

G.J. CHEMICAL COMPANY, INC. SAFETY DATA SHEET

1. PRODUCT IDENTIFIER

1.1 PRODUCT NAME: ACETONE

PRODUCT NUMBER(S): 100100, 100101, 100110, 100120, 100130, 100140, 100150, 100160 & 100180

TRADE NAMES/SYNONYMS: 2-Propanone; Dimethylformaldehyde; Dimethyl Ketone; Beta-Ketopropane; Methyl Ketone;

CAS-No: 67-74-1

CHEMICAL FAMILY: Ketone, Aliphatic

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

IDENTIFIED USES: 1. Manufacture, process and distribution of substances and mixtures * 2. Use in laboratories 3. Uses in coatings 4. Use as binders and release agents 5. Rubber production and processing 6. Polymer manufacturing 7. Polymer processing 8. Use in Cleaning Agents 9. Use in Oil and Gas Field drilling and production operations 10. Blowing agents 11. Mining chemicals

USES ADVISED AGAINST: No information available

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company: G.J. CHEMICAL CO., INC.

Address: 40 VERONICA AVENUE
SOMERSET, NJ 08873

Telephone: 1-973-589-1450

Fax: 1-973-589-3072

1.4 Emergency Telephone Number

Emergency Phone: 1-800-424-9300 (CHEMTREC)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225

Eye irritation (Category 2A), H319

Specific target organ toxicity - single exposure (Category 3), Central Nervous system, H336

2.2 GHS Label elements, including precautionary statements



Pictogram

GHS02

GHS07

Signal word: **DANGER**

Hazard statement(s)

H225 **Highly flammable liquid and vapor.**
H319 **Causes serious eye irritation.**
H336 **May cause drowsiness or dizziness.**

Precautionary statement(s)

Prevention:

P210 **Keep away from heat/sparks/open flames/hot surfaces. - No smoking.**
P261 **Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.**
P264 **Wash skin thoroughly after handling.**
P271 **Use only outdoors or in a well ventilated area.**

Response:

P303 + P361 + P353 **IF ON SKIN (or hair) Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.**
P304 + P340 **IF INHALED Remove victim to fresh air and keep at rest in a position comfortable for breathing.**
P305 + P351 + P338 **IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**
P312 **Call a POISON CENTER or doctor/physician if you feel unwell.**
P337 + P313 **If eye irritation persists. Get medical advice/attention.**
P370 + P378 **In case of fire. Use dry sand, dry chemical or alcohol-resistant foam for extinction.**

Storage:

P403 + P233 **Store in a well-ventilated place. Keep container tightly closed.**
P403 + P235 **Store in a well ventilate place. Keep cool.**
P405 **Store locked up.**

Disposal:

P591 **Dispose of contents/container to an approved waste disposal plant.**

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS:

Repeated exposure may cause skin dryness or cracking.

3. INGREDIENTS

3.1 SUBSTANCE:

COMPONENT	CAS NO.	% BY WT.	CLASSIFICATION
Acetone	67-64-1 EC-No.200-662-2 Index-No.606-001-00-8 Reg.-No. 01-2119471330-49-XXXX	99.8% min	Flammable liquids (Category 2), H225 Eye irritation (Category 2A), H319 STOT-SE (Category 3) Central Nervous System, H336

OTHER CONTAMINANTS:

Methanol	67-56-1	0.05% max,
Isopropyl Alcohol	67-63-0	0.05% max,
Aldehydes as HCHO	50-00-0	0.002% max
Residue		0.001%

3.2 MIXTURE: Not applicable.

4. FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES:

**INHALATION: ACETONE: IRRITANT/NARCOTIC. 20,000 PPM
IMMEDIATELY DANGEROUS TO LIFE OR HEALTH.**

****FIRST AID- Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.**

**SKIN CONTACT: ACETONE: IRRITANT. SMALL AMOUNTS MAY BE
ABSORBED THROUGH INTACT SKIN.**

****FIRST AID- Remove contaminated clothing and shoes immediately. Wash affected area with soap or mild detergent and large amounts of water until no evidence of chemical remains (approximately 15-20 minutes). Get medical attention immediately.**

EYE CONTACT: ACETONE: IRRITANT.

