

**Precautionary Statements - Prevention**

Avoid breathing dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use only non-sparking tools
 Take precautionary measures against static discharge
 Use explosion-proof equipment
 Keep cool

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Call a poison center or doctor/physician if you feel unwell
 IN CASE OF FIRE: Use CO₂, dry chemical, or foam for extinction

Precautionary Statements - Storage

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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other hazards

Toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS		
Chemical name	CAS No	Weight-%
Methyl ethyl ketone	78-93-3	Proprietary
Acetone	67-64-1	Proprietary
* The exact percentage (concentration) of composition has been withheld as a trade secret		
4. FIRST AID MEASURES		

Description of first aid measures**General Advice**

If exposed or concerned: Get medical advice/attention.

Eye Contact	In case of irritation from airborne exposure, move to fresh air. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek immediate medical attention/advice.
Skin Contact	Take off contaminated clothing. Wash with soap and water. If symptoms persist, call a physician. Wash contaminated clothing before reuse.
Inhalation	Remove to fresh air. If symptoms persist, call a physician. If breathing is difficult, give oxygen. Seek immediate medical attention/advice.
Ingestion	Rinse mouth. Seek medical attention. If drowsy or unconscious, do not give anything by mouth; place individual on the left side with head down. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms	Exposed individuals may experience eye tearing, redness and discomfort. Prolonged or repeated skin contact may result in dermatitis (red, dry skin). May cause nose and throat irritation, with possible central nervous system effects. Fatigue and weakness. May cause drowsiness or dizziness. Long term overexposure may cause liver and kidney damage.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically. Individuals with chronic respiratory, skin, kidney, or liver disorders may be at increased risk from exposure.
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5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**Foam. Carbon dioxide (CO₂). Dry chemical.**Unsuitable Extinguishing Media** Not determined.**Specific Hazards Arising from the Chemical**

Class IB Flammable Liquid. Vapors may travel to source of ignition and flash back.

Hazardous combustion products Carbon oxides.**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Personal Precautions	Use personal protective equipment as required. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Persons not wearing proper personal protective equipment should be excluded from area of spill.
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Environmental precautions

Environmental precautions	Do not allow into any sewer, on the ground or into any body of water. See Section 12 for additional Ecological Information.
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Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Clean-Up	Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to

containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling

Wash thoroughly after handling. Use personal protection recommended in Section 8. Do not eat, drink or smoke when using this product. Avoid breathing vapors or mists. Use only in well-ventilated areas. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges. Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, solid) all hazard precautions given in the data sheet must be observed. Avoid prolonged contact with eyes, skin, and clothing. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Store containers upright. Store away from heat, sparks, flame.

Incompatible Materials

Oxidizers. Acids. Bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Acetone 67-64-1	STEL: 500 ppm TWA: 250 ppm	TWA: 1000 ppm TWA: 2400 mg/m ³ (vacated) TWA: 750 ppm (vacated) TWA: 1800 mg/m ³ (vacated) STEL: 2400 mg/m ³ The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors. (vacated) STEL: 1000 ppm	IDLH: 2500 ppm TWA: 250 ppm TWA: 590 mg/m ³
Methyl ethyl ketone 78-93-3	STEL: 300 ppm TWA: 200 ppm	TWA: 200 ppm TWA: 590 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 590 mg/m ³ (vacated) STEL: 300 ppm (vacated) STEL: 885 mg/m ³	IDLH: 3000 ppm TWA: 200 ppm TWA: 590 mg/m ³ STEL: 300 ppm STEL: 885 mg/m ³

Appropriate engineering controls

Engineering Controls

Apply technical measures to comply with the occupational exposure limits. Ventilation systems. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Splash goggles or safety glasses. Refer to 29 CFR 1910.133 for eye and face protection regulations.

Skin and Body Protection	Rubber gloves. Use body protection appropriate for task. Refer to 29 CFR 1910.138 for appropriate skin and body protection.
Respiratory Protection	Not required under normal conditions. If recommended levels are exceeded, respiratory protection must be selected to assure compliance with OSHA Standard 29CFR 1910.134.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid	Odor	Ether-like
Appearance	Clear liquid	Odor Threshold	1.0 ppm
Color	Clear		
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH	Not available		
Melting point / freezing point	No data available		
Initial boiling point and boiling range	56 °C / 133 °F		
Flash point	-20 °C / -4 °F		
Evaporation Rate	Not determined		
Flammability (Solid, Gas)	n/a-liquid		
Flammability Limit in Air			
Upper flammability or explosive limits	12.8%		
Lower flammability or explosive limits	1.4%		
Vapor Pressure	190 mm Hg @ 20C (68F)		
Vapor Density	No data available		
Relative Density	Not determined		
Water Solubility	Negligible		
Solubility in other solvents	Not determined		
Partition Coefficient	Not determined		
Autoignition temperature	No data available		
Hyphen	Not determined		
Kinematic viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Not determined		
Oxidizing Properties	Not determined		

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Hazardous Polymerization	Hazardous polymerization does not occur.
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Conditions to Avoid

Avoid heat, sparks, open flames and other ignition sources.

