

Manf: KMG Electronic Chemicals (acquired General Chemical Corp)

Product: Acetone



SAFETY DATA SHEET

1. Identification

Product identifier Acetone

Other means of identification

Product code -

Recommended use Industrial use.

Recommended restrictions None known.

Manufacturer / Importer / Supplier / Distributor information

Manufacturer/Supplier KMG Electronic Chemicals, Inc.

Address 9555 W. Sam Houston Parkway South
Suite 600
Houston Texas 77099 US

Phone number 713-600-3800

Emergency telephone

3E Emergency Services +1 866-706-3266 Access code: 333035

2. Hazard(s) identification

Physical hazards Flammable liquids Category 2

Health hazards Serious eye damage/eye irritation Category 2A
Specific target organ toxicity, single exposure Category 3 narcotic effects

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Highly flammable liquid and vapor. Causes serious eye irritation. May cause drowsiness or dizziness.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing mist/vapors. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling.

Response If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. In case of fire: Use alcohol-resistant foam, carbon dioxide, dry powder or water fog for extinction. 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 inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

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

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

Hazard(s) not otherwise classified (HNOC) Not classified.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Acetone		67-64-1	100

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Acetone

1367 Version #: 01 Revision date: - Issue date: 24-November-2013

SDS US

1 / 8

Manf: KMG Electronic Chemicals (acquired General Chemical Corp)

Product: Acetone

4. First-aid measures

Inhalation	Move into fresh air and keep at rest. Get medical attention if any discomfort continues.
Skin contact	Remove contaminated clothing and wash skin with soap and water. Get medical attention if irritation develops and persists. Flush thoroughly with water for at least 15 minutes.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation persists after washing.
Ingestion	Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Get medical attention.
Most important symptoms/effects, acute and delayed	Defats the skin. Repeated exposure may cause skin dryness or cracking. Vapors may cause drowsiness and dizziness. Aspiration may cause pulmonary edema and pneumonitis.
Indication of immediate medical attention and special treatment needed	In case of shortness of breath, give oxygen. Keep victim warm.
General information	Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). In case of shortness of breath, give oxygen. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	The product is highly flammable, and explosive vapor/air mixtures may be formed even at normal room temperatures. Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.
Unsuitable extinguishing media	Water may be ineffective.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed. Solvent vapors may form explosive mixtures with air.
Special protective equipment and precautions for firefighters	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Avoid inhalation of vapors and contact with skin and eyes. Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Stay upwind. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak. Ventilate closed spaces before entering. Use personal protection recommended in Section 8 of the MSDS.
Methods and materials for containment and cleaning up	<p>ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.</p> <p>Large Spills: Dike the spilled material, where this is possible. Following product recovery, flush area with water. Cover with plastic sheet to prevent spreading. Absorb spillage with non-combustible, absorbent material.</p> <p>Small Spills: Absorb spill with vermiculite or other inert material. Clean surface thoroughly to remove residual contamination. After removal flush contaminated area thoroughly with water.</p>
Environmental precautions	Never return spills in original containers for re-use. Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Manf: KMG Electronic Chemicals (acquired General Chemical Corp)

Product: Acetone

7. Handling and storage

Precautions for safe handling

The product is highly flammable, and explosive vapor/air mixtures may be formed even at normal room temperatures. Do not handle or store near an open flame, heat or other sources of ignition. Do not smoke. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Use only with adequate ventilation. Avoid inhalation of vapors and contact with skin and eyes. Wash thoroughly after handling. Handle and open container with care.

Conditions for safe storage, including any incompatibilities

Follow rules for flammable liquids. Keep away from heat, sparks and open flame. Store in a cool place. Keep in a well-ventilated place. Keep containers tightly closed. Keep in an area equipped with sprinklers. Keep this material away from food, drink and animal feed. Use care in handling/storage. Keep away from sources of ignition - No smoking.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Material	Type	Value
Acetone (CAS 67-64-1)	PEL	2400 mg/m ³ 1000 ppm

US. ACGIH Threshold Limit Values

Material	Type	Value
Acetone (CAS 67-64-1)	STEL	750 ppm
	TWA	500 ppm

US NIOSH Pocket Guide to Chemical Hazards: Recommended exposure limit (REL)

Material	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m ³ 250 ppm

Biological limit values

ACGIH Biological Exposure Indices

Material	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls

Explosion proof exhaust ventilation should be used. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment. Provide easy access to water supply or an emergency shower.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear chemical goggles.

Skin protection

Hand protection

Wear protective gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.

Other

Wear appropriate chemical resistant clothing. Protective shoes or boots. Structural firefighters protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations. Do not get this material in contact with skin. Do not get this material on clothing. Wear chemical protective equipment that is specifically recommended by the Personal Protective Equipment manufacturer.

Respiratory protection

Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use positive pressure, air-supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke. Launder contaminated clothing before reuse. Remove and isolate contaminated clothing and shoes.

9. Physical and chemical properties

Appearance

Colorless liquid.

Physical state

Liquid.

Form

Liquid.