****FIRST AID- Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains (approximately 15-20 minutes). Get medical attention immediately.**

INGESTION: ACETONE: NARCOTIC.

****FIRST AID- Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Get medical attention immediately.**

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:
Ingestion: Central nervous system depression is the most common effect, resembling intoxication by ethyl alcohol. Excitation is followed by impaired motor coordination, slurred speech, sensory disturbances such as double vision and vertigo, flushing of the face, rapid pulse, and sweating. Nausea and vomiting are common. Other symptoms include dryness of the mouth and the throat, headache, sleepiness, dizziness, light headedness, weakness, and loss of energy. Very high exposures may cause unconsciousness, coma, or death. Kidney toxicity may occur but is rare following acute exposure. Post-alcoholic headache and gastritis are common in recovery.

Eyes: Contact with eyes can result in irritation and eye injury.

Inhalation: Exposure may cause lung irritation and cough.

Skin: Contact may result in redness, irritation, and dermatitis since acetone has a drying effect on the skin.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:

Specific details on antidote: No recommendation given.

5. FIRE FIGHTING MEASURES

FLASH POINT: -17°C (1.4°F) closed cup LOWER EXPLOSIVE LIMIT: 2.6% (V)

AUTOIGNITION TEMP.: 465°C (869°F) UPPER EXPLOSIVE LIMIT: 12.8% (V)

BURN RATE: 3.9 mm/min

UNIFORM FIRE CODE: Flammable Liquid Class IB

5.1 SUITABLE EXTINGUISHING MEDIA: DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR ALCOHOL-RESISTANT FOAM. FOR LARGER FIRES, USE WATER SPRAY, FOG OR ALCOHOL-RESISTANT FOAM.

Unsuitable extinguishing media: Do not use waterjet.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

FIRE AND EXPLOSION HAZARD: DANGEROUS FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME. VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL A CONSIDERABLE DISTANCE TO A SOURCE OF IGNITION AND FLASH BACK. VAPOR-AIR MIXTURES ARE EXPLOSIVE.

Highly dangerous fire hazard when exposed to heat, sparks, flame, or oxidants. Acetone is extremely flammable and its vapors form explosive mixtures with air. Acetone containers may explode in heat of fire. Water solutions of acetone may still be flammable because of released vapors.

CONDITIONS OF FLAMMABILITY: Flammable in the presence of a source of ignition when the temperature is above the flash point.

COMBUSTION PRODUCTS: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, carbon oxides and other unidentified organic compounds evolve when this material undergoes combustion.

5.3 ADVICE FOR FIREFIGHTERS: Keep unnecessary people away; isolate hazard area and deny entry. Avoid breathing vapors, stay upwind. Do not enter fire area without structural fire fighter's protective equipment including NIOSH/MSHA approved self-contained breathing apparatus (SCBA) in positive pressure mode. Use water spray to knock down vapors. Use halon, carbon dioxide extinguisher or dry powder for small fires. Large fires are best controlled by alcohol foam, fog, and water spray. Move container from fire area if you can do it without risk. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. Stay away from ends of tanks. For massive fire in cargo area, use unmanned hose holder or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire. Isolate for 1/2 mile in all directions if tank, rail car or tank truck is involved in fire. Extinguish only if fire can be stopped. Use flooding amounts of water as a fog; solid streams may be ineffective. Cool containers with flooding amounts of water from as far a distance as possible. Avoid breathing vapors; keep upwind. If fire is uncontrollable or containers are exposed to direct flame, water may be ineffective. Fire fighters should wear full protective clothing and NIOSH/MSHA approved self-contained breathing apparatus (SCBA) with full face-piece operated

in the pressure demand or other positive pressure mode. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures. Do Not Use: Water in straight hose stream will scatter and spread fire and should not be used.

