



Safety Data Sheet

Acetone

1. IDENTIFICATION

Product Identifier: Acetone

Canadian TDG: UN1090

Synonyms: 2-Propanone, Dimethyl ketone, Propanone

Chemical Family: Aliphatic ketone

Recommended Use: Chemical intermediate, solvent

Restrictions on Use: None

Manufacturer / Supplier:

Genesis Chemicals
602 – 13th St SE
Medicine Hat, AB
T1A 1X3

Prepared by: The Environmental, Health and Safety Department of Genesis Chemicals Ltd

Preparation Date of SDS: January 27, 2017

Telephone number of preparer: 403-528-4220

24-Hour Emergency Telephone Number (CANUTEC): (613) 996-6666

2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquid – Category 2; Eye irritation – Category 2A



Signal Word: Danger

Hazard Statement(s):

Highly flammable liquid and vapour
Causes serious eye irritation

Precautionary Statement(s):

General:
Keep out of reach of children.

Read label before use.

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Keep cool.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Wash thoroughly after handling.

Response:

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing and wash it before re-use. Rinse skin with water/shower. If skin or rash occurs: Get medical advice or attention.

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 or attention.

IF SWALLOWED: Immediately call a POISON CENTRE or doctor. Do NOT induce vomiting.

In case of fire: Stop leak if safe to do so. Use carbon dioxide, dry chemical powder, appropriate foam to extinguish.

Storage:

Store locked up.

Keep container tightly closed.

Store in a well-ventilated place.

Keep cool.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards:

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | Concentration % |
|---------------|---------|-----------------|
| Acetone | 67-64-1 | 100 |

Notes

Concentrations are expressed in % volume/volume.

4. FIRST AID MEASURES

First-aid Measures

Inhalation

Move to fresh air. Keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor if you feel unwell or are concerned.

Skin Contact

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. If skin irritation or a rash occurs, get medical advice/attention. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Remove contact lenses, if present and easy to do. If eye irritation persists, get medical advice/attention.

Ingestion

Immediately call a Poison Centre or doctor. Do not induce vomiting.

Most Important Symptoms and Effects, Acute and Delayed

If inhaled: at high concentrations symptoms may include headache, nausea, dizziness, drowsiness and confusion.

If on skin: may cause an allergic skin reaction in some people. Symptoms include redness, rash, itching and swelling.

If in eyes: symptoms include sore, red eyes, and tearing.

If swallowed: may be drawn into the lungs if swallowed or vomited, causing severe lung damage. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest.

Immediate Medical Attention and Special Treatment**Special Instructions**

Not applicable.

5. FIRE-FIGHTING MEASURES

Extinguishing Media**Suitable Extinguishing Media**

Carbon dioxide, dry chemical powder or appropriate foam. Use water to keep non-leaking, fire-exposed containers cool.

Unsuitable Extinguishing Media

Water is not effective for extinguishing a fire. It may not cool product below its flash point.

Specific Hazards Arising from the Chemical

Highly flammable liquid and vapour. Can ignite at room temperature. Releases vapour that can form explosive mixture with air. Can be ignited by static discharge. May travel a considerable distance to a source of ignition and flash back to a leak or open container. May accumulate in hazardous amounts in low-lying areas especially inside confined spaces, resulting in a fire and/or health hazard. Closed containers may rupture violently when heated releasing contents. In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide. As well, other toxic and irritating compounds, such as formaldehyde, methanol, acetic acid, hydrogen peroxide, methane and ethylene oxide may be formed, depending on fire conditions.

Special Protective Equipment and Precautions for Fire-fighters

Evacuate area. Approach fire from upwind to avoid hazardous vapours or gases.

Stop leak before attempting to put out the fire. Product could form an explosive mixture and reignite. Keep containers cool to avoid bursting.

Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours, flammable or explosive atmosphere.

Dike and recover contaminated water for appropriate disposal.

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn. If there is potential for skin contact with concentrated cleaner: chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary. See Skin Protection in Section 8 (Exposure Controls/Personal Protection) for advice on suitable chemical protective materials.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Concentrated product: evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Distant ignition and flashback are

possible.

