitizer
Formaldehyde	50-00-0	OSHA	TWA:0.75 ppm;STEL:2 ppm	29 CFR 1910.1048
NAPHTHA	64741-84-0	OSHA	TWA:400 mg/m3(100 ppm)	
Acetone	67-64-1	ACGIH		A4: Not class. as human carcin
Acetone	67-64-1	OSHA	TWA:2400 mg/m3(1000 ppm)	

1	2	/N	4	/25	

Benzene	71-43-2	ACGIH	TWA:0.02 ppm	A1: Confirmed human
				carcin.,Danger of
				cutaneous absorption
Benzene	71-43-2	OSHA	TWA:1 ppm;TWA:10	29 CFR 1910.1028
			ppm;STEL:5 ppm;CEIL:25	
			ppm	
Methyl Ethyl Ketone	78-93-3	ACGIH	TWA:75 ppm;STEL:150 ppm	Danger of cutaneous
				absorption
Methyl Ethyl Ketone	78-93-3	OSHA	TWA:590 mg/m3(200 ppm)	
Resin acids, as total Resin Acids,	8050-09-7	ACGIH	TWA(as Resin, inhalable	Dermal/Respiratory
inhalable fraction			fraction):0.001 mg/m3	Sensitizer
Branched Hexane Isomers	96-14-0	ACGIH	TWA:200 ppm	A3: Confirmed animal
				carcin.

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

CMRG: Chemical Manufacturer's Recommended Guidelines

OSHA: United States Department of Labor - Occupational Safety and Health Administration

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/vapors/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

If this product is used in a manner that presents a higher potential for exposure (e.g., spraying, high splash potential, etc.), then use of a protective apron may be necessary. See recommended glove material(s) for determining appropriate apron material(s). If a glove material is not available as an apron, polymer laminate is a suitable option.

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 vapors and particulates Organic vapor cartridges may have short service life.

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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

information on basic physical and chemical propertie	
Physical state	Liquid
Color	Yellow
Odor	Strong Solvent
Odor threshold	No Data Available
pH	No Data Available
Melting point/Freezing point	No Data Available
Boiling point/Initial boiling point/Boiling range	60 °C
Flash Point	-25.6 °C [Test Method:Closed Cup]
Evaporation rate	>=2.5 [<i>Ref Std</i> :ETHER=1]
Flammability	Flammable Liquid: Category 2.
Flammable Limits(LEL)	1 %
Flammable Limits(UEL)	11.5 %
Vapor Pressure	15,998.6 Pa [@ 20 °C]
Relative Vapor Density	3 [Ref Std:AIR=1]
Density	No Data Available
Relative Density	0.88 [Ref Std:WATER=1]
Water solubility	Negligible
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	767 mm2/sec
Volatile Organic Compounds	708.2 g/l [Test Method:calculated SCAQMD rule 443.1]
Percent volatile	80.5 % weight
VOC Less H2O & Exempt Solvents	725.8 g/l [Test Method:calculated SCAQMD rule 443.1]
Molecular weight	No Data Available

Particle Characteristics	Not Applicable

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:

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.

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 odors 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.

Ingredient	CAS No.	Class Description	Regulation
Benzene	71-43-2	Known To Be Human Carcinogen.	National Toxicology Program Carcinogens
Benzene	71-43-2	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
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	Known To Be Human Carcinogen.	National Toxicology Program Carcinogens
Formaldehyde	50-00-0	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
FORMALDEHYDE	50-00-0	Cancer hazard	OSHA Carcinogens

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
Naphtha (petroleum), solvent-refined light	Dermal	Rat	LD50 > 2,800 mg/kg
Naphtha (petroleum), solvent-refined light	Inhalation-	Rat	LC50 > 25.2 mg/l
	Vapor (4 hours)		
Naphtha (petroleum), solvent-refined light	Ingestion	Rat	LD50 > 5,840 mg/kg
Methyl Ethyl Ketone	Dermal	Rabbit	LD50 > 8,050 mg/kg
Methyl Ethyl Ketone	Inhalation-	Rat	LC50 34.5 mg/l
•	Vapor (4		
	hours)		
Methyl Ethyl Ketone	Ingestion	Rat	LD50 2,737 mg/kg
HEXANE	Dermal	Rabbit	LD50 > 2,000 mg/kg
HEXANE	Inhalation-	Rat	LC50 170 mg/l
	Vapor (4		
	hours)		
HEXANE	Ingestion	Rat	LD50 > 28,700 mg/kg
FORMALDEHYDE, POLYMER WITH 4-(1,1-	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
DIMETHYLETHYL)PHENOL, MAGNESIUM OXIDE			
COMPLEX			
FORMALDEHYDE, POLYMER WITH 4-(1,1-	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
DIMETHYLETHYL)PHENOL, MAGNESIUM OXIDE			
COMPLEX			
POLYCHLOROPRENE	Dermal		LD50 estimated to be > 5,000 mg/kg
POLYCHLOROPRENE	Ingestion	Rat	LD50 > 20,000 mg/kg
Heptane	Dermal	similar	LD50 > 2,000 mg/kg
•		compoun	
		ds	
Heptane	Inhalation-	similar	LC50 > 33.5 mg/l
- -	Vapor (4	compoun	
	hours)	ds	
Heptane	Ingestion	similar	LD50 > 5,000 mg/kg
- -		compoun	
		ds	
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-	Rat	LC50 30 mg/l
	Vapor (4		

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Toluene	
2-METHYLPENTANE Dermal LD50 estimated to be > 5,000 m	
Vapor	g/kg
2-METHYLPENTANE Ingestion LD50 estimated to be > 5,000 m 3-METHYLPENTANE Dermal LD50 estimated to be > 5,000 m 3-METHYLPENTANE Inhalation-Vapor S-METHYLPENTANE Ingestion LD50 estimated to be > 50 mg/l CYCLOHEXANE Dermal Rat LD50 > 2,000 mg/kg CYCLOHEXANE Inhalation-Vapor (4 hours) CYCLOHEXANE Ingestion Rat LD50 > 32.9 mg/l CYCLOHEXANE Ingestion Rat LD50 > 15,688 mg/kg Acetone Dermal Rabbit LD50 > 15,688 mg/kg Inhalation-Vapor (4	<u> </u>
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	g/kg
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	g/kg
3-METHYLPENTANE Ingestion LD50 estimated to be > 5,000 m	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	g/kg
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
Acetone Dermal Rabbit LD50 > 15,688 mg/kg Acetone Inhalation- Vapor (4 Rat LC50 76 mg/l	
Acetone Inhalation- Rat LC50 76 mg/l Vapor (4	
Vapor (4	
nours)	
Acetone Ingestion Rat LD50 5,800 mg/kg	
Zinc Oxide Dermal LD50 estimated to be > 5,000 m	g/kg
Zinc Oxide Inhalation-Dust/Mist (4 hours) Rat LC50 > 5.7 mg/l	
Zinc Oxide Ingestion Rat LD50 > 5,000 mg/kg	
ROSIN Dermal Rabbit LD50 > 2,500 mg/kg	
ROSIN Ingestion Rat LD50 7,600 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	
p-Tert-Butylphenol Dermal Rabbit LD50 2,318 mg/kg	
p-Tert-Butylphenol Inhalation-Dust/Mist (4 hours) Rat LC50 > 5.6 mg/l	
p-Tert-Butylphenol Ingestion Rat LD50 4,000 mg/kg	
Benzene Dermal Multiple animal species LD50 > 8,260 mg/kg	
Benzene Inhalation-Vapor (4 hours) Rat LC50 43.8 mg/l	
Benzene Ingestion Rat LD50 5,970 mg/kg	
Formaldehyde Dermal Rabbit LD50 270 mg/kg	
Formaldehyde Inhalation-Gas (4 hours) Rat LC50 470 ppm	
Formaldehyde Ingestion Rat LD50 800 mg/kg	

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Naphtha (petroleum), solvent-refined light	Rabbit	Irritant
Methyl Ethyl Ketone	Rabbit	Minimal irritation
HEXANE	Human	Mild irritant
	and	
	animal	
POLYCHLOROPRENE	Human	No significant irritation
Heptane	Professio	Mild irritant
	nal	
	judgeme	
	nt	

1	2	/N	4	/25	

Toluene	Rabbit	Irritant
2-METHYLPENTANE	Professio	Mild irritant
	nal	
	judgeme	
	nt	
3-METHYLPENTANE	Professio	Mild irritant
	nal	
	judgeme	
	nt	
CYCLOHEXANE	Rabbit	Mild irritant
Acetone	Mouse	Minimal irritation
Zinc Oxide	Human	No significant irritation
	and	
	animal	
ROSIN	Rabbit	No significant irritation
Ethylbenzene	Rabbit	Mild irritant
p-Tert-Butylphenol	Rabbit	Irritant
Benzene	Rabbit	Irritant
Formaldehyde	official	Corrosive
•	classifica	
	tion	