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Extremely Flammable; Eliminate ignition sources in the vicinity of the spill or released vapor. Immediately evacuate all nonessential people. Verify that responders are properly trained and wearing appropriate respiratory equipment and fire resistant protective clothing during cleanup operations.

6.2 ENVIRONMENTAL PRECAUTIONS:

Keep out of water sources, drains and sewers. Do not flush into surface water or sanitary sewer system.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:

Methods for cleanup and containment:

Use explosion proof equipment. Shut off valves, contain spill, for small spills add non-flammable absorbent in spill area. For large spills use foam on spill to minimize vapors clean up by vacuuming then using non-flammable absorbent.

Methods for disposal:

Place all saturated absorbent, using non-sparking tools, in an approved container for disposal. Minimize breathing vapors and skin contact, ventilate confined areas, open all windows and doors, assure conformity with applicable government regulations.

REPORTABLE QUANTITY (RQ): 5000lbs.

The Superfund Amendments and Reauthorization Act (SARA) Section 304 requires that a release equal to or greater than the reportable quantity for this substance be immediately reported to the local emergency planning committee and the state emergency response commission (40 CFR 355.40). If the release of this substance is reportable under CERCLA Section 103, the national response center must be notified immediately at (800) 424-8882 or (202) 426-2675 in the metropolitan Washington, D. C. area (40 CFR 302.6).

6.4 REFERENCE TO OTHER SECTIONS: See Sections 8 and 13.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING: This material presents a fire hazard. Acetone is a class IB flammable liquid (NFPA). Liquid quickly evaporates and forms vapor (fumes), which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources, such as pilot lights, welding equipment, and electrical motors and switches. Vapor is heavier than air and can travel considerable distance to a source of ignition and flash back. Avoid breathing vapors in top of shipping container. Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid work practices that may release volatile components in the atmosphere. Avoid contaminating soil or releasing material into sewage and drainage systems. Use

non-sparking tools to open or close containers.

Advice on general occupational hygiene:

Wash hands before breaks and after work. Keep away from food, drink and animal feeding stuffs. When using do not smoke.

STATIC HAZARD: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not be sufficient. For more information refer to OSHA Standard 29CFR 1910.106 “Flammable and Combustible Liquids” and National Fire Protection Association (NFPA 77) “Recommended Practice on Static Electricity”.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

Follow maximum allowed pile heights specified in the BOCA codes or the NFPA manual. Local fire authorities should be notified for storage of this material in any quantity. Local permits are required for storage in warehouse quantities. Recommended storage temperature: 15 - 25°C. Store large quantities only in cool, dry areas in buildings designed to comply with OSHA 1910.106. Keep containers tight and upright to prevent leakage. Do not contact with oxidizing materials. Keep containers closed when not in use. Do not take internally. Storage class (TRGS 510): 3: Flammable liquids.

CONTAINER WARNINGS: Containers should be Bonded and Grounded when pouring. Avoid free fall of liquid in excess of a few inches. Empty containers release residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, or expose such containers to heat, sparks, static electricity or other sources of ignition. Do not attempt to clean. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum re-conditioner.

7.3 SPECIFIC END USES: Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS:

COMPONENT	CAS NO.	% BY WT.	EXPOSURE LIMITS
Acetone	67-64-1 EC-No.200-662-2 Index-No.606-001-00-8 Reg.-No. 01-2119471330-49-XXXX	99.8% min	250PPM TWA (ACGIH) 500PPM STEL (ACGIH) 1000PPM TWA (OSHA) 2400mg/m3 TWA (OSHA) 250PPM TWA (NIOSH) 590mg/m3 TWA (NIOSH)

Key: (PEL) = Permissible Exposure Limit OSHA
(TLV) = Threshold Limit Value OSHA & ACGIH
(STEL) = Short Term Exposure Limit ACGIH
(WEEL) = USA. Workplace Environmental Exposure Levels
(TWA) = Time Weighted Average
CAS = Chemical Abstracts Registry Number

IDLH = Immediate Danger to Life and Health
N.E. =None Established

8.2 EXPOSURE CONTROLS

EXPOSURE GUIDELINES: Consider the potential hazards of this material (Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended.