Increase ventilation to area or move leaking container to a well-ventilated and secure area. Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Review Section 7 (Handling) of this safety data sheet before proceeding with clean-up.

Before entry, especially into confined areas, check atmosphere with an appropriate monitor. Monitor area for flammable or explosive atmosphere.

Product (diluted as directed): use the personal protective equipment recommended in Section 8 of this safety data sheet. No other special precautions are necessary.

Environmental Precautions

Concentrated product: do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas.

Methods and Materials for Containment and Cleaning Up

Concentrated product: small spills or leaks: contain and soak up spill with absorbent that does not react with spilled product. Do NOT use combustible materials such as sawdust. Place used absorbent into suitable, covered, labelled containers for disposal.

Concentrated product: large spills or leaks: cover the spill surface with the appropriate type of foam to reduce the release of vapour. Dike spilled product to prevent runoff. Remove or recover liquid using pumps or vacuum equipment. Dike and recover contaminated water for appropriate disposal. Store recovered product in suitable containers that are: tightly-covered.

Product (diluted as directed): no special clean-up methods are necessary.

Other Information

Report spills to local health, safety and environmental authorities, as required.

7. HANDLING AND STORAGE

Precautions for Safe Handling

When handling diluted product: no special handling precautions are necessary.

When handling concentrated product: only use where there is adequate ventilation. Avoid generating vapours or mists. Keep containers tightly closed when not in use or empty. Electrically bond and ground equipment. Ground clips must contact bare metal. Eliminate heat and ignition sources such as sparks, open flames, hot surfaces and static discharge. Post "No Smoking" signs. Use non-sparking tools. Wear personal protective equipment to avoid direct contact with this chemical.

Do NOT smoke in work areas. Wash hands thoroughly after handling this material. Immediately remove contaminated clothing using the method that minimizes exposure. Keep contaminated clothing under water, in closed containers. Launder clothes before rewearing. Inform laundry personnel of product hazard(s). Do not take contaminated clothing home.

Conditions for Safe Storage

Concentrated product: store in an area that is: temperature-controlled, well-ventilated, out of direct sunlight and away from heat and ignition sources, an approved, fire-resistant area, separate from incompatible materials (see Section 10: Stability and Reactivity). Store in a closed container.

Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity). Keep amount in storage to a minimum. Avoid bulk storage indoors.

Comply with all applicable health and safety regulations, fire and building codes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

| Ingredients | ACGIH® TLV® | OSHA PEL | IDLH |
|-------------|---------------------------------|---|----------|
| Acetone | 500 ppm STEL 250 ppm TLV-TWA | 750 ppm TWA 1800 mg/m3 TWA 2400 mg/m3 STEL 1000 ppm STEL | 2500 ppm |

Consult local authorities for provincial or state exposure limits.

Appropriate Engineering Controls

General ventilation is usually adequate. Provide eyewash and safety shower if contact or splash hazard exists. When handling large quantities of concentrated product: use a local exhaust ventilation and enclosure, if necessary, to control amount in the air. Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored.

Individual Protection Measures

Eye/Face Protection

Do not get in eyes. Wear chemical safety goggles.

Skin Protection

Prevent all skin contact. Wear chemical protective clothing e.g. gloves, aprons, boots.

Suitable materials are: Barrier® (PE/PA/PE), Silver Shield/4H® (PE/EVAL/PE), Tychem® Responder, Tychem® TK.

The following materials should NOT be used: neoprene rubber, nitrile rubber, polyvinyl alcohol.

Respiratory Protection

Not normally required if product is used as directed.

Concentrated product: wear a NIOSH approved air-purifying respirator with an organic vapour cartridge.

For non-routine or emergency situations: wear a NIOSH approved air-purifying respirator with an organic vapour Cartridge, or, wear a NIOSH approved self-contained breathing apparatus (SCBA) or supplied air respirator.

Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work-station location.

9. CHEMICAL AND PHYSICAL PROPERTIES

Basic Physical and Chemical Properties

| | |
|---|--|
| Appearance | Colourless liquid. |
| Odour | Sweet |
| Odour Threshold | Not available |
| pH | 7 |
| Melting Point/Freezing Point | -94.6°C / -138.3°F (estimated) (freezing) |
| Initial Boiling Point/Range | 56 °C / 133°F |
| Flash Point | < -18 °C (closed cup) |
| Evaporation Rate | Not available |
| Flammability (solid, gas) | Not applicable (liquid). |
| Upper/Lower Flammability or Explosive Limit | Not available (upper); Not available (lower) |
| Vapour Pressure | 180 mm Hg at 20 °C (Acetone) |
| Vapour Density (air = 1) | 2 |
| Relative Density (water = 1) | 0.792 at 20 °C |

Solubility
Partition Coefficient,
n-Octanol/Water (Log Kow)

Soluble in water
Not available

Auto-ignition Temperature
Decomposition Temperature

Not available
Not available

Viscosity

Dynamic: 0.32 mPa.s (0.32 centipoises) at 20°C 14.2 mm²/s at 40 °C (kinematic)

Other Information

Physical State:

Liquid

10. STABILITY AND REACTIVITY

Reactivity

Not reactive. Not sensitive to mechanical impact.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

Conditions to Avoid

Open flames, sparks, static discharge, heat and other ignition sources.

Incompatible Materials

Oxidizing agents (e.g. peroxides), strong bases (e.g. sodium hydroxide), reducing agents (e.g. hydroquinone).
Not corrosive to metals.

Hazardous Decomposition Products

During a fire, irritating/toxic gases, such as carbon monoxide, carbon dioxide and other toxic and irritating compounds, such as formaldehyde, methanol, acetic acid, hydrogen peroxide, methane and ethylene oxide may be formed, depending on fire conditions.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

| Chemical Name | LC50 | LD50 (oral) | LD50 (dermal) |
|---------------|---|----------------------------|------------------------|
| Acetone | 30000 ppm (male rat) (4-hour exposure) | 5800 mg/kg (female rat) | > 16000 mg/kg (rabbit) |

Skin Corrosion/Irritation

May cause mild irritation based on information for closely related chemicals.

Serious Eye Damage/Irritation

Animal tests show serious eye irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May cause depression of the central nervous system.

Aspiration Hazard

May be drawn into the lungs (aspirated) if swallowed or vomited. Symptoms may include coughing, choking, shortness of breath, difficult or rapid breathing, and wheezing.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Following skin contact: may cause dermatitis.

May cause harmful effects on the kidneys, harmful effects on the liver.

Respiratory and/or Skin Sensitization

Not a respiratory sensitizer.

Skin sensitizer. May cause an allergic reaction (skin sensitization) based on information for closely related chemicals.

Carcinogenicity

| Chemical Name | IARC | ACGIH | NTP | OSHA |
|---------------|---------------|-------|------------|------------|
| Acetone | Not evaluated | A4 | Not Listed | Not Listed |

Key to Abbreviations

IARC = International Agency for Research on Cancer. Group 3 = Not classifiable as to its carcinogenicity to humans.

ACGIH® = American Conference of Governmental Industrial Hygienists. A4 = Not classifiable as a human carcinogen.

NTP = National Toxicology Program. OSHA = US Occupational Safety and Health Administration

Reproductive Toxicity**Development of Offspring**

Animal studies show effects on the offspring. However, these effects are only seen with significant toxicity in the mothers.

Sexual Function and Fertility

Does not cause effects on sexual function or fertility.

Germ Cell Mutagenicity

Not mutagenic.

Interactive Effects

No information was located.