Serious Eye Damage/Irritation

Name	Species	Value
Nanhtha (natralaum) salvant rafinad light	Rabbit	Mild irritant
Naphtha (petroleum), solvent-refined light		
Methyl Ethyl Ketone	Rabbit	Severe irritant
HEXANE	Rabbit	Mild irritant
POLYCHLOROPRENE	Professio	No significant irritation
	nal	
	judgeme	
	nt	
Heptane	similar	Mild irritant
	compoun	
	ds	
Toluene	Rabbit	Moderate irritant
2-METHYLPENTANE	Professio	Moderate irritant
	nal	
	judgeme	
	nt	
3-METHYLPENTANE	Professio	Moderate irritant
	nal	
	judgeme	
	nt	
CYCLOHEXANE	Rabbit	Mild irritant
Acetone	Rabbit	Severe irritant
Zinc Oxide	Rabbit	Mild irritant
ROSIN	Rabbit	Mild irritant
Ethylbenzene	Rabbit	Moderate irritant
p-Tert-Butylphenol	Rabbit	Corrosive
Benzene	Rabbit	Severe irritant
Formaldehyde	official	Corrosive
	classifica	
	tion	

Skin Sensitization

Name	Species	Value
Naphtha (petroleum), solvent-refined light	Guinea	Not classified
	pig	
HEXANE	Human	Not classified
Heptane	similar	Not classified
	compoun	
	ds	
Toluene	Guinea	Not classified
	pig	

12	2/0	4/	2	5

Zinc Oxide	Guinea	Not classified
	pig	
ROSIN	Guinea	Sensitizing
	pig	
Ethylbenzene	Human	Not classified
p-Tert-Butylphenol	Human	Not classified
	and	
	animal	
Benzene	Multiple	Not classified
	animal	
	species	
Formaldehyde	Guinea	Sensitizing
	pig	

Respiratory Sensitization

Name	Species	Value
ROSIN	Human	Not classified
Formaldehyde	Human	Some positive data exist, but the data are not sufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
Methyl Ethyl Ketone	In Vitro	Not mutagenic
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
CYCLOHEXANE	In Vitro	Not mutagenic
CYCLOHEXANE	In vivo	Some positive data exist, but the data are not sufficient for classification
Acetone	In vivo	Not mutagenic
Acetone	In Vitro	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
Ethylbenzene	In vivo	Not mutagenic
Ethylbenzene	In Vitro	Some positive data exist, but the data are not sufficient for classification
p-Tert-Butylphenol	In Vitro	Not mutagenic
Benzene	In Vitro	Some positive data exist, but the data are not sufficient for classification
Benzene	In vivo	Mutagenic
Formaldehyde	In Vitro	Some positive data exist, but the data are not sufficient for classification
Formaldehyde	In vivo	Mutagenic

Carcinogenicity

Name	Route	Species	Value
Methyl Ethyl Ketone	Inhalation	Human	Not carcinogenic
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
Acetone	Not	Multiple	Not carcinogenic

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12	2/0	4/	2	5

	Specified	animal	
		species	
Ethylbenzene	Inhalation	Multiple	Carcinogenic
		animal	
		species	
p-Tert-Butylphenol	Ingestion	Multiple	Some positive data exist, but the data are not
		animal	sufficient for classification
		species	
Benzene	Dermal	Mouse	Carcinogenic
Benzene	Ingestion	Multiple	Carcinogenic
		animal	
		species	
Benzene	Inhalation	Human	Carcinogenic
Formaldehyde	Not	Human	Carcinogenic
	Specified	and	
		animal	

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Naphtha (petroleum), solvent-refined light	Ingestion	Toxic to male reproduction	similar compoun ds	NOAEL not available	not available
Naphtha (petroleum), solvent-refined light	Inhalation	Toxic to male reproduction	similar compoun ds	NOAEL not available	not available
Methyl Ethyl Ketone	Inhalation	Not classified for development	Rat	LOAEL 8.8 mg/l	during gestation
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
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
Acetone	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,700 mg/kg/day	13 weeks
Acetone	Inhalation	Not classified for development	Rat	NOAEL 5.2 mg/l	during organogenesi s
Zinc Oxide	Ingestion	Not classified for reproduction and/or development	Multiple animal species	NOAEL 125 mg/kg/day	premating & during gestation
Ethylbenzene	Inhalation	Not classified for development	Rat	NOAEL 4.3 mg/l	premating & during gestation
p-Tert-Butylphenol	Ingestion	Not classified for male reproduction	Rat	NOAEL 600 mg/kg/day	2 generation

