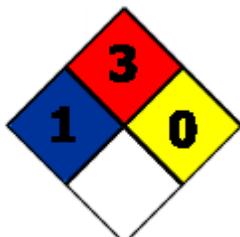


## MATERIAL SAFETY DATA SHEET

NFPA	HMIS	Personal Protective Equipment
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Health Hazard	2
Fire Hazard	3
Reactivity	0



See Section 8.

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<b>Product code:</b>	A1020
<b>Product Name:</b>	ACETONE, REAGENT, ACS
<b>Chemical Name:</b>	2-Propanone
<b>Synonyms:</b>	beta-Ketopropane Dimethyl ketone Dimethylformaldehyde Dimethylketal Ketone propane Ketone, dimethyl Methyl ketone Propanone Pyroacetic acid Pyroacetic ether Acétone (French)
<b>Recommended use:</b>	Solvent.
<b>CAS #:</b>	67-64-1
<b>Formula:</b>	C3-H6-O
<b>RTECS #</b>	AL3150000
<b>CI#:</b>	Not available
<b>Supplier:</b>	Spectrum Chemicals and Laboratory Products, Inc. 14422 South San Pedro St. Gardena, CA 90248 (310) 516-8000
<b>Emergency Telephone Number:</b>	CHEMTREC: 1-800-424-9300
<b>Contact Person:</b>	Martin LaBenz (West Coast)
<b>Contact Person:</b>	Regina Wachenheim (East Coast)

### 2. HAZARDS IDENTIFICATION

## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

DANGER FLAMMABLE! . WARNING! IRRITANT. Irritating to eyes. Irritating to respiratory system. May cause skin irritation.

**Odor:**  
Fruity. Mint-like. Fragrant.  
Ethereal.

**Physical state:**  
Liquid.

**Appearance:**  
No information available

**Color:**  
Clear. Colorless.

#### OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

### POTENTIAL HEALTH EFFECTS

#### Principal Routes of Exposure:

Ingestion. Skin. Eyes. Inhalation.

#### Acute Potential Health Effects:

##### 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 nausea and vomiting. May cause central nervous system effects. May affect respiration. May cause cardiovascular effects. May cause metabolic acidosis. May cause other symptoms similar to those of ingestion.

##### Ingestion:

Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhoea. May cause central nervous system effects. May affect the liver. May affect the cardiovascular system. May affect the pancreas. It may affect metabolism. It may affect the kidneys. It may affect the skeletal muscles. It may affect the joints. May cause metabolic acidosis.

#### Chronic Potential Health Effects:

<b>Carcinogen Status:</b>	A4- Not classifiable as a human carcinogen by ACGIH
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**Target Organs:** Skin. Central nervous system. Peripheral nervous system. Kidneys. Liver.

**Teratogenic Effects:** No information available

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

**Aggravated Medical Conditions:** No information available

See Section 11 for additional Toxicological Information

### POTENTIAL ENVIRONMENTAL EFFECTS

No information available

### 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

<b>General Advice:</b>	Poison information centres in each State capital city can provide additional assistance for scheduled poisons (13 1126)
<b>Skin Contact:</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention. If skin irritation persists, call a physician.
<b>Eye Contact:</b>	Flush eye with water for 15 minutes. Get medical attention.
<b>Inhalation:</b>	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
<b>Ingestion:</b>	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.
<b>Notes to Physician:</b>	Treat symptomatically

### 5. FIRE-FIGHTING MEASURES

#### Flammable Properties

<b>Flashpoint (°C/°F):</b>	-20 to -17 °C/-4 to 1.4 °F -9.4 to -9 °C/15.1 to 15.8 °F
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#### Flash Point Tested according to:

Closed cup  
Open cup

<b>Lower Explosion Limit (%):</b>	2.5-2.6%
<b>Upper Explosion Limit (%):</b>	12.8%

<b>Autoignition Temperature (°C/°F):</b>	465 °C/869 °F
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<b>Suitable Extinguishing Media:</b>	Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Alcohol-resistant foam. Water spray.
<b>Unsuitable Extinguishing Media:</b>	Do not use a solid (straight) water stream as it may scatter and spread fire.
<b>Hazardous Combustion Products:</b>	Carbon monoxide; Carbon dioxide
<b>Specific hazards:</b>	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 Equipment for Firefighters:**

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

**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.

## 6. ACCIDENTAL RELEASE MEASURES

**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. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas. In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

**Methods for Cleaning Up:**

Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

**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.

**Storage****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 . sulfuric acid + potassium 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

**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.

**Personal Protective Equipment**

- Eye protection:** Goggles. Safety glasses with side-shields.
- 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.

**National occupational exposure limits****United States**

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Acetone - 67-64-1	1000 ppm TWA 2400 mg/m <sup>3</sup> TWA	250 ppm TWA 590 mg/m <sup>3</sup> 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	0.3 ppm Ceiling	None

**Canada**

Components	Alberta	British Columbia	Ontario	Quebec
Acetone 67-64-1	500 ppm TWA 1200 mg/m <sup>3</sup> TWA 750 ppm STEL 1800 mg/m <sup>3</sup> STEL	250 ppm TWA 500 ppm STEL	500 ppm TWA 750 ppm STEL	500 ppm TWAEV 1190 mg/m <sup>3</sup> TWAEV 1000 ppm STEV 2380 mg/m <sup>3</sup> STEV
Benzene 71-43-2	0.5 ppm TWA 1.6 mg/m <sup>3</sup> TWA 2.5 ppm STEL 8 mg/m <sup>3</sup> STEL	0.5 ppm TWA 2.5 ppm STEL	0.5 ppm TWA	1 ppm TWAEV 3 mg/m <sup>3</sup> TWAEV 5 ppm STEV 15.5 mg/m <sup>3</sup> STEV
Formaldehyde 50-00-0	1 ppm Ceiling 1.3 mg/m <sup>3</sup> Ceiling 0.75 ppm TWA 0.9 mg/m <sup>3</sup> TWA	0.3 ppm TWA 1 ppm Ceiling	1.5 ppm Ceiling 1.0 ppm STEL	2 ppm Ceiling 3 mg/m <sup>3</sup> Ceiling

**Australia and Mexico**

Components	Australia	Mexico
Acetone 67-64-1	1000 ppm STEL 2375 mg/m <sup>3</sup> STEL 1185 mg/m <sup>3</sup> TWA 500 ppm TWA	1000 ppm TWA 2400 mg/m <sup>3</sup> TWA 1260 ppm STEL 3000 mg/m <sup>3</sup> STEL
Benzene 71-43-2	1.0 ppm/3.2 mg/m <sup>3</sup> TWA confirmed carcinogen	1 ppm TWA 3.2 mg/m <sup>3</sup> TWA 5 ppm STEL 16 mg/m <sup>3</sup> STEL
Formaldehyde 50-00-0	1 ppm/1.2 mg/m <sup>3</sup> TWA 2 ppm/2.5 mg/m <sup>3</sup> STEL probable carcinogen	2 ppm Peak 3 mg/m <sup>3</sup> Peak

**9. PHYSICAL AND CHEMICAL PROPERTIES**

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Liquid.	<b>Appearance:</b> No information available	<b>Color:</b> Clear. Colorless.
<b>Odor:</b> Fruity. Mint-like. Fragrant. Ethereal.	<b>Taste</b> Pungent. Sweetish.	<b>Molecular/Formula weight:</b> 58.08
<b>Flash point (°C):</b> -20 °C	<b>Lower Explosion Limit (%):</b> 2.5-2.6%	<b>Upper Explosion Limit (%):</b> 12.8%
<b>Autoignition Temperature (°C/°F):</b> 465 °C/869 °F	<b>pH:</b> No information available	<b>Melting point/range(°C/°F):</b> -94.7 to -95.4 °C/-138.46 to -139.72
<b>Boiling point/range(°C/°F):</b> 56.2 °C/133.2 °F	<b>Decomposition temperature(°C/°F):</b> No information available	<b>Specific gravity:</b> 0.79 @ 20 °C
<b>Density (g/cm<sup>3</sup>):</b> 0.780 @ 30 °C 0.784 @ 25 °C 0.79 @ 20 °C	<b>Bulk density:</b> No information available	<b>Vapor pressure @ 20°C (kPa):</b> 24
<b>Evaporation rate:</b> 5.6 (Butyl acetate = 1)	<b>Vapor density:</b> 2.0	<b>VOC content (g/L):</b> 780-790
<b>Odor threshold (ppm):</b> 62-140	<b>Partition coefficient (n-octanol/water):</b> - 0.24	<b>Miscibility:</b> Miscible with water Miscible with Ether Miscible with Chloroform Miscible with Benzene Miscible with alcohol
<b>Solubility:</b> No information available		

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable at normal conditions
<b>Conditions to avoid:</b>	Heat. Ignition sources. Incompatible materials.
<b>Incompatible Materials:</b>	Oxidizing agents. Reducing agents. Bases. Acids. activated carbon. chromium trioxide . dioxygen difluoride + carbon dioxide . sulfuric acid + potassium 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.
<b>Hazardous decomposition products:</b>	Carbon monoxide. Carbon dioxide.

**Possibility of Hazardous Reactions:**

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, thiotriazyl 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

**Polymerization:** Hazardous polymerisation does not occur

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### Component Information

##### Acetone - 67-64-1

**LD50/oral/rat** = 5800 mg/kg Oral LD50 Rat

**LD50/oral/mouse** 3 gm/kg

**LD50/dermal/rabbit** = 20000 mg/kg

**LD50/dermal/rat** = No information available

**LC50/inhalation/rat** =

76 mg/l 4H

50100 mg/m<sup>3</sup> 8H

**LC50/inhalation/mouse** = 44 gm/m<sup>3</sup>/4H

**Other LD50 or LC50 information** = >9400 uL/kg LD50 Dermal Guinea Pig

5340 mg/kg LD50 Oral Rabbit

##### Benzene - 71-43-2

**LD50/oral/rat** = 1800 mg/kg (LOLI)

930-6400 mg/kg (RTECS)

**LD50/oral/mouse** 4700 mg/kg

**LD50/dermal/rabbit** = >9400 uL/kg

**LD50/dermal/rat** = No information available

**LC50/inhalation/rat** =

13050-14380 ppm 4 h(LOLI)

1000 ppm 7 h (RTECS)

**LC50/inhalation/mouse** = No information available

**Other LD50 or LC50 information** = >9400 uL/kg LD50 Dermal Guinea Pig

##### Formaldehyde - 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  
**LD50/dermal/rat** = No information available  
**LC50/inhalation/rat** =  
0.578 mg/L Inhalation LC50 Rat 4 h (LOLI and IUCLID)  
250 ppm Inhalation LC50 Rat 4 h (LOLI, RTECS, and IUCLID)  
578 ppm 4 h (IUCLID)  
578 mg/m<sup>3</sup> 2 h (RTECS)  
**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50 information** = 260 mg/kg oral LD50 Guinea Pig

## Product Information

**LC50/inhalation/rat**  
50100 mg/m<sup>3</sup>/8H  
76 mg/l 4H  
**LC50/Inhalation/mouse** 44 gm/m<sup>3</sup>/4H  
**LD50/dermal/rabbit** 20000mg/kg  
**LD50/dermal/rat** No information available  
**LD50/oral/mouse** 3000mg/kg  
**LD50/oral/rat** 5800 mg/kg

## Local Effects

**Skin irritation:** May cause skin irritation. Mild skin irritation.

**Eye irritation:** Causes eye irritation. 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 lightheadness, 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).

**Sensitization:** No information available

## Chronic Toxicity

**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.

**Carcinogenic effects:** Not classifiable as a human carcinogen.

Components	NTP	IARC	OSHA HCS - Carcinogens	ACGIH - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
Acetone	Not listed	Not listed	Not listed	A4 Not Classifiable as a Human Carcinogen	Not listed	Not listed
Benzene	Known Human Carcinogen	Group 1 - Monograph 100F [in preparation] Supplement 7 [1987] Monograph 29 [1982]	Present Cancer hazard - see 29 CFR 1910.1028	A1 Confirmed Human Carcinogen	Not listed	Present when used in feedstock containing more than 50% of Benzene by volume
Formaldehyde	Known Human Carcinogen	IARC Group 1 - Monograph 100F [in preparation] Monograph 88 [2006] Monograph 62 [1995] Supplement 7 [1987]	Present Irritant and potential cancer hazard - see 29 CFR 1910.1048	A2 Suspected Human Carcinogen	Not listed	Not listed

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

**Reproductive Effects:** May cause adverse reproductive effects based on animal test data

**Teratogenic Effects:** No information available

**Target Organs:** Skin. Central nervous system. Peripheral nervous system. Kidneys. Liver.

## 12. ECOLOGICAL INFORMATION

### ECOTOXICITY

**Toxicity to terrestrial and aquatic plants and animals:** Information given is based on data on the components and the ecotoxicology of similar products

**Ecotoxicity effects:** Aquatic environment.

**Aquatic toxicity:**

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  
22330-41160 µg/L LC50 Pimephales promelas 96 h static 1  
70000-142000 µg/L LC50 Lepomis macrochirus 96 h static 1  
22.49 mg/L LC50 Lepomis macrochirus 96 h static 1  
28.6 mg/L LC50 Poecilia reticulata 96 h static 1  
5.3 mg/L LC50 Oncorhynchus mykiss 96 h flow-through 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

**Mobility:** No information available

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available

**13. DISPOSAL CONSIDERATIONS**

**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	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Acetone	None	None	None	U002 Ignitable waste
Benzene	None	None	None	U019 Ignitable waste, Toxic waste
Formaldehyde	None	None	None	U122

**14. TRANSPORT INFORMATION**

**DOT**

**UN-No:** UN1090  
**Proper Shipping Name:** Acetone  
**Hazard Class:** 3  
**Packing Group:** II

**Subsidiary Risk:** Not applicable  
**Marine Pollutant** No data available  
**ERG No:** 127  
**DOT RQ (lbs):** 5000 lbs./2270 kg  
**Symbol(s):** R5

**TDG (Canada)**

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

**ADR**

**UN-No:** UN1090  
**Proper Shipping Name:** Acetone  
**Hazard Class:** 3  
**Packing Group:** II  
**Subsidiary Risk:** No information available  
**Classification Code:** No information available  
**Description:** No information available  
**CEFIC Tremcard No:** No information available

**IMO / IMDG**

**UN-No:** UN1090  
**Proper Shipping Name:** Acetone (Acetone solutions)  
**Hazard Class:** 3  
**Packing Group:** II  
**Subsidiary Risk:** No information available  
**Description:** No information available  
**IMDG Page:** No information available  
**Marine Pollutant** No information available  
**EMS:** F-E  
**MFAG:** No information available  
**Maximum Quantity:** No information available

**RID**

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

**ICAO**

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

**IATA**

**UN-No:** UN1090  
**Proper Shipping Name:** Acetone  
**Hazard Class:** 3

**Packing Group:** II  
**Subsidiary Risk:** No information available  
**ERG Code:** 3H  
**Description:** No information available

## 15. REGULATORY INFORMATION

### International Inventories

Components	U.S. TSCA	Philippines (PICCS)	KOREA KECL	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Acetone	Present	Present	Present KE-29367	2-542	Present	Present	Present 200-662-2
Benzene	Present	Present	Present KE-02150	3-1	Present	Present	Present 200-753-7
Formaldehyde	Present	Present	Present KE-17074	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)  
**Louisana Reportable Quantity List for Pollutants:** Listed  
**California Directors List of Hazardous Substances:** Present

#### Benzene

**Massachusetts RTK:** Present  
**New Jersey RTK Hazardous Substance List:** Present  
**New Jersey (EHS) List:** Present  
**New Jersey - Discharge Prevention - List of Hazardous Substances** Present  
**Pennsylvania RTK:** Environmental hazard  
 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  
**Louisana 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

#### Formaldehyde

**Massachusetts RTK:** Present  
**Massachusetts EHS:** carcinogen; extraordinarily hazardous  
**New Jersey RTK Hazardous Substance List:** Present  
**New Jersey (EHS) List:** Present  
**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

Acetone

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

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 contains a chemical known to the State of California to cause cancer. (See table below)

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

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm (See table below)

Table with 5 columns: Components, Carcinogen, Developmental Toxicity, Male Reproductive Toxicity, Female Reproductive Toxicity. Rows include Acetone, Benzene, and Formaldehyde.

CERCLA/SARA

Table with 6 columns: Components, 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. Rows include Acetone, Benzene, and Formaldehyde.

U.S. TSCA

Table with 3 columns: Components, TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS), TSCA 8(d) -Health and Safety Reporting. Rows include Acetone, Benzene, and Formaldehyde.

Canada

WHMIS hazard class:

B2 Flammable liquid
D2B Toxic materials

Acetone

B2 D2B

Benzene

B2 D2A D2B

Formaldehyde

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.

Table with 2 columns: Components, WHMIS Ingredient Disclosure List -

**Acetone**

Acetone	1 %
Benzene	0.1 %
Formaldehyde	0.1 %

**Inventory**

Components	Canada (DSL)	Canada (NDSL)
Acetone	Present	Not Listed
Benzene	Present	Not Listed
Formaldehyde	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Acetone	Not listed	Not listed
Benzene	Present	Not listed
Formaldehyde	Present	Not listed

**EU Classification****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	Classification	Safety Phrases
Acetone	F; R11 Xi; R36 R66 R67	S2 S9 S16 S26
Benzene	F; R11 Xi; R36/38 Carc.Cat.1; R45 Muta.Cat.2; R46 T; R48/23/24/25 Xn; R65	S53 S45
Formaldehyde	C;R34 Carc. Cat.3;R40 R23 R43 T;R23/24/25	S(1/2)-S26-S36/37/39-S45-S51

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

**Indication of danger:**

Flammable

Xi - Irritant.

Xi



F

**16. OTHER INFORMATION**

The MSDS format complies with ANSI Z400.1-2004 standards.

**Preparation Date:** 01-Apr-2013

**Reason for revision:** Not applicable

**Prepared by:** Sonia Owen

**Literature reference:** No information available

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) 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 MSDS. The physical properties reported in this MSDS 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 MSDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.