Additional Information: Acute skin contact with Acetone is either slightly irritating or not irritating, based on animal and limited human information. Prolonged or repeated contact may cause defatting of the skin and produce dermatitis (dryness, irritation, redness and cracking). Eye contact with vapor or liquid may cause mild - severe irritation and may cause corneal injury. Depending on the concentration, the effects of inhalation may be: irritation of the nose and throat, headaches, light-headedness and tiredness, dizziness, drunkenness, drowsiness, nausea and vomiting. Unconsciousness may result if exposure is extremely high (greater than 10000 ppm). Intolerable nose and throat irritation would also occur at these concentrations. Even higher concentrations can cause collapse, coma and death. Tolerance to the effects of acetone can develop. No effects or minor effects (slight drowsiness) are expected with ingestion. If acetone is aspirated (breathed into the lungs during ingestion or vomiting) it can cause severe, life-threatening lung injury. Animal information suggests that acetone would be difficult to aspirate because it evaporates so quickly. Based on its physical properties, acetone can be aspirated into the lungs during ingestion or vomiting. Acetone has increased the liver toxicity of chemicals, such as carbon tetrachloride, chloroform, trichloroethylene, bromodichloromethane, dibromochloromethane, N-nitrosodimethylamine and 1,1,2-trichloroethane, the lung toxicity of styrene and the toxicity of acetonitrile and 2,5-hexanedione in laboratory animals. It appears to inhibit the metabolism and elimination of ethyl alcohol, thereby potentially increasing its toxicity. Acetone can either increase or decrease the toxicity of 1,2-dichlorobenzene, depending on the concentration of acetone used.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

| Ingredients | Ecotoxicity - Fish Species Data | Acute Crustaceans Toxicity: | Ecotoxicity - Freshwater Algae Data |
|-------------|---|-----------------------------|-------------------------------------|
| Acetone | 5540 mL/L LC50 (Oncorhynchus mykiss) 96 h 6210 - 8120 mg/L LC50 (Pimephales promelas) 96 h static 8300 mg/L LC50 (Lepomis macrochirus) 96 h | Not Available. | Not Available. |

Other Information:

Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams or public waterways. Block off drains and ditches. Spill areas must be cleaned and restored to original condition or to the satisfaction of authorities. May be harmful to aquatic life. Biodegrades (slow). Rapid volatilization. Not expected to bioconcentrate.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Recommended disposal methods are for the product, as sold. (Used material may contain other hazardous contaminants). The required hazard evaluation of the waste and compliance with the applicable hazardous waste laws are the responsibility of the user.

Burn in an approved incinerator according to federal, provincial/state, and local regulations.

Empty containers retain product residue. Follow label warnings even if container appears to be empty. The container for this product can present explosion or fire hazards, even when emptied. Do not cut, puncture, or weld on or near this container.

14. TRANSPORT INFORMATION

DOT (U.S.):

DOT Shipping Name: ACETONE

DOT Hazardous Class 3

DOT UN Number: UN1090

DOT Packing Group: II

DOT Reportable Quantity (lbs): Not Available.

Note: No additional remark.

Marine Pollutant: No.

TDG (Canada):

TDG Shipping Name: ACETONE

Hazard Class: 3

UN Number: UN1090

Packing Group: II

Note: No additional remark.

Marine Pollutant: No.

Special Precautions for User

Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

15. REGULATORY INFORMATION

Canada

WHMIS Classification

B2 - Flammable Liquid; D2B - Toxic (Eye irritant; Skin sensitization)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL/NDSL.

CEPA - National Pollutant Release Inventory (NPRI)

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

16. OTHER INFORMATION

| | |
|---------------------------------|---|
| Additional Information: | This product has been classified in accordance with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) and the SDS contains all the information required by the Hazardous Products Regulations (HPR). |
| Prepared by: | The Environmental, Health and Safety Department of Genesis Chemicals Ltd |
| Date of Latest Revision: | December 11, 2017 |
| Key to Abbreviations: | IARC = International Agency for Research on Cancer. Group 3 = Not classifiable as to its carcinogenicity to humans. ACGIH® = American Conference of Governmental Industrial Hygienists. A4 = Not classifiable as a human carcinogen. NTP = National Toxicology Program. OSHA = US Occupational Safety and Health Administration. ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. TWA = Time-Weighted Average. STEL = Short-term Exposure Limit. A4 = Not classifiable as a human carcinogen. OSHA = US Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. IDLH = Immediately Dangerous to Life and Health. |
| Disclaimer: | <p>NOTICE TO READER:</p> <p>Genesis Chemicals, expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.</p> |

Do not use ingredient information and/or ingredient percentages in this SDS as a product specification. For product specification information refer to a Product Specification Sheet and/or a Certificate of Analysis. These can be obtained from your local Genesis Chemicals Sales Office.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Genesis Chemicals makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Genesis Chemicals' control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

*****END OF SDS*****