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p-Tert-Butylphenol	Ingestion	Not classified for development	Rat	NOAEL 70 mg/kg/day	2 generation
p-Tert-Butylphenol	Ingestion	Toxic to female reproduction	Rat	NOAEL 200 mg/kg/day	2 generation
Benzene	Inhalation	Not classified for female reproduction	Rat	NOAEL 0.96 mg/l	premating into lactation
Benzene	Inhalation	Not classified for development	Rat	NOAEL 0.032 mg/l	during organogenesi s
Benzene	Ingestion	Toxic to male reproduction	Rat	LOAEL 50 mg/kg/day	90 days
Formaldehyde	Ingestion	Not classified for male reproduction	Rat	NOAEL 100 mg/kg	not applicable
Formaldehyde	Inhalation	Not classified for development	Rat	NOAEL 10 ppm	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Naphtha (petroleum), solvent-refined light	Inhalation	central nervous system depression	May cause drowsiness or dizziness	similar compoun ds	NOAEL not available	not available
Naphtha (petroleum), solvent-refined light	Ingestion	central nervous system depression	May cause drowsiness or dizziness	similar compoun ds	NOAEL not availavle	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
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	
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
2-METHYLPENTANE	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Professio nal	NOAEL Not available	

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				judgeme nt		
2 METHYL DENTANE	Tuli allati au		C	III	NOAEL N-4	
2-METHYLPENTANE	Inhalation	respiratory irritation	Some positive data exist, but the		NOAEL Not	
			data are not sufficient for		available	
	X 1 1 .:	11 141 41	classification	D	NOAFLNI	
2-METHYLPENTANE	Inhalation	cardiac sensitization	Not classified	Dog	NOAEL Not	
					available	
2-METHYLPENTANE	Ingestion	central nervous	May cause drowsiness or	Professio	NOAEL Not	
		system depression	dizziness	nal	available	
				judgeme		
				nt		
3-METHYLPENTANE	Inhalation	central nervous	May cause drowsiness or	Professio	NOAEL Not	
		system depression	dizziness	nal	available	
				judgeme		
				nt		
3-METHYLPENTANE	Inhalation	respiratory irritation	Some positive data exist, but the		NOAEL Not	
			data are not sufficient for		available	
			classification			
3-METHYLPENTANE	Inhalation	cardiac sensitization	Not classified	Dog	NOAEL Not	
					available	
3-METHYLPENTANE	Ingestion	central nervous	May cause drowsiness or	Professio	NOAEL Not	
		system depression	dizziness	nal	available	
	1	•		judgeme		
	1			nt		
CYCLOHEXANE	Inhalation	central nervous	May cause drowsiness or	Human	NOAEL Not	
		system depression	dizziness	and	available	
		J 1		animal		
CYCLOHEXANE	Inhalation	respiratory irritation	Some positive data exist, but the	Human	NOAEL Not	
			data are not sufficient for	and	available	
			classification	animal		
CYCLOHEXANE	Ingestion	central nervous	May cause drowsiness or	Professio	NOAEL Not	
CTCEOTIEZHIVE	mgestion	system depression	dizziness	nal	available	
		system depression	GIZZIIIC33	judgeme	avanable	
				nt		
Acetone	Inhalation	central nervous	May cause drowsiness or	Human	NOAEL Not	
rectone	minutation	system depression	dizziness	Trainair	available	
Acetone	Inhalation	respiratory irritation	Some positive data exist, but the	Human	NOAEL Not	
rectone	minaration	respiratory irritation	data are not sufficient for	Trumun	available	
			classification		uvunuore	
Acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19	6 hours
rectone	minaration	minune system	Tvot classified	Trumun	mg/l	o nours
Acetone	Inhalation	liver	Not classified	Guinea	NOAEL Not	
Accione	Illiaiation	IIVCI	Not classified	pig	available	
Acetone	Ingestion	central nervous	May cause drowsiness or	Human	NOAEL Not	poisoning
Acetone	ingestion	system depression	dizziness	Huiliali	available	and/or abuse
Edualhana	Inhalation			Human	NOAEL Not	and/or abuse
Ethylbenzene	innaiation	central nervous	May cause drowsiness or	Human		
77.4 11	ı	system depression	dizziness	TT	available NOAEL Not	-
	Inhalati	roomirotom: imit-ti-	Como positivo data avii-t lt tl			i e
Ethylbenzene	Inhalation	respiratory irritation	Some positive data exist, but the	Human		
Ethylbenzene	Inhalation	respiratory irritation	data are not sufficient for	and	available	
			data are not sufficient for classification	and animal	available	
Ethylbenzene	Inhalation Ingestion	central nervous	data are not sufficient for classification May cause drowsiness or	and animal Professio	available NOAEL Not	
			data are not sufficient for classification	and animal Professio nal	available	
		central nervous	data are not sufficient for classification May cause drowsiness or	and animal Professio nal judgeme	available NOAEL Not	
Ethylbenzene	Ingestion	central nervous system depression	data are not sufficient for classification May cause drowsiness or dizziness	and animal Professio nal judgeme nt	NOAEL Not available	
		central nervous	data are not sufficient for classification May cause drowsiness or	and animal Professio nal judgeme	NOAEL Not available LOAEL 5.6	4 hours
Ethylbenzene p-Tert-Butylphenol	Ingestion Inhalation	central nervous system depression respiratory irritation	data are not sufficient for classification May cause drowsiness or dizziness May cause respiratory irritation	and animal Professio nal judgeme nt Rat	NOAEL Not available LOAEL 5.6 mg/l	4 hours
Ethylbenzene	Ingestion	central nervous system depression respiratory irritation central nervous	data are not sufficient for classification May cause drowsiness or dizziness May cause respiratory irritation May cause drowsiness or	and animal Professio nal judgeme nt Rat	NOAEL Not available LOAEL 5.6 mg/l NOAEL Not	4 hours
Ethylbenzene p-Tert-Butylphenol	Ingestion Inhalation	central nervous system depression respiratory irritation	data are not sufficient for classification May cause drowsiness or dizziness May cause respiratory irritation	and animal Professio nal judgeme nt Rat Human and	NOAEL Not available LOAEL 5.6 mg/l	4 hours
Ethylbenzene p-Tert-Butylphenol Benzene	Ingestion Inhalation Inhalation	central nervous system depression respiratory irritation central nervous system depression	data are not sufficient for classification May cause drowsiness or dizziness May cause respiratory irritation May cause drowsiness or dizziness	and animal Professio nal judgeme nt Rat Human and animal	NOAEL Not available LOAEL 5.6 mg/l NOAEL Not Available	4 hours
Ethylbenzene p-Tert-Butylphenol	Ingestion Inhalation	central nervous system depression respiratory irritation central nervous	data are not sufficient for classification May cause drowsiness or dizziness May cause respiratory irritation May cause drowsiness or dizziness Some positive data exist, but the	and animal Professio nal judgeme nt Rat Human and animal similar	available NOAEL Not available LOAEL 5.6 mg/l NOAEL Not Available NOAEL Not	4 hours
Ethylbenzene p-Tert-Butylphenol Benzene	Ingestion Inhalation Inhalation	central nervous system depression respiratory irritation central nervous system depression	data are not sufficient for classification May cause drowsiness or dizziness May cause respiratory irritation May cause drowsiness or dizziness Some positive data exist, but the data are not sufficient for	and animal Professio nal judgeme nt Rat Human and animal similar health	NOAEL Not available LOAEL 5.6 mg/l NOAEL Not Available	4 hours
Ethylbenzene p-Tert-Butylphenol Benzene Benzene	Ingestion Inhalation Inhalation	central nervous system depression respiratory irritation central nervous system depression respiratory irritation	data are not sufficient for classification May cause drowsiness or dizziness May cause respiratory irritation May cause drowsiness or dizziness Some positive data exist, but the data are not sufficient for classification	and animal Professio nal judgeme nt Rat Human and animal similar health hazards	available NOAEL Not available LOAEL 5.6 mg/l NOAEL Not Available NOAEL Not Available	
Ethylbenzene p-Tert-Butylphenol Benzene	Ingestion Inhalation Inhalation	central nervous system depression respiratory irritation central nervous system depression	data are not sufficient for classification May cause drowsiness or dizziness May cause respiratory irritation May cause drowsiness or dizziness Some positive data exist, but the data are not sufficient for	and animal Professio nal judgeme nt Rat Human and animal similar health	available NOAEL Not available LOAEL 5.6 mg/l NOAEL Not Available NOAEL Not	4 hours 6 hours
Ethylbenzene p-Tert-Butylphenol Benzene Benzene	Ingestion Inhalation Inhalation	central nervous system depression respiratory irritation central nervous system depression respiratory irritation	data are not sufficient for classification May cause drowsiness or dizziness May cause respiratory irritation May cause drowsiness or dizziness Some positive data exist, but the data are not sufficient for classification	and animal Professio nal judgeme nt Rat Human and animal similar health hazards Rat	available NOAEL Not available LOAEL 5.6 mg/l NOAEL Not Available NOAEL Not Available LOAEL 128 ppm	
Ethylbenzene p-Tert-Butylphenol Benzene Benzene	Ingestion Inhalation Inhalation	central nervous system depression respiratory irritation central nervous system depression respiratory irritation	data are not sufficient for classification May cause drowsiness or dizziness May cause respiratory irritation May cause drowsiness or dizziness Some positive data exist, but the data are not sufficient for classification Causes damage to organs Some positive data exist, but the	and animal Professio nal judgeme nt Rat Human and animal similar health hazards	available NOAEL Not available LOAEL 5.6 mg/l NOAEL Not Available NOAEL Not Available LOAEL 128 ppm NOAEL Not	
Ethylbenzene p-Tert-Butylphenol Benzene Benzene Formaldehyde	Ingestion Inhalation Inhalation Inhalation	central nervous system depression respiratory irritation central nervous system depression respiratory irritation respiratory system	data are not sufficient for classification May cause drowsiness or dizziness May cause respiratory irritation May cause drowsiness or dizziness Some positive data exist, but the data are not sufficient for classification Causes damage to organs	and animal Professio nal judgeme nt Rat Human and animal similar health hazards Rat	available NOAEL Not available LOAEL 5.6 mg/l NOAEL Not Available NOAEL Not Available LOAEL 128 ppm	

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Specific Target Organ Toxicity - repeated exposure

Specific Target Organ	 					
Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Naphtha (petroleum), solvent-refined light	Inhalation	peripheral nervous system	May cause damage to organs though prolonged or repeated exposure	similar compoun ds	NOAEL not available	not available
Methyl Ethyl Ketone	Dermal	nervous system	Not classified	Guinea pig	NOAEL Not available	31 weeks
Methyl Ethyl Ketone	Inhalation	liver	Not classified	Rat	NOAEL 14.7 mg/l	90 days
Methyl Ethyl Ketone	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 14.7 mg/l	90 days
Methyl Ethyl Ketone	Inhalation	heart	Not classified	Rat	NOAEL 14.7 mg/l	90 days
Methyl Ethyl Ketone	Inhalation	endocrine system	Not classified	Rat	NOAEL 14.7 mg/l	90 days
Methyl Ethyl Ketone	Inhalation	gastrointestinal tract	Not classified	Rat	NOAEL 14.7 mg/l	90 days
Methyl Ethyl Ketone	Inhalation	bone, teeth, nails, and/or hair	Not classified	Rat	NOAEL 14.7 mg/l	90 days
Methyl Ethyl Ketone	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 14.7 mg/l	90 days
Methyl Ethyl Ketone	Inhalation	immune system	Not classified	Rat	NOAEL 14.7 mg/l	90 days
Methyl Ethyl Ketone	Inhalation	muscles	Not classified	Rat	NOAEL 14.7 mg/l	90 days
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
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	Not classified	Human	NOAEL Not available	occupational exposure
HEXANE	Inhalation	immune system	Not classified	Human	NOAEL Not available	occupational exposure
HEXANE	Inhalation	eyes	Not classified	Human	NOAEL Not available	occupational exposure
HEXANE	Inhalation	heart	Not classified	Rat	NOAEL 1.76 mg/l	6 months
HEXANE	Inhalation	skin	Not classified	Rat	NOAEL 1.76 mg/l	6 months
HEXANE	Inhalation	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	Not classified	Rat	NOAEL Not available	13 weeks
HEXANE	Ingestion	hematopoietic system	Not classified	Rat	NOAEL Not available	13 weeks
HEXANE	Ingestion	liver	Not classified	Rat	NOAEL Not available	13 weeks
HEXANE	Ingestion	immune system	Not classified	Rat	NOAEL Not available	13 weeks
HEXANE	Ingestion	kidney and/or	Not classified	Rat	NOAEL Not	13 weeks

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		bladder			available	
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	Not classified	Rat	NOAEL 12.2 mg/l	26 weeks
Heptane	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 12.2 mg/l	26 weeks
Toluene	Inhalation	auditory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	eyes	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	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 classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	liver	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	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	Not classified	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	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	Not classified	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	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
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/day	28 days
3-METHYLPENTANE	Inhalation	peripheral nervous system	Not classified	Rat	NOAEL 5.3 mg/l	14 weeks
3-METHYLPENTANE	Ingestion	peripheral nervous	Not classified	Rat	NOAEL Not	8 weeks

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		system			available	
3-METHYLPENTANE	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 2,000 mg/kg/day	28 days
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
Acetone	Dermal	eyes	Not classified	Guinea pig	NOAEL Not available	3 weeks
Acetone	Inhalation	hematopoietic system	Not classified	Human	NOAEL 3 mg/l	6 weeks
Acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19 mg/l	6 days
Acetone	Inhalation	kidney and/or bladder	Not classified	Guinea pig	NOAEL 119 mg/l	not available
Acetone	Inhalation	heart	Not classified	Rat	NOAEL 45 mg/l	8 weeks
Acetone	Inhalation	liver	Not classified	Rat	NOAEL 45 mg/l	8 weeks
Acetone	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 900 mg/kg/day	13 weeks
Acetone	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Acetone	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 200 mg/kg/day	13 weeks
Acetone	Ingestion	liver	Not classified	Mouse	NOAEL 3,896 mg/kg/day	14 days
Acetone	Ingestion	eyes	Not classified	Rat	NOAEL 3,400 mg/kg/day	13 weeks
Acetone	Ingestion	respiratory system	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Acetone	Ingestion	muscles	Not classified	Rat	NOAEL 2,500 mg/kg	13 weeks
Acetone	Ingestion	skin	Not classified	Mouse	NOAEL 11,298 mg/kg/day	13 weeks
Acetone	Ingestion	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 11,298 mg/kg/day	13 weeks
Zinc Oxide	Ingestion	nervous system	Not classified	Rat	NOAEL 600 mg/kg/day	10 days
Zinc Oxide	Ingestion	endocrine system	Not classified	Other	NOAEL 500 mg/kg/day	6 months
Zinc Oxide	Ingestion	hematopoietic system	Not classified	Other	NOAEL 500 mg/kg/day	6 months
Zinc Oxide	Ingestion	kidney and/or bladder	Not classified	Other	NOAEL 500 mg/kg/day	6 months
Ethylbenzene	Inhalation	auditory system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 0.9 mg/l	13 weeks
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

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Ethylbenzene	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 3.4 mg/l	28 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	Not classified	Multiple animal species	NOAEL 4.2 mg/l	90 days
Ethylbenzene	Inhalation	muscles	Not classified	Multiple animal species	NOAEL 4.2 mg/l	90 days
Ethylbenzene	Inhalation	heart	Not classified	Multiple animal species	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Inhalation	immune system	Not classified	Multiple animal species	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Inhalation	respiratory system	Not classified	Multiple animal species	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Ingestion	liver	Not classified	Rat	NOAEL 680 mg/kg/day	6 months
Ethylbenzene	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 680 mg/kg/day	6 months
p-Tert-Butylphenol	Ingestion	endocrine system	Not classified	Rat	NOAEL 600 mg/kg/day	2 generation
p-Tert-Butylphenol	Ingestion	liver	Not classified	Rat	NOAEL 600 mg/kg/day	2 generation
p-Tert-Butylphenol	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 600 mg/kg/day	2 generation
p-Tert-Butylphenol	Ingestion	blood	Not classified	Rat	NOAEL 200 mg/kg	6 weeks
Benzene	Inhalation	hematopoietic system	Causes damage to organs through prolonged or repeated exposure	Human and animal	NOAEL Not Available	
Benzene	Inhalation	heart	Not classified	Rat	NOAEL 0.96 mg/l	90 days
Benzene	Inhalation	endocrine system	Not classified	Rat	NOAEL 0.96 mg/l	90 days
Benzene	Inhalation	gastrointestinal tract	Not classified	Rat	NOAEL 0.96 mg/l	90 days
Benzene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Rat	NOAEL 0.96 mg/l	90 days
Benzene	Inhalation	liver	Not classified	Rat	NOAEL 0.96 mg/l	90 days
Benzene	Inhalation	immune system	Not classified	Rat	NOAEL 0.96 mg/l	90 days
Benzene	Inhalation	muscles	Not classified	Rat	NOAEL 0.96 mg/l	90 days
Benzene	Inhalation	nervous system	Not classified	Rat	NOAEL 0.96 mg/l	90 days
Benzene	Inhalation	eyes	Not classified	Rat	NOAEL 0.96 mg/l	90 days
Benzene	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 0.96 mg/l	90 days
Benzene	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.96 mg/l	90 days
Benzene	Ingestion	hematopoietic system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 25 mg/kg/day	90 days
Benzene	Ingestion	heart	Not classified	Rat	NOAEL 600 mg/kg/day	90 days
Benzene	Ingestion	endocrine system	Not classified	Rat	NOAEL 600 mg/kg/day	90 days
Benzene	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 600 mg/kg/day	90 days
Benzene	Ingestion	bone, teeth, nails,	Not classified	Rat	NOAEL 600	90 days

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		and/or hair			mg/kg/day	
Benzene	Ingestion	liver	Not classified	Rat	NOAEL 600 mg/kg/day	90 days
Benzene	Ingestion	immune system	Not classified	Rat	NOAEL 600 mg/kg/day	90 days
Benzene	Ingestion	nervous system	Not classified	Rat	NOAEL 600 mg/kg/day	90 days
Benzene	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 600 mg/kg/day	90 days
Benzene	Ingestion	respiratory system	Not classified	Rat	NOAEL 600 mg/kg/day	90 days
Formaldehyde	Dermal	respiratory system	Not classified	Mouse	NOAEL 80 mg/kg/day	60 weeks
Formaldehyde	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 0.3	28 months
Formaldehyde	Inhalation	liver	Not classified	Rat	NOAEL 20 ppm	13 weeks
Formaldehyde	Inhalation	hematopoietic system	Not classified	Mouse	NOAEL 15 ppm	3 weeks
Formaldehyde	Inhalation	nervous system	Not classified	Mouse	NOAEL 10 ppm	13 weeks
Formaldehyde	Inhalation	endocrine system	Not classified	Rat	NOAEL 15 ppm	28 months
Formaldehyde	Inhalation	immune system	Not classified	Rat	NOAEL 15 ppm	28 months
Formaldehyde	Inhalation	muscles	Not classified	Rat	NOAEL 15 ppm	28 months
Formaldehyde	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 15 ppm	28 months
Formaldehyde	Inhalation	gastrointestinal tract	Not classified	Rat	NOAEL 15 ppm	2 years
Formaldehyde	Inhalation	eyes	Not classified	Rat	NOAEL 14.3 ppm	2 years
Formaldehyde	Inhalation	vascular system	Not classified	Rat	NOAEL 14.3 ppm	2 years
Formaldehyde	Inhalation	heart	Not classified	Mouse	NOAEL 14.3 ppm	2 years
Formaldehyde	Ingestion	liver	Not classified	Rat	NOAEL 300 mg/kg/day	2 years
Formaldehyde	Ingestion	immune system	Not classified	Rat	NOAEL 20 mg/kg/day	4 weeks
Formaldehyde	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 15 mg/kg/day	24 months
Formaldehyde	Ingestion	nervous system	Not classified	Rat	NOAEL 109 mg/kg/day	2 years
Formaldehyde	Ingestion	heart	Not classified	Rat	NOAEL 300 mg/kg/day	2 years
Formaldehyde	Ingestion	endocrine system	Not classified	Rat	NOAEL 300 mg/kg/day	2 years
Formaldehyde	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 300 mg/kg/day	2 years
Formaldehyde	Ingestion	respiratory system	Not classified	Rat	NOAEL 300 mg/kg/day	2 years
Formaldehyde	Ingestion	vascular system	Not classified	Rat	NOAEL 300 mg/kg/day	2 years
Formaldehyde	Ingestion	skin	Not classified	Rat	NOAEL 109 mg/kg/day	2 years
Formaldehyde	Ingestion	muscles	Not classified	Rat	NOAEL 109 mg/kg/day	2 years
Formaldehyde	Ingestion	eyes	Not classified	Rat	NOAEL 109 mg/kg/day	2 years

Aspiration Hazard

115piration 11azara	
Name	Value
Naphtha (petroleum), solvent-refined light	Aspiration hazard
HEXANE	Aspiration hazard

Heptane	Aspiration hazard
Toluene	Aspiration hazard
2-METHYLPENTANE	Aspiration hazard
3-METHYLPENTANE	Aspiration hazard
CYCLOHEXANE	Aspiration hazard
Ethylbenzene	Aspiration hazard
Benzene	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

Ecotoxicological information

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

Chemical fate information

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

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. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. 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.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable), D018 (Benzene), D035 (Methyl ethyl ketone)

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. US Federal Regulations

Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards
Flammable (gases, aerosols, liquids, or solids)

Health Hazards
Carcinogenicity
Reproductive toxicity
Serious eye damage or eye irritation

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Skin Corrosion or Irritation

Specific target organ toxicity (single or repeated exposure)

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

<u>Ingredient</u>	<u>C.A.S. No</u>	% by Wt		
Toluene	108-88-3	Trade Secret	3 -	10
CYCLOHEXANE	110-82-7	< 3.5		
HEXANE	110-54-3	Trade Secret	7 -	30
Ethylbenzene	100-41-4	< 0.5		

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

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.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

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

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 Flammability: 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:
 10-5100-2
 Version Number:
 38.00

 Issue Date:
 12/04/25
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 11/04/25

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