ENGINEERING CONTROLS: Provide general dilution or local exhaust ventilation in volume and pattern to keep concentrations within permitted exposure limits. All areas should be ventilated in accordance with OSHA Regulation 29 CFR Part 1910. Explosion proof motors should be used in mechanical ventilation.

RESPIRATORY PROTECTION:

The following respirators and maximum use concentrations are recommendations by the U.S. Department of Health and Human Services, NIOSH Pocket Guide to Chemical Hazards; NIOSH criteria documents or by the U.S. Department of Labor, 29 CFR 1910 Subpart Z., 1910.132, 1910.134

The specific respirator selected must be based on contamination levels found in the work place, must not exceed the working limits of the respirator and be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA):

1000 PPM- Any chemical cartridge respirator with organic vapor cartridge(s).

Any powered, air-purifying respirator with organic vapor cartridge(s).
Any supplied-air respirator.
Any self-contained breathing apparatus.

6250 PPM- Any supplied-air respirator operated in a contained-flow mode.

12,500 PPM- Any air-purifying full-face piece respirator (gas mask) with a chin style, front- or back-mounted organic vapor canister.
Any self-contained breathing apparatus with a full-face piece.
Any supplied-air respirator with a full-face piece.

20,000 PPM- Any supplied-air respirator that has a full-face piece and is operated in a pressure-demand or other positive-pressure mode.

ESCAPE- Any air-purifying, full-face piece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister.
Any appropriate escape-type, self-contained breathing apparatus.

BODY CLOTHING: Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged contact with this substance.

SKIN PROTECTION: Employee must wear appropriate protective gloves to prevent contact with this substance. Protective gloves according to ASTM F 739 Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Full contact Material: Fluorinated rubber
Minimum layer thickness: 0.7 mm

Break through time: 480 min
Splash contact Material: Nitrile rubber
Minimum layer thickness: 0.4 mm
Break through time: 35 min

HYGIENE: Use good personal hygiene practices, wash hands before eating, drinking, smoking or using toilet facilities.

EYE /FACE PROTECTION: Use chemical safety goggles and/or a full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

Acetone 67-64-1

APPEARANCE:	Clear volatile liquid
COLOR:	Colorless
ODOR:	Sweetish, pungent odor
ODOR THRESHOLD:	20 PPM
pH:	No Data Available
MOLECULAR WEIGHT:	58.08 amu
MELTING POINT:	-94°C (-137.2°F)
BOILING POINT:	56°C (132.8°F)
SPECIFIC GRAVITY:	0.7899
DENSITY (Relative):	0.79 g/ml 20°C (68.0°F) 0.791 g/ml 25°C (77.0°F)
VAPOR PRESSURE:	184 mm Hg @ 20°C (68.0°F) 400mm Hg @ 39.5°C (103.1°F)
VAPOR DENSITY:	No data available
WATER SOLUBILITY:	Complete
PARTITION COEFFICIENT N-OCTANOL/WATER	log Pow: -0.24
FLASH POINT:	-17.0°C (1.4°F)
EVAPORATION RATE (BUTYL ACETATE=1):	6
UPPER FLAMMABILITY LIMIT:	13% (V)
LOWER FLAMMABILITY LIMIT:	2% (V)
AUTO IGNITION TEMPERATURE:	465°C (869°F)
DECOMPOSITION TEMPERATURE:	No data available
VISCOSITY:	No data available
EXPLOSIVE PROPERTIES:	No data available
OXIDIZING PROPERTIES:	No data available

9.2 OTHER INFORMATION:

Surface tension:

23.2 mN/m at 20.0°C (68.0°F)

10. STABILITY AND REACTIVITY INFORMATION

10.1 REACTIVITY: No data available.

10.2 CHEMICAL STABILITY: Unstable () Stable (X)

Stable under normal temperatures and pressures. Decomposition Temp: 236°C

10.3 POSSIBILITY OF HAZARDOUS REACTIONS: Vapors may form flammable mixtures with air. Reacts with air to form peroxides.

HAZARDOUS POLYMERIZATION: May occur () Will not occur (X)

10.4 CONDITIONS TO AVOID: --> Heat, Sparks, Pilot Lights, Static Electricity, and Open Flame. Extremes of temperature and direct sunlight.

10.5 INCOMPATIBLE MATERIALS -->

ACIDS: Incompatible

AMINES (ALIPHATIC): Incompatible

BROMINE: Violent reaction with excess amounts of bromine

BROMINE TRIFLUORIDE: Explosion on contact

BROMOFORM: Violent reaction in presence of bases (e.g. potassium hydroxide)

CHLOROFORM: Violent reaction in presence of a base

CHROMIUM TRIOXIDE: Ignition on contact at ambient temperature

CHROMYL CHLORIDE: Incandescent reaction

DIOXYGEN BIFLUORIDE + SOLID CARBON DIOXIDE: Explosion at -78 C

HEXACHLOROMELANINE: Possible explosion

HYDROGEN PEROXIDE: Explosion

NITRIC ACID: Ignition

NITRIC + ACETIC ACID MIXTURE: Possible explosion

NITRIC + SULFURIC ACID MIXTURE: Violent oxidation

NITROSYL CHLORIDE: Explosive reaction

NITROSYL PERCHLORATE: Ignition and explosion

NITRYL PERCHLORATE: Ignition and explosion hazard

OXIDIZERS (STRONG): Fire and explosion hazard

PERMONOSULFURIC ACID: Explosion

PLASTICS: Incompatible

PLATINUM + NITROSYL CHLORIDE: Possible explosion

POTASSIUM-TERT-BUTOXIDE: Ignition

RAYON: Incompatible

SODIUM HYPOBROMITE: Explosion

SODIUM HYPOIODITE: Possible explosion

SULFUR DICHLORIDE: Violent reaction
SULFURIC ACID AND POTASSIUM BICHROMATE: Ignition
THIODIGLYCOL + HYDROGEN PEROXIDE: Possible explosion
THIOTRIAZYL PERCHLORATE: Possible explosion
1,1,1-TRICHLOROETHANE: Exothermic condensation by a basic catalyst
TRICHLOROMELANINE: Possible explosion
See also ketones.

KETONES:

ACETALDEHYDE: Violent condensation reaction
NITRIC ACID + HYDROGEN PEROXIDE: Formation of explosive product
PERCHLORIC ACID: Violent decomposition

10.6 HAZARDOUS DECOMPOSITION PRODUCTS --> Thermal decomposition products may include: Fumes, Smoke, Carbon Monoxide, Aldehydes and other decomposition products where combustion is not complete.

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

Routes of Entry: Inhalation--> x Skin--> x Ingestion--> x Eye--> x

ACUTE HEALTH EFFECTS:

Effects of overexposure:

Ingestion: Central nervous system depression is the most common effect, resembling intoxication by ethyl alcohol. Excitation is followed by impaired motor coordination, slurred speech, sensory disturbances such as double vision and vertigo, flushing of the face, rapid pulse, and sweating. Nausea and vomiting are common. Other symptoms include dryness of the mouth and the throat, headache, sleepiness, dizziness, light headedness, weakness, and loss of energy. Very high exposures may cause unconsciousness, coma, or death. Kidney toxicity may occur but is rare following acute exposure. Post-alcoholic headache and gastritis are common in recovery.

Inhalation: Exposure may cause lung irritation and cough.

Skin: Contact may result in redness, irritation, and dermatitis since acetone has a drying effect on the skin.

Eyes: Contact with eyes can result in irritation and eye injury.

ACUTE TOXICITY:

IRRITATION DATA: 395 MG open skin-rabbit mild; 500 MG/24 hours skin-rabbit mild; 500 PPM eye-human; 20 MG eye-rabbit severe; 20 MG/24 hours eye-rabbit moderate.

The effects of overexposure shown in Section II are based on acute toxicity profiles. Typical values are:

Ingredient	Oral LD50 (Rat)	Skin LD50 (Rabbit)	Inhalation LC50
Acetone	5800mg/kg	7426mg/kg (Guinea Pig)	50100ppm/8hr

Additional Toxicity Data:

500 PPM inhalation-human TCLD; 110 GM/H3/1 hour inhalation-mouse LCLO; 2857 MG/KG oral-man TDLO; 8 GM/KG oral-dog LDLO; 3000 MG/KG oral-mouse LD50; 5 GM/KG dermal-dog LDLO; 5000 MG/KG subcutaneous-guinea pig LDLO; 5500 MG/KG intravenous-rat LD50; 4 GM/KG intravenous-mouse LDLO; 1576 MG/KG intraperitoneal-mouse LD50; 8 GM/KG intraperitoneal-dog LDLO; 1159 MG/KG unreported-man LDLO; mutagenic data (RTECS); reproductive effects data (RTECS).

SKIN CORROSION/IRRITATION: Skin - Rabbit Result: Mild skin irritation - 24 h

SERIOUS EYE DAMAGE/EYE IRRITATION: Eyes - Rabbit Result: Eye irritation 24 h

RESPIRATORY OR SKIN SENSITIZATION: Guinea pig Result: Does not cause skin sensitization.

MUTAGENIC EFFECTS: Germ Cell Mutagenicity: No information available.

CARCINOGEN STATUS:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

REPRODUCTIVE TOXICITY: No data available.

SPECIFIC TARGET ORGAN TOXICITY (STOT-SE) - Single Exposure (Globally Harmonized System): May cause drowsiness or dizziness.

SPECIFIC TARGET ORGAN TOXICITY (STOT-RE) - Repeated Exposure (Globally Harmonized System): no data available

AT INCREASED RISK FORM EXPOSURE: Persons with chronic respiratory or skin diseases.

ASPIRATION HAZARD: No data available

ADDITIONAL DATA: Alcohol may enhance the toxic effects.

RTECS NUMBER: AL3150000

12. ECOLOGICAL INFORMATION

12.1 AQUATIC TOXICITY (Acute):

Toxicity to fish:

LC50 - Oncorhynchus mykiss (rainbow trout) - 5,540 mg/l - 96 h

LC50 - Leuciscus idus (Golden Orfe) – 11300 mg/l - 48 h

LC50 – Gambusia affinis (Moskquito Fish) – 13000 mg/l – 48 h

LC50 – Pimphales promelas (Fathead Minnow) – 6210 mg/l – 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 - Daphnia magna (Water flea) - 8800 mg/l - 48 h

Toxicity to Algae:

EC50 – Algae - 3400mg/l – 48 h

Toxicity to Microorganisms:

EC50 Bacteria – 1700 mg/l – 16 h

12.2 PERSISTANCE AND DEGRADABILITY:

Result 91%- Readily biodegradable; (OECD Test Guideline 301B)

Biological Oxygen Demand: 1850 mg/g, 5 h

Oxygen Demand (Theoretical): 2200 mg/g

Carbon Dioxide (Theoretical): 2273 mg/mg

Process	Degradation rate	Time
Biotic/abiotic	91%	28 days
Carbon dioxide generation	90.9%	28 days

12.3 BIOACCUMULATIVE POTENTIAL:

log Pow -.024

Will not bio-accumulate.

Bio-concentration Factor: 0.69, Method of testing BCF.

12.4 MOBILITY IN SOIL:

SURFACE TENSION: 26.2 mN/m 0°C

This product is water soluble and may spread in water systems.

12.5 RESULTS OF PBT AND vPvB:

PBT assessment results: This substance is not classified as PBT or vPvB.

12.6 OTHER ADVERSE EFFECTS: Slightly toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS:

The waste material should be treated and/or disposed of at site authorized to handle hazardous chemical waste. Appropriate Federal, State and Local Regulatory Authorities should be contacted before discharge, treatment or disposal of waste material.

CONTAMINATED PACKAGING: Dispose of as unused product.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

RCRA: The unused product is a RCRA hazardous waste if discarded. The RCRA ID number is: U002.

If the waste is a spent solvent, the appropriate spent solvent code should be used.

DISPOSAL MUST BE IN ACCORDANCE WITH STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE, 48 CFR 262

14. TRANSPORT INFORMATION

Land Transport (DOT)

14.1 USDOT ID Number-----> UN1090

14.2 USDOT Shipping Name-----> Acetone

14.3 USDOT Hazard Classification-----> 3 (Flammable Liquid)

USDOT Label Codes-----> 3 (Flammable Liquid)

14.4 USDOT Package Code-----> II

14.5 Marine Pollutant-----> No

14.6 Special precautions for user-----> Yes
Emergency Response Guide-----> 127
Reportable quantity-----> 5000lbs.

Special Provisions:

IB2, T4, TP1

T8; Refers to transportation of IM portable tanks

Packaging authorizations:

Exceptions: 173.150; for small quantities of flammable liquids

Non-bulk packaging: 173.202: for liquid hazardous material in packing group II

Bulk-packaging: 173.242: for liquid hazardous material

Quantity Limitations:

Passenger aircraft or railcar: 5 L

Cargo aircraft only: 60 L

Vessel stowage requirements: B

Sea Transport (IMDG)

14.1 ID Number-----> UN1090

14.2 Proper shipping name-----> ACETONE

14.3 Hazard Classification-----> 3 (Flammable Liquid))

Label Codes-----> 3

14.4 Package Code-----> II

14.5 Marine Pollutant-----> No

14.6 Special precautions for user-----> Yes

EMS-Number-----> F-E, S-D

Quantity Limitations:

limited quantities 1L;

excepted quantities E2

Packing Instructions and provisions: P001; IBC02

Portable tank and bulk containers: Instructions T4; provisions TP1

Stowage and segregation: Category E

Air Transport (IATA)

14.1 ID Number-----> UN1090

14.2 Proper shipping name-----> Acetone

14.3 Hazard Classification-----> 3 (Flammable Liquid)

Label Codes-----> 3

14.4 Package Code-----> II

14.5 Environmental hazard-----> None

14.6 Special precautions for user-----> Yes

Quantity Limitations:

Limited quantities Y341 1L

Excepted quantities E2

Cargo Packing Instructions: 364 Passenger

Packing Instructions: 353

15. REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE:

SARA TITLE III (Superfund Amendment and Reauthorization Act)

SECTION 302 AND 304: Extremely Hazardous Substance List (40 CFR 355) - Not Listed

SECTION 313: Toxic Chemicals Listing (40 CFR 372.65) - Not Listed

SECTION 311/312: Hazard Categorization (40 CFR 370) - Acute Health Hazard, Chronic Health Hazard, and Fire Hazard

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)

SECTION 102(A) Hazardous Substances (40 CFR 302.4) - Listed Reportable Quantity - 5,000 pounds.

SECTION 101(14) Reportable Quantity: 5,000 lbs

RCRA (Resource Conservation and Recovery Act.)

40 CFR 261.33 Hazardous Waste Number: U002

**Massachusetts Right to Know Components
Acetone CAS-No.67-64-1**

**Pennsylvania Right to Know Components
Acetone CAS-No.67-64-1**

**New Jersey Right to Know Components
Acetone CAS-No.67-64-1**

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

DEA (Drug Enforcement Agency)

Acetone is subject to the Chemical Diversion and Trafficking Act of 1988 and subject to certain record keeping and reporting requirements. (21 CFR 1310 and 1313)

TSCA (Toxic Substance Control Act)

Acetone CAS-No.67-64-1 is listed on the TSCA Inventory.

International Inventories:

Country or Region	Inventory Name	On inventory yes/no
<u>Australia</u>	Australian Inventory of Chemical Substances (AICS)	Yes
<u>Canada</u>	Domestic Substances List (DSL)	Yes
<u>Canada</u>	Non-Domestic Substances List (NDSL)	No
<u>China</u>	Inventory of Existing Chemical Substances in China (IECSC)	Yes
<u>Europe</u>	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
<u>Europe</u>	European List of Notified Chemical Substances (ELINCS)	No
<u>Japan</u>	Inventory of Existing and New Chemical Substances (ENCS)	Yes
<u>Japan</u>	Industrial Safety & Health Law Inventory (ISHL)	Yes
<u>Korea</u>	Existing Chemicals List (ECL)	Yes
<u>Mexico</u>	National Inventory of Chemical Substances (INSQ)	Yes
<u>New Zealand</u>	New Zealand Inventory	Yes
<u>Philippines</u>	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
<u>Switzerland</u>	Inventory of Notified New Substances (CHINV)	Yes
<u>Taiwan</u>	National Existing Chemical Inventory (NECI)	Yes
<u>United States & Puerto Rico</u>	Toxic Substances Control Act Inventory	Yes

15.2 CHEMICAL SAFETY ASSESSMENT: A chemical safety assessment has been carried out for this substance.

16. OTHER INFORMATION:

Hazard Rating:

4-Extreme

3-High

2-Moderate

1-Slight

0-Insignificant

NFPA RATINGS (SCALE 0-4): Health=2 Fire=3 Reactivity=0
HMIS RATINGS (SCALE 0-4): Health=2 Fire=3 Reactivity=0 PPE=H

Hazard statement(s) from Section 2 and 3:

H225 Highly flammable liquid and vapor.

H316 Causes mild skin irritation.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Date of Preparation-----> July 27, 2000

Revision Number-----> 3.0

Revision content-----> Updated Section 3, 5, 7, 8, and 9
Revision Date-----> December 20, 2018
Prepared by-----> T.G. Fenstermaker

Acronyms:

ACGIH	-	American Conference of Governmental Industrial Hygienists
AIHA	-	American Industrial Hygiene Association
ANSI	-	American Nation Standards Institute
API	-	American Petroleum Institute
CERCLA	-	Comprehensive Emergency Response, Compensation, and Liability Act
DOT	-	U.S. Department of Transportation
EC-50	-	Effective Concentration
EPA	-	U.S. Environmental Protection Agency
HMIS	-	Hazardous Materials Information System
IARC	-	International Agency For Research On Cancer
LD-50	-	Lethal Dose
MAK	-	Germany Maximum Concentration Values
MSHA	-	Mine Safety and Health Administration
NFPA	-	National Fire Protection Association
NIOSH	-	National Institute of Occupational Safety and Health
NOIC	-	Notice of Intended Change (Proposed change to ACGIH TLV)
NTP	-	National Toxicology Program
OPA	-	Oil Pollution Act of 1990
OSHA	-	U.S. Occupational Safety & Health Administration
PEL	-	Permissible Exposure Limit (OSHA)
RCRA	-	Resource Conservation and Recovery Act
REL	-	Recommended Exposure Limit (NIOSH)
SARA	-	Superfund Amendments and Reauthorization Act of 1986 Title III
SCBA	-	Self-Contained Breathing Apparatus
STEL	-	Short-Term Exposure Limit (generally 15 minutes)
TLV	-	Threshold Limit Value
TSCA	-	Toxic Substances Control Act
TWA	-	Time Weighted Average (8hr.)
WHMIS	-	Canadian Workplace Hazardous Materials Information System

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