Acetone

1367 Version #: 01 Revision date: - Issue date: 24-November-2013

SDS US

3 / 8

Manf: KMG Electronic Chemicals (acquired General Chemical Corp)

Product: Acetone

Color	Colorless.
Odor	Acetone.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
	133.11 °F (56.17 °C)
Flash point	-4.0 °F (-20.0 °C) Closed Cup Not available. Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	2.6
Flammability limit - upper (%)	12.8
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor density	2 (air=1)
Relative density	Not available.
Solubility(ies)	Miscible Not available.
Partition coefficient (n-octanol/water)	-0.24
Auto-ignition temperature	Not available. 867.2 °F (464 °C)
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	0.79 g/cm ³
Dynamic viscosity	0.32 mPa.s
Dynamic viscosity temperature	68 °F (20 °C)
Heat of combustion (NFPA 30B)	27.7 kJ/g
Molecular formula	C ₃ H ₆ O
Molecular weight	58.08 g/mol
Percent volatile	100 %

10. Stability and reactivity

Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under normal temperature conditions. May form explosive peroxides.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents. Strong acids.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Swallowing or vomiting of the liquid may result in aspiration into the lungs.
------------------	---

Manf: KMG Electronic Chemicals (acquired General Chemical Corp)

Product: Acetone

Inhalation Vapors may cause drowsiness and dizziness.
Skin contact Defats the skin. Repeated exposure may cause skin dryness or cracking.
Eye contact Causes serious eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics Irritation of nose and throat. Irritating to mucous membranes. Vapors may cause drowsiness and dizziness.

Information on toxicological effects

Acute toxicity Breathing of high concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness. Vapors may cause drowsiness and dizziness. High concentration: May cause central nervous system effects. May cause skin irritation. Defats the skin. Repeated exposure may cause skin dryness or cracking. Irritating to eyes. May be harmful if swallowed and enters airways. Swallowing or vomiting of the liquid may result in aspiration into the lungs.



Product	Species	Test Results
Acetone (CAS 67-64-1)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	20 ml/kg
<i>Inhalation</i>		
LC50	Rat	76 mg/l, 4 Hours 50.1 mg/l, 8 Hours

Skin corrosion/irritation May cause skin irritation. Defats the skin. Repeated exposure may cause skin dryness or cracking.
Serious eye damage/eye irritation Causes serious eye irritation.
Respiratory sensitization Not classified.
Skin sensitization May cause eczema-like skin disorders (dermatitis).
Germ cell mutagenicity Not expected to be mutagenic.
Carcinogenicity None known.
Reproductive toxicity Not classified.
Specific target organ toxicity - single exposure May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure None known.
Aspiration hazard May be harmful if swallowed and enters airways.
Chronic effects None known.
Further information Prolonged or frequent contact may cause redness, itching and eczema/chaps. Pre-existing skin and respiratory conditions including dermatitis and asthma might be aggravated by exposure.

12. Ecological information

Ecotoxicity The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product	Species	Test Results
Acetone (CAS 67-64-1)		
Aquatic		
Fish	LC50	Fathead minnow (Pimephales promelas) 5490 - 7030 mg/l, 96 hours

Persistence and degradability The product is easily biodegradable.
Bioaccumulative potential Potential to bioaccumulate is low.
Partition coefficient n-octanol / water (log Kow) -0.24
Mobility in soil No data available.
Other adverse effects The product is a volatile organic compound which has a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions Dispose of this material and its container at hazardous or special waste collection point. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose in accordance with all applicable regulations.

Manf: KMG Electronic Chemicals (acquired General Chemical Corp)

Product: Acetone

Hazardous waste code D001: Waste Flammable material with a flash point <140 °F

US RCRA Hazardous Waste U List: Reference

Acetone (CAS 67-64-1) U002

Waste from residues / unused products Dispose of in accordance with local regulations.

Contaminated packaging Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number UN1090
UN proper shipping name Acetone
Transport hazard class(es) 3
Subsidiary class(es) -
Packing group II
Special precautions for user Not available.
Special provisions IB2, T4, TP1
Packaging exceptions 150
Packaging non bulk 202
Packaging bulk 242
ERG number 127

IATA

UN number UN1090
UN proper shipping name Acetone
Transport hazard class(es) 3
Subsidiary class(es) -
Packing group II
Environmental hazards No
Labels required 3
ERG Code 3H
Special precautions for user Not available.

IMDG

UN number UN1090
UN proper shipping name ACETONE
Transport hazard class(es) 3
Subsidiary class(es) -
Packing group II
Environmental hazards
Marine pollutant No
Labels required 3
EmS F-E, S-D
Special precautions for user Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This substance/mixture is not intended to be transported in bulk.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1) LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

Manf: KMG Electronic Chemicals (acquired General Chemical Corp)

Product: Acetone

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting) Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Acetone (CAS 67-64-1) 6532

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Acetone (CAS 67-64-1) 35 % weight/volumn

DEA Exempt Chemical Mixtures Code Number

Acetone (CAS 67-64-1) 6532

Food and Drug Administration (FDA) Not regulated.

US state regulations

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

US. Massachusetts RTK - Substance List

Acetone (CAS 67-64-1)

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Acetone (CAS 67-64-1)

US. Rhode Island RTK

Acetone (CAS 67-64-1)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

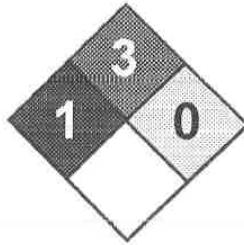
16. Other information, including date of preparation or last revision

Issue date 24-November-2013
Revision date -
Version # 01

Manf: KMG Electronic Chemicals (acquired General Chemical Corp)

Product: Acetone

NFPA Ratings



Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.