Incompatible materials

Oxidizers. Acids. Bases.

Hazardous decomposition products

Carbon oxides. Hydrogen chloride. Other various hydrocarbons.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Causes serious eye irritation.
Skin Contact	May be harmful in contact with skin.
Inhalation	Harmful if inhaled.
Ingestion	May be harmful if swallowed.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Acetone 67-64-1	= 5800 mg/kg (Rat)	> 15700 mg/kg (Rabbit)	= 50100 mg/m ³ (Rat) 8 h
Methyl ethyl ketone 78-93-3	= 2483 mg/kg (Rat)	= 5000 mg/kg (Rabbit)	= 11700 ppm (Rat) 4 h

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Please see section 4 of this SDS for symptoms.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Serious eye damage/eye irritation	Causes serious eye irritation.
Carcinogenicity	Group 3 - Not Classifiable as to Carcinogenicity in Humans.

Chemical name	ACGIH	IARC	NTP	OSHA

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
 A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
 Group 3 IARC components are "not classifiable as human carcinogens"
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
 X - Present

STOT - single exposure	May cause drowsiness or dizziness.
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Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

Oral LD50	2,453.30 mg/kg
Dermal LD50	2,273.30 mg/kg
Gas	700.00 ppm
ATEmix (inhalation-dust/mist)	2.96 mg/l
ATEmix (inhalation-vapor)	34.50 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects.

Component Information

Chemical name	Algae/aquatic plants	Fish	Crustacea
Acetone 67-64-1		LC50: 4.74 - 6.33mg/L (96h, Oncorhynchus mykiss) LC50: 6210 - 8120mg/L (96h, Pimephales promelas) LC50: =8300mg/L (96h, Lepomis macrochirus)	EC50: 10294 - 17704mg/L (48h, Daphnia magna) EC50: 12600 - 12700mg/L (48h, Daphnia magna)
Methyl ethyl ketone 78-93-3		LC50: 3130 - 3320mg/L (96h, Pimephales promelas)	EC50: >520mg/L (48h, Daphnia magna) EC50: =5091mg/L (48h, Daphnia magna) EC50: 4025 - 6440mg/L (48h, Daphnia magna)

Persistence/Degradability

Not determined.

Bioaccumulation

There is no data for this product.

Mobility

Chemical name	Partition coefficient
Methyl ethyl ketone 78-93-3	0.3
Acetone 67-64-1	-0.24

Other adverse effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

US EPA Waste Number

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Acetone 67-64-1		Included in waste stream: F039		U002
Methyl ethyl ketone 78-93-3	U159	Included in waste streams: F005, F039	200.0 mg/L regulatory level	U159

California Hazardous Waste Status

Chemical name	California Hazardous Waste Status
Methyl ethyl ketone 78-93-3	Toxic mixture of acetone, methyl acetate, and methyl alcohol Ignitable mixture of acetone, methyl acetate, and methyl alcohol
Acetone 67-64-1	Ignitable

14. TRANSPORT INFORMATION**Note**

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances. Shipments of containers holding 1 liter or less in volume may qualify for a "Limited Quantity" exception. Refer to 49 CFR 173.150 for additional information.

DOT

UN/ID No UN1993
Proper Shipping Name Flammable Liquid, N.O.S. (Acetone, Methyl Ethyl Ketone)
Transport hazard class(es) 3
Packing Group II

IATA

UN number or ID number UN1993
Proper Shipping Name Flammable Liquid, N.O.S. (Acetone, Methyl Ethyl Ketone)
Transport hazard class(es) 3
Packing group II

IMDG

UN number or ID number UN1993
Proper Shipping Name Flammable Liquid, N.O.S. (Acetone, Methyl Ethyl Ketone)
Transport hazard class(es) 3
Packing Group II
Marine Pollutant This material may meet the definition of a marine pollutant

15. REGULATORY INFORMATION**International Inventories**

Chemical name	TSCA	TSCA Inventory Status	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Acetone	X	ACTIVE	X	X	X	X	X	X	X
Methyl ethyl ketone	X	ACTIVE	X	X	X	X	X	X	X

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Acetone 67-64-1	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ
Methyl ethyl ketone 78-93-3	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Acetone 67-64-1	X	X	X
Methyl ethyl ketone 78-93-3	X	X	X

16. OTHER INFORMATION**NFPA**

Health hazards

2

Flammability

3

Instability

1

Special hazards

-

HMIS

Health hazards

2

Flammability

3

Physical hazards

1

Personal Protection

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New format

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet