

SAFETY DATA SHEET

Preparation Date: 1/15/2014

Revision Date: 4/04/2018

Revision Number: G4

1. IDENTIFICATION

Product identifier

Product code: A1041
Product Name: ACETONE, FCC

Other means of identification

Synonyms: beta-Ketopropane
 Dimethyl ketone
 Dimethylformaldehyde
 Dimethylketal
 Ketone propane
 Ketone, dimethyl
 Methyl ketone
 Propanone
 Pyroacetic acid
 Pyroacetic ether
 Acétone (French)
 Acetona (Spanish)

CAS #: 67-64-1
RTECS # AL3150000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: Solvent.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

| | |
|--|------------|
| Serious eye damage/eye irritation | Category 2 |
| Reproductive toxicity | Category 2 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Flammable liquids | Category 2 |

Label elements

Product code: A1041

Product name: ACETONE, FCC

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Danger

Hazard statements

Causes serious eye irritation
Suspected of damaging fertility or the unborn child
May cause respiratory irritation. May cause drowsiness or dizziness
Highly flammable liquid and vapor



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Causes mild skin irritation
Repeated exposure may cause skin dryness or cracking

Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
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
Keep cool

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

In case of fire: Use CO₂, dry chemical, or foam to extinguish.

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 person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Precautionary Statements - Storage

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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Weight % |
|--------------|---------|----------|
| Acetone | 67-64-1 | 99-100.5 |
| Benzene | 71-43-2 | 0-0.003 |
| Formaldehyde | 50-00-0 | 0-0.002 |

4. FIRST AID MEASURES

First aid measures

- General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.
- Skin Contact:** Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritation persists, call a physician.
- Eye Contact:** Flush eyes with water for 15 minutes. Get medical attention.
- Inhalation:** Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
- Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

- Symptoms**
- Moderate eye irritation
 - Mild skin irritation
 - Nausea
 - Vomiting
 - Central nervous system effects
 - Dizziness
 - Drowsiness
 - Fatigue
 - Narcosis
 - Ataxia
 - Staggering gait
 - Headache
 - May affect respiration
 - Respiratory depression
 - May cause cardiovascular effects
 - Hypotension
 - Weak, rapid pulse or rapid heart rate (Tachycardia)
 - May cause metabolic acidosis

Indication of any immediate medical attention and special treatment needed

- Notes to Physician:** Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

- Suitable Extinguishing Media:** Carbon dioxide (CO₂). Dry chemical. Alcohol-resistant foam. Water spray.

- Unsuitable Extinguishing Media:** Do not use a solid (straight) water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

- Hazardous Combustion Products:** Carbon Monoxide, Carbon Dioxide.

Specific hazards:

Flammable. May be ignited by heat, sparks or flames. Vapor may travel considerable distance to source of ignition and flash back. Vapors may form explosive mixtures with air. Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks). Container explosion may occur under fire conditions or when heated. Fire may produce irritating, corrosive and/or toxic gases.

Special Protective Actions for Firefighters**Specific Methods:**

Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out.

Special Protective Equipment 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:**

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up**Methods for containment**

Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up

Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling**Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Keep away from heat and sources of ignition. Store in a segregated and approved area. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents
 Reducing agents
 Bases
 Acids
 activated carbon
 chromium trioxide
 dioxygen difluoride + carbon dioxide
 Potassium dichromate or Sodium dichromate
 Potassium t-butoxide
 Hydrogen peroxide
 Chromic anhydride
 Chromyl chloride
 Hexachloromelamine
 Nitrosyl chloride + Platinum
 Nitrosyl chloride
 Bromine trifluoride
 Thiodiglycol
 2,4,6-trichloro-1,3,5-triazine + water
 2-Methyl-1,3-butadiene
 Chloroform

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters****National occupational exposure limits****United States**

| Components | CAS-No. | OSHA | NIOSH | ACGIH | AIHA WEEL |
|--------------|---------|---|--|-----------------------------|-----------|
| Acetone | 67-64-1 | 1000 ppm TWA 2400 mg/m ³ TWA | 250 ppm TWA 590 mg/m ³ TWA | 750 ppm STEL 500 ppm TWA | None |
| Benzene | 71-43-2 | 10 ppm TWA 1 ppm TWA 25 ppm Ceiling 5 ppm STEL | 0.1 ppm TWA 1 ppm STEL | 2.5 ppm STEL 0.5 ppm TWA | None |
| Formaldehyde | 50-00-0 | 0.75 ppm TWA 2 ppm STEL | 0.016 ppm TWA 0.1 ppm Ceiling 15 min | 0.3 ppm Ceiling | None |

Canada

| Components | CAS-No. | Canada - Alberta | Canada - British Columbia | Canada - Ontario | Canada - Quebec |
|--------------|---------|---|------------------------------|---------------------------------|---|
| Acetone | 67-64-1 | 500 ppm TWA 1200 mg/m ³ TWA 750 ppm STEL 1800 mg/m ³ STEL | 250 ppm TWA 500 ppm STEL | 500 ppm TWA 750 ppm STEL | 500 ppm TWAEV 1190 mg/m ³ TWAEV 1000 ppm STEV 2380 mg/m ³ STEV |
| Benzene | 71-43-2 | 0.5 ppm TWA 1.6 mg/m ³ TWA 2.5 ppm STEL 8 mg/m ³ STEL | 0.5 ppm TWA 2.5 ppm STEL | 0.5 ppm TWA 2.5 ppm STEL | 1 ppm TWAEV 3 mg/m ³ TWAEV 5 ppm STEV 15.5 mg/m ³ STEV |
| Formaldehyde | 50-00-0 | 1 ppm Ceiling 1.3 mg/m ³ Ceiling 0.75 ppm TWA 0.9 mg/m ³ TWA | 0.3 ppm TWA 1 ppm Ceiling | 1.5 ppm Ceiling 1.0 ppm STEL | 2 ppm Ceiling 3 mg/m ³ Ceiling |

Australia and Mexico

| Components | CAS-No. | Australia | Mexico |
|--------------|---------|--|--|
| Acetone | 67-64-1 | 1000 ppm STEL 2375 mg/m ³ STEL 1185 mg/m ³ TWA 500 ppm TWA | 1000 ppm TWA 2400 mg/m ³ TWA 1260 ppm STEL 3000 mg/m ³ STEL |
| Benzene | 71-43-2 | 1.0 ppm/3.2 mg/m ³ TWA confirmed carcinogen | 1 ppm TWA 3.2 mg/m ³ TWA 5 ppm STEL 16 mg/m ³ STEL |
| Formaldehyde | 50-00-0 | 1 ppm/1.2 mg/m ³ TWA 2 ppm/2.5 mg/m ³ STEL probable carcinogen | 2 ppm Ceiling 3 mg/m ³ Ceiling |

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Goggles

Skin and body protection: Chemical resistant apron
Long sleeved clothing
Gloves

Respiratory protection: Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:

Liquid

Appearance:

No information available.

Color:

Clear. Colorless.

Odor:

Fruity. Mint-like. Fragrant. Ethereal.

Taste

Pungent. Sweetish.

Formula:

C₃H₆O

Molecular/Formula weight:

58.08

Flammability:

No information available

Flash point (°C):

-20 °C

Flashpoint (°C/°F):

-20 to -17 °C/-4 to 1.4 °F

-9.4 to -9 °C/15.1 to 15.8 °F

Flash Point Tested according to:

Closed cup

Open cup

Autoignition Temperature (°C/°F):

465 °C/869 °F

Lower Explosion Limit (%):

2.5-2.6%

Upper Explosion Limit (%):

12.8%

Melting point/range(°C/°F):

-94.7 to -95.4 °C/-138.46 to -139.72

Decomposition temperature(°C/°F):

No information available

Boiling point/range(°C/°F):

56.2 °C/133.2 °F

Bulk density:

No information available

Density (g/cm³):

0.780 @ 30 °C

0.784 @ 25 °C

0.79 @ 20 °C

Specific gravity:

0.79 @ 20 °C

pH:

No information available

Vapor pressure @ 20°C (kPa):
24

Evaporation rate:
5.6 (Butyl acetate = 1)

Vapor density:
2.0

VOC content (g/L):
780-790

Odor threshold (ppm):
62-140

**Partition coefficient
(n-octanol/water):**
- 0.24

Viscosity:
No information available

Miscibility:
Miscible with water
Miscible with Ether
Miscible with Chloroform
Miscible with Benzene
Miscible with alcohol

Solubility:
No information available

10. STABILITY AND REACTIVITY

Reactivity

Reactive with oxidizing agents

Reacts with reducing agents

Reactive with acids

Reacts with strong bases

Acetone ignites on contact with activated carbon, chromium trioxide, dioxygen difluoride + carbon dioxide, potassium-tert-butoxide, sulfuric acid + potassium dichromate

Acetone may form explosive mixtures with chromic anhydride, chromyl chloride, hexachloromelamine, hydrogen peroxide, nitric acid and acetic acid, nitric acid and sulfuric acid, nitrosyl chloride, nitrosyl chloride + platinum, nitrosyl perchlorate, nitryl perchlorate, permonosulfuric acid, potassium tert-butoxide, thiodiglycol, chloroform, bromine trifluoride, thiotriazolyl perchlorate, 2,4,6-trichloro-1,3,5-triazine + water, 2-methyl-1,3-butadiene, peroxomonosulfuric acid

An explosion occurred during an attempt to prepare bromoform from acetone by the haloform reaction

Chloroform and acetone interact vigorously and exothermally in presence of solid potassium hydroxide or calcium hydroxide to form 1,1,1-trichloro-2-hydroxy-2-methylpropane

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Incompatible materials.

Incompatible Materials:

- Oxidizing agents
- Reducing agents
- Bases
- Acids
- activated carbon
- chromium trioxide
- dioxygen difluoride + carbon dioxide
- Potassium dichromate or Sodium dichromate
- Potassium t-butoxide
- Hydrogen peroxide
- Chromic anhydride
- Chromyl chloride
- Hexachloromelamine
- Nitrosyl chloride + Platinum
- Nitrosyl chloride
- Bromine trifluoride
- Thiodiglycol
- 2,4,6-trichloro-1,3,5-triazine + water
- 2-Methyl-1,3-butadiene
- Chloroform

Hazardous decomposition products: Carbon monoxide. Carbon dioxide.

Other Information Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Skin. Eyes. Inhalation.

Acute Toxicity

Component Information

| | |
|---------|---------|
| Acetone | |
| CAS-No. | 67-64-1 |

LD50/oral/rat = 5800 mg/kg Oral LD50 Rat
LD50/oral/mouse = 3 gm/kg
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = 50100 mg/m³ Inhalation LC50 Rat 8 h
LC50/inhalation/mouse = 44 gm/m³/4H
Other LD50 or LC50information = >9400 uL/kg LD50 Dermal Guinea Pig
5340 mg/kg LD50 Oral Rabbit

| | |
|---------|---------|
| Benzene | |
| CAS-No. | 71-43-2 |

LD50/oral/rat = 810 mg/kg Oral LD50 Rat = 1800 mg/kg Oral LD50 Rat; 930-6400 mg/kg (RTECS)
LD50/oral/mouse = 4700 mg/kg
LD50/dermal/rabbit = >9400 mg/kg Dermal LD50 Rabbit (RTECS)
>8200 mg/kg (LOLI)
LD50/dermal/rat = No information available
LC50/inhalation/rat = 13050 - 16000 ppm Inhalation LC50 Rat 4 h (EU Commission IUCLID dataset)
44.66 mg/L Inhalation LC50 Rat 4 h (LOLI)
LC50/inhalation/mouse = No information available
Other LD50 or LC50information = >9400 ul/kg LD50 Guinea Pig

| | |
|--------------|---------|
| Formaldehyde | |
| CAS-No. | 50-00-0 |

LD50/oral/rat = 500 mg/kg Oral LD50 Rat (RTECS and LOLI)
100 mg/kg (RTECS)
LD50/oral/mouse = 500 mg/kg (RTECS)
385 mg/kg (RTECS)
42 mg/kg (RTECS)
LD50/dermal/rabbit = 270 mg/kg Dermal LD50Rabbit
LD50/dermal/rat = No information available
LC50/inhalation/rat = 0.578 mg/L Inhalation LC50 Rat 4 h
LC50/inhalation/mouse = No information available
Other LD50 or LC50information = 260 mg/kg oral LD50 Guinea Pig

Product Information

LD50/oral/rat =

Product code: A1041

Product name: ACETONE, FCC

VALUE- Acute Tox Oral = 5800

LD50/oral/mouse =

Value - Acute Tox Oral = 3000 mg/kg

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = 20000 mg/kg

LD50/dermal/rat

VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat

VALUE-Vapor = 76 mg/l (4-hr)

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: May cause skin irritation. Mildly to moderately irritating to the skin. It may be absorbed through the skin. If absorbed through skin it may cause systemic effects with symptoms similar to those of ingestion.

Eye Contact: Causes eye irritation. Moderately irritating to the eyes. May cause corneal injury.

Inhalation Irritating to respiratory system. May cause conjunctival irritation. May cause nausea, vomiting. May cause loss of appetite. May affect the brain. May affect the kidneys. May cause muscle weakness. May affect respiration (respiratory depression). Inhalation of high concentrations may cause central nervous system effects characterized by headache, dizziness, unsteady gait, drowsiness, lethargy, sleepiness lightheadedness, fainting, narcosis, confusion, loss of coordination, lassitude, speech abnormalities, tremor, unconciousness, coma. May cause metabolic acidosis. May cause other symptoms similar to those of ingestion.

Ingestion May cause digestive (gastrointestinal) tract irritation. Ingestion may cause nausea, vomiting. It may affect metabolism (ketosis/ketonemia/ketonuria). May cause hyperglycemia. May affect liver. May affect respiration. May affect the cardiovascular system (hypotension). May affect the cardiovascular system (weak rapid pulse, tachycardia). May cause metabolic acidosis. May affect urinary system (kidneys). It may affect the joints. It may affect the skeletal muscles. It may affect behavior/central nervous system (depression, headache, tremors, ataxia, hyperesthesia, stupor, sedation, fatigue, excitement, seizures, coma).

Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Prolonged or repeated skin contact may cause defatting and drying of the skin, and brittle nails. Prolonged or repeated inhalation may affect the brain. Prolonged or repeated inhalation may affect the blood (changes in red blood cell count, granulocytopenia). Prolonged or repeated inhalation may affect the cardiovascular system. Prolonged or repeated inhalation may affect the thyroid (evidence of thyroid hyperfunction). Prolonged or repeated ingestion may affect the spleen. Prolonged or repeated ingestion may affect the bladder. Prolonged or repeated ingestion may affect the liver, and kidneys. Prolonged or repeated ingestion may

affect the blood (normocytic anemia, macrocytosis). Prolonged or repeated inhalation may cause eye and throat irritation and bronchitis. Prolonged or repeated inhalation may cause nausea, gastritis, loss of appetite, and weight loss. Prolonged or repeated inhalation may cause central nervous system effects such as weakness, dizziness, drowsiness, and vertigo.

Sensitization: No information available.

Mutagenic Effects: May affect genetic material
Sex Chromosome Loss and Nondisjunction in *Saccharomyces cerevisiae* (yeast)
Cytogenetic analysis (Hamster fibroblast)

Carcinogenic effects: Not classifiable as a human carcinogen.

| Components | CAS-No. | IARC | ACGIH - Carcinogens | NTP | OSHA HCS - Carcinogens | Australia - Notifiable Carcinogenic Substances | Australia - Prohibited Carcinogenic Substances |
|--------------|---------|---|---|------------------------|------------------------------|---|--|
| Acetone | 67-64-1 | Not listed | A4 Not Classifiable as a Human Carcinogen | Not listed | Not listed | Not listed | Not listed |
| Benzene | 71-43-2 | Monograph 100F [2012] Supplement 7 [1987] Monograph 29 [1982] | A1 Confirmed Human Carcinogen | Known Human Carcinogen | Present see 29 CFR 1910.1028 | Present includes pure substance or mixtures containing >=0.1% (w/w) concentration. Restricted use: all uses involving Benzene as a feedstock containing >50% of Benzene by volume; genuine research or analysis | Not listed |
| Formaldehyde | 50-00-0 | Group 1 - Carcinogenic to Humans - Monograph 100F [2012] Monograph 88 [2006] Monograph 62 [1995] Supplement 7 [1987] | A2 Suspected Human Carcinogen | Known Human Carcinogen | Present see 29 CFR 1910.1048 | Not listed | Not listed |

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity Suspected of damaging fertility or the unborn child

Reproductive Effects: No information available

Developmental Effects: Possible risk of harm to the unborn child

Teratogenic Effects: No information available

Specific Target Organ Toxicity

Product code: A1041

Product name: ACETONE, FCC

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STOT - single exposure
STOT - repeated exposure
Target Organs:

Respiratory system. central nervous system.
 No information available.
 Skin. Central nervous system. Peripheral nervous system. Kidneys. Liver.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Acetone - 67-64-1

Freshwater Fish Species Data: 4.74 - 6.33 mL/L LC50 *Oncorhynchus mykiss* 96 h 1
 8300 mg/L LC50 *Lepomis macrochirus* 96 h 1
 6210 - 8120 mg/L LC50 *Pimephales promelas* 96 h static 1
Water Flea Data: 10294 - 17704 mg/L EC50 *Daphnia magna* 48 h
 12600 - 12700 mg/L EC50 *Daphnia magna* 48 h

Benzene - 71-43-2

Freshwater Algae Data: 29 mg/L EC50 *Pseudokirchneriella subcapitata* 72 h
Freshwater Fish Species Data: 10.7 - 14.7 mg/L LC50 *Pimephales promelas* 96 h flow-through 1 5.3 mg/L LC50
Oncorhynchus mykiss 96 h flow-through 1 22.49 mg/L LC50 *Lepomis macrochirus*
 96 h static 1 28.6 mg/L LC50 *Poecilia reticulata* 96 h static 1 22330 - 41160 µg/L
 LC50 *Pimephales promelas* 96 h static 1 70000 - 142000 µg/L LC50 *Lepomis*
macrochirus 96 h static 1
Water Flea Data: 8.76 - 15.6 mg/L EC50 *Daphnia magna* 48 h 10 mg/L EC50 *Daphnia magna* 48 h

Formaldehyde - 50-00-0

Freshwater Fish Species Data: 0.032 - 0.226 mL/L LC50 *Oncorhynchus mykiss* 96 h flow-through 1
 100 - 136 mg/L LC50 *Oncorhynchus mykiss* 96 h static 1
 22.6 - 25.7 mg/L LC50 *Pimephales promelas* 96 h flow-through 1
 23.2 - 29.7 mg/L LC50 *Pimephales promelas* 96 h static 1
 1510 µg/L LC50 *Lepomis macrochirus* 96 h static 1
 41 mg/L LC50 *Brachydanio rerio* 96 h static 1
Water Flea Data: 11.3 - 18 mg/L EC50 *Daphnia magna* 48 h
 2 mg/L LC50 *Daphnia magna* 48 h

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

| Components | CAS-No. | RCRA - F Series Wastes | RCRA - K Series Wastes | RCRA - P Series Wastes | RCRA - U Series Wastes |
|--------------|---------|------------------------|------------------------|------------------------|-----------------------------------|
| Acetone | 67-64-1 | None | None | None | U002 Ignitable waste |
| Benzene | 71-43-2 | None | None | None | U019 ignitable waste, toxic waste |
| Formaldehyde | 50-00-0 | None | None | None | U122 |

14. TRANSPORT INFORMATION

DOT

UN-No: UN1090
Proper Shipping Name: Acetone
Hazard Class: 3
Subsidiary Class: No information available
Packing group: II
Emergency Response Guide Number: No information available
Marine Pollutant: No data available
DOT RQ (lbs): 5000 lbs./2270 kg
Special Provisions: No Information available
Symbol(s): [DOT]: (R5) - Identifies a material that is a hazardous substance that has a reportable quantity (RQ) of 5000 pounds (2270 Kilograms).
Description: UN1090,Acetone ,3,,PG II

TDG (Canada)

UN-No: UN1090
Proper Shipping Name: Acetone
Hazard Class: 3
Subsidiary Risk: No information available
Packing Group: II
Marine Pollutant: No Information available
Description: ACETONE,3,UN1090,PG II

ADR

UN-No: UN1090
Proper Shipping Name: Acetone
Hazard Class: 3
Packing Group: II
Subsidiary Risk: No information available
Description: UN1090 Acetone,3,II

IMO / IMDG

UN-No: UN1090
Proper Shipping Name: Acetone (Acetone solutions)
Hazard Class: 3
Subsidiary Risk: No information available
Packing Group: II
Marine Pollutant: No information available
EMS: F-E

RID

UN-No: UN1090
Proper Shipping Name: Acetone
Hazard Class: 3
Subsidiary Risk: 3
Packing Group: II
Description: UN1090 Acetone,3,II,RID

ICAO

UN-No: UN1090
Proper Shipping Name: Acetone
Hazard Class: 3
Subsidiary Risk: No information available
Packing Group: II
Description: Acetone,3,UN1090,PG II

IATA

UN-No: UN1090
Proper Shipping Name: Acetone
Hazard Class: 3
Subsidiary Risk: No information available
Packing Group: II
ERG Code: 3H
Special Provisions No information available
Description: UN1090,Acetone,3,PG II

15. REGULATORY INFORMATION**International Inventories**

| Components | CAS-No. | U.S. TSCA | KOREA KECL | Philippines (PICCS) | Japan ENCS | CHINA | Australia (AICS) | EINECS-No. |
|--------------|---------|------------------|------------------|---------------------|-----------------|---------|------------------|-------------------|
| Acetone | 67-64-1 | Present (ACTIVE) | Present KE-29367 | Present | Present (2)-542 | Present | Present | Present 200-662-2 |
| Benzene | 71-43-2 | Present(ACTIVE) | Present KE-02150 | Present | Present (3)-1 | Present | Present | Present 200-753-7 |
| Formaldehyde | 50-00-0 | Present(ACTIVE) | Present KE-17074 | Present | Present (2)-482 | Present | Present | Present 200-001-8 |

U.S. Regulations*Acetone*

Massachusetts RTK: Present
New Jersey RTK Hazardous Substance List: Present (sn 006)
New Jersey - Discharge Prevention - List of Hazardous Substances: Present
Pennsylvania RTK: Environmental hazard
Pennsylvania RTK - Environmental Hazard List Present
Minnesota - Hazardous Substance List: Present
New York Release Reporting - List of Hazardous Substances:
 = 1 lb RQ (land/water)
 = 5000 lb RQ (air)
Louisiana Reportable Quantity List for Pollutants: Listed
California Directors List of Hazardous Substances: Present

FDA - Direct Food Additives 21 CFR 173.210

FDA - 21 CFR - Total Food Additives 173.210 175.105 175.320 176.180 176.300 177.2600 73.1 73.30 73.345 73.615

Benzene

Massachusetts RTK: Present
New Jersey RTK Hazardous Substance List: 0197
New Jersey (EHS) List: 0197 500 lb TPQ
New Jersey - Discharge Prevention - List of Hazardous Substances: Present
Pennsylvania RTK: Environmental hazard
 Present
 Special hazardous substance
Pennsylvania RTK - Environmental Hazard List Present
Pennsylvania RTK - Special Hazardous Substances Present
Michigan - Critical Materials List: Present
Minnesota - Hazardous Substance List: Present
New York Release Reporting - List of Hazardous Substances:
 10 lb RQ
 1 lb RQ
Connecticut - Carcinogenic Substances: Present
Louisiana Reportable Quantity List for Pollutants: 10lbfinal RQreceives an adjustable RQ of 10 lbs based on potential carcinogenicity in August 14, 1989 final rule
 4.54kgfinal RQreceives an adjustable RQ of 10 lbs based on potential carcinogenicity in August 14, 1989 final rule
California Directors List of Hazardous Substances: Present

FDA - 21 CFR - Total Food Additives 172.560, 175.105

Formaldehyde

Massachusetts RTK: Present
Massachusetts EHS: carcinogen; extraordinarily hazardous
New Jersey RTK Hazardous Substance List: 0946
New Jersey (EHS) List: 0946 500 lb TPQ

New Jersey - Discharge Prevention - List of Hazardous Substances: Present

New Jersey TCPA - EHS: 175lbTQ

15000lbTQ

Pennsylvania RTK: Environmental hazard

Special hazardous substance

Pennsylvania RTK - Environmental Hazard List Present

Pennsylvania RTK - Special Hazardous Substances Present

Michigan PSM HHC: = 1000 lb TQ

Minnesota - Hazardous Substance List: Present

New York Release Reporting - List of Hazardous Substances:

100 lb RQ

1 lb RQ

Louisiana Reportable Quantity List for Pollutants: 100lbfinal RQ

45.4kgfinal RQ


California Directors List of Hazardous Substances: Present

FDA - Direct Food Additives 21 CFR 173.340


FDA - 21 CFR - Total Food Additives 173.340 175.105 175.210 175.300 176.170 176.180 176.200 177.1200 177.2410 178.3120 573.460

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

 WARNING: This product can expose you to chemicals including (see table below) which is (are) known to the State of California to cause cancer. For more information go to www.p65warnings.ca.gov.

Chemicals Known to the State of California to Cause Reproductive Toxicity:

 WARNING: This product can expose you to chemicals including (see table below) which is (are) known to the State of California to cause birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.

| Components | CAS-No. | Carcinogen | Developmental Toxicity | Male Reproductive Toxicity | Female Reproductive Toxicity: |
|--------------|---------|------------|------------------------|----------------------------|-------------------------------|
| Acetone | 67-64-1 | Not Listed | Not Listed | Not Listed | Not Listed |
| Benzene | 71-43-2 | carcinogen | developmental toxicity | male reproductive toxicity | Not Listed |
| Formaldehyde | 50-00-0 | carcinogen | Not Listed | Not Listed | Not Listed |

CERCLA/SARA

| Components | CAS-No. | CERCLA - Hazardous Substances and their Reportable Quantities | Section 302 Extremely Hazardous Substances and TPQs | Section 302 Extremely Hazardous Substances and RQs | Section 313 - Chemical Category | Section 313 - Reporting de minimis |
|--------------|---------|---|---|--|---------------------------------|------------------------------------|
| Acetone | 67-64-1 | 5000 lb final RQ 2270 kg final RQ | None | None | None | None |
| Benzene | 71-43-2 | 10 lb final RQ 4.54 kg final RQ | None | None | None | 0.1 % de minimis concentration |
| Formaldehyde | 50-00-0 | 100 lb final RQ 45.4 kg final RQ | 100 lb EPCRA RQ | None | None | 0.1 % de minimis concentration |

U.S. TSCA

| Components | CAS-No. | TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS) | TSCA 8(d) -Health and Safety Reporting |
|--------------|---------|---|--|
| Acetone | 67-64-1 | Not Applicable | Not Applicable |
| Benzene | 71-43-2 | Not Applicable | Not Applicable |
| Formaldehyde | 50-00-0 | Not Applicable | Not Applicable |

Canada

WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component
 Acetone
 67-64-1 (99-100.5)
 Benzene
 71-43-2 (0-0.003)

WHMIS 2015 Hazard Classification
 Flammable liquids - Category 2: H225 Highly flammable liquid and vapour.; Serious Eye Damage/Eye Irritation - Category 2A: H319 Causes serious eye irritation.
 Flammable liquids - Category 2: H225 Highly flammable liquid and vapour.; Skin corrosion/irritation - Category 2: H315 Causes skin irritation.; Serious Eye Damage/Eye Irritation - Category 2: H319 Causes serious eye irritation.; Germ cell mutagenicity - Category 1B: H340 May cause genetic defects.; Carcinogenicity - Category 1A: H350 May cause cancer.; Specific target organ toxicity - Repeated exposure - Category 1: H372 Causes damage to organs through prolonged or repeated exposure.; Aspiration hazard - Category 1: H304 May be fatal if swallowed and enters airways.
 Flammable gases - Category 1: H220 Extremely flammable gas.; Flammable liquids - Category 3: H226 Flammable liquid and vapour. (solution, 37%); Corrosive to Metals - Category 1: H290 May be corrosive to metals. (solution, 37%); Acute toxicity - Oral - Category 4: H302 Harmful if swallowed. (solution, 37%); Acute toxicity - Dermal - Category 3: H311 Toxic in contact with skin. (solution, 37%); Acute toxicity - Inhalation - Category 2: H330 Fatal if inhaled.; Skin corrosion/irritation - Category 2: H315 Causes skin irritation. (solution, 37%); Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage. (solution, 37%); Serious Eye Damage/Eye Irritation - Category 2: H319 Causes serious eye irritation.; Skin sensitizers - Category 1A: H317 May cause allergic skin reaction. (solution, 37%); Germ cell mutagenicity - Category 2: H341 Suspected of causing genetic defects.; Carcinogenicity - Category 1A: H350 May cause cancer.; Reproductive Toxicity - Category 1: H360 May damage fertility or the unborn child. (solution, 37%; contains 16% of a substance that is toxic to reproduction (Methyl alcohol)); Specific target organ toxicity - Single exposure - Category 2: H371 May cause damage to organs. (solution, 37%); Specific target organ toxicity - Single exposure - Category 3: H335 May cause respiratory irritation.; Specific target organ toxicity - Single exposure - Category 3: H336 May cause drowsiness or dizziness. (solution, 37%)

Formaldehyde
 50-00-0 (0-0.002)

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

WHMIS 1988 Hazard Class
 B2 Flammable liquid
 D2B Toxic materials

Components
 Acetone
 Benzene
 Formaldehyde

WHMIS 1988
 B2 D2B
 B2,D2A,D2B
 A B1 D1A D2A D2B
 B3 D1A D2A D2B E regulated under Formol

Canada Controlled Products Regulation:
 This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

| Components | WHMIS Ingredient Disclosure List - |
|--------------|------------------------------------|
| Acetone | 1 % |
| Benzene | 0.1 % |
| Formaldehyde | 0.1 % |

Inventory

| Components | CAS-No. | Canada (DSL) | Canada (NDSL) |
|--------------|---------|--------------|---------------|
| Acetone | 67-64-1 | Present | Not Listed |
| Benzene | 71-43-2 | Present | Not Listed |
| Formaldehyde | 50-00-0 | Present | Not Listed |

| Components | CAS-No. | CEPA Schedule I - Toxic Substances |
|------------|---------|------------------------------------|
| | | |

| | | |
|--------------|---------|---|
| Acetone | 67-64-1 | Not listed |
| Benzene | 71-43-2 | Present |
| Formaldehyde | 50-00-0 | Present |
| Components | CAS-No. | CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting |
| Acetone | 67-64-1 | Not listed |
| Benzene | 71-43-2 | Not listed |
| Formaldehyde | 50-00-0 | Not listed |

EU Classification

EU GHS - SV - CLP 1272/2008

| Components | CAS-No. | EU GHS - SV - CLP (1272/2008) |
|--------------|---------|--|
| Acetone | 67-64-1 | |
| Benzene | 71-43-2 | Flammable liquids - Flam. Liq. 2: H225 Highly flammable liquid and vapour.; Skin corrosion/irritation - Skin Irrit. 2: H315 Causes skin irritation.; Serious Eye Damage/Eye Irritation - Eye Irrit. 2: H319 Causes serious eye irritation.; Germ cell mutagenicity - Muta. 1B: H340 May cause genetic defects.; Carcinogenicity - Carc. 1A: H350 May cause cancer.; Specific target organ toxicity - Repeated exposure - STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure. (No information to prove exclusion of certain routes of exposure); Aspiration hazard - Asp. Tox. 1: H304 May be fatal if swallowed and enters airways.601-020-00-8 |
| Formaldehyde | 50-00-0 | |

EU - CLP (1272/2008)

R-phrase(s)

R11 - Highly flammable.
R36 - Irritating to eyes.
R66 - Repeated exposure may cause skin dryness or cracking.
R67 - Vapors may cause drowsiness and dizziness.

S -phrase(s)

S 9 - Keep container in a well-ventilated place.
S16 - Keep away from sources of ignition - No smoking.
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

| Components | CAS-No. | Classification | Concentration Limits: | Safety Phrases |
|--------------|---------|--|-----------------------|-----------------------|
| Acetone | 67-64-1 | F; R11 Xi; R36 R66 R67 | No information | S2 S9 S16 S26 |
| Benzene | 71-43-2 | F; R11 Xi; R36/38 Carc.Cat.1; R45 Muta.Cat.2; R46 T; R48/23/24/25 Xn; R65 | No information | S53 S45 |
| Formaldehyde | 50-00-0 | | 0.2%≤C<1% Xi;R43 | S(1/2)-S26-S36/37/39- |

| | | | | |
|--|--|--|---|---------|
| | | | 1%<=C<5% Xn;R40-43 25%<=C T;R23/24/25-34-40-43 5%<=C<25% Xn;R20/21/22-36/37/3 8-40-43 | S45-S51 |
|--|--|--|---|---------|

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xi - Irritant.

F - Highly flammable.

Xi



F



16. OTHER INFORMATION

Preparation Date: 1/15/2014
Revision Date: 4/04/2018
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet