1. Identification

Product Name: Acetone

Cat No.: A9-4; A9-20; A9-200; A11-1; A11-4; A11-20; A11-200; A11S-4; A13-20; A13-200; A16F-1GAL; A16P-1GAL; A16P-4; A16S-4; A16S-20; A18-1; A18-4; A18-20; A18-20LC; A18-200; A18-200LC; A18-500; A18CU1300; A18FB-19; A18FB-50; A18FB-115; A18FB-200; A18P-4; A18POP-19; A18POPB-50; A18RB-19; A18RB-50; A18RB-115; A18RB-200; A18RS-28; A18RS-50; A18RS-115; A18RS-200; A18S-4; A18SK-4; A18SS-19; A18SS-28; A18SS-50; A18SS-115; A18SS-200; A19-1; A19-4; A19RS-115; A19RS-200; A40-4; A928-4; A929-1; A929-4; A929-4LC; A929RS-19; A929RS-50; A929RS-200; A929SK-4; A929SS-28; A929SS-50; A929SS-115; A929SS-200; A946-4; A946-4LC; A946FB-200; A946RB-19; A946RB-50; A946RB-115; A946RB-200; A949-1; A949-4; A949-4LC; A949CU-50; A949N-119; A949N-219; A949POP-19; A949RS-28; A949RS-50; A949RS-115; A949SK-1; A949SK-4; A949SS-19; A949SS-28; A949SS-50; A949SS-115; A949SS-200; BP2403-1; BP2403-4; BP2403-20; BP2403-RS200; BP2404-1; BP2404-4; BP2404-SK1; BP2404-SK4; HC300-1GAL; S70091; 22050131; 22050295; XXA9ET200LI; NC2396838

CAS-No: 67-64-1

Synonyms: 2-Propanone; Dimethyl ketone; (Certified ACS, HPLC, OPTIMA, Histological, Spectranalyzed, NF/FCC/EP, Pesticide, Electronic, GC Resolv, SAFE-COTE)

Recommended Use: Laboratory chemicals.

Uses advised against: Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company: Fisher Scientific
Importer/Distributor: Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

Manufacturer: Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification
Classification

WHMIS 2015 Classification  Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

<table>
<thead>
<tr>
<th>Flammable liquids</th>
<th>Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious Eye Damage/Eye Irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Target Organs - Central nervous system (CNS).</td>
<td></td>
</tr>
<tr>
<td>Specific target organ toxicity - (repeated exposure)</td>
<td>Category 2</td>
</tr>
<tr>
<td>Health Hazards Not Otherwise Classified</td>
<td>Category 1</td>
</tr>
<tr>
<td>Repeated exposure may cause skin dryness or cracking</td>
<td></td>
</tr>
</tbody>
</table>

Label Elements

Signal Word
Danger

Hazard Statements
Highly flammable liquid and vapor
Causes serious eye irritation
May cause drowsiness and dizziness
May cause damage to organs through prolonged or repeated exposure
Repeated exposure may cause skin dryness or cracking

Precautionary Statements

Prevention
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/equipment
Do not breathe dust/fumes/gas/mist/vapours/spray
Wash face, hands and any exposed skin thoroughly after handling
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Use non-sparking tools
Take action to prevent static discharges

Response
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
IF INHALED: Remove person to fresh air and keep comfortable for breathing
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Call a POISON CENTER/ doctor if you feel unwell
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

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

Disposal
Dispose of contents/container to an approved waste disposal plant
3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>&gt;95</td>
</tr>
</tbody>
</table>

4. First-aid measures

General Advice
If symptoms persist, call a physician.

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Inhalation
Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

Ingestion
Clean mouth with water and drink afterwards plenty of water.

Most important symptoms/effects
Difficulty in breathing. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: May cause pulmonary edema

Notes to Physician
Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media
Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.

Unsuitable Extinguishing Media
Water may be ineffective

Flash Point
-20 °C / -4 °F

Method -
CC (closed cup)

Autoignition Temperature
465 °C / 869 °F

Explosion Limits
Upper 12.8 vol %
Lower 2.5 vol %

Oxidizing Properties
Not oxidising

Specific Hazards Arising from the Chemical
Flammable. Risk of ignition. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

Hazardous Combustion Products
Carbon monoxide (CO), Carbon dioxide (CO2), Formaldehyde. Methanol.

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

NFPA
6. Accidental release measures

Personal Precautions
Use personal protective equipment as required. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.

Environmental Precautions
Shall not be released into the environment.

Methods for Containment and Clean-Up
Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7. Handling and storage

Handling
Do not get in eyes, on skin, or on clothing. Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

Storage

8. Exposure controls / personal protection

Exposure Guidelines

<table>
<thead>
<tr>
<th>Component</th>
<th>Alberta</th>
<th>British Columbia</th>
<th>Ontario TWAEV</th>
<th>Quebec</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>TWA: 500 ppm TWA: 1200 mg/m³ STEL: 750 ppm STEL: 1800 mg/m³</td>
<td>TWA: 250 ppm STEL: 500 ppm</td>
<td>TWA: 500 ppm STEL: 750 ppm</td>
<td>TWA: 500 ppm TWA: 1190 mg/m³ STEL: 1000 ppm STEL: 2380 mg/m³</td>
<td>TWA: 250 ppm STEL: 500 ppm (Vacated) TWA: 750 ppm STEL: 1000 ppm (Vacated) STEL: 2400 mg/m³ (Vacated) STEL: 1000 ppm TWA: 1000 ppm TWA: 2400 mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend
ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
NIOSH - National Institute for Occupational Safety and Health

Engineering Measures
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

Personal protective equipment

Eye Protection
Goggles

Hand Protection
Wear appropriate protective gloves and clothing to prevent skin exposure.
Inspect gloves before use. Observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) Gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Gloves with care avoiding skin contamination.

Respiratory Protection
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly.

**Recommended Filter type:** low boiling organic solvent Type AX Brown conforming to EN371

When RPE is used a face piece Fit Test should be conducted

**Environmental exposure controls**
Do not allow material to contaminate ground water system.

**Hygiene Measures**
Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

### 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>sweet</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>19.8 ppm</td>
</tr>
<tr>
<td>pH</td>
<td>7</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>-95 °C / -139 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>56 °C / 132.8 °F</td>
</tr>
<tr>
<td>Flash Point</td>
<td>-20 °C / -4 °F</td>
</tr>
<tr>
<td>Method -</td>
<td>CC (closed cup)</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>5.6 (Butyl Acetate = 1.0)</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability or explosive limits</td>
<td></td>
</tr>
<tr>
<td>Upper</td>
<td>12.8 vol %</td>
</tr>
<tr>
<td>Lower</td>
<td>2.5 vol %</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>247 mbar @ 20 °C</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>2.0</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.790</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water</td>
</tr>
<tr>
<td>Partition coefficient; n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>465 °C / 869 °F</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>&gt; 4°C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>0.32 mPa.s @ 20 °C</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>C3 H6 O</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>58.08</td>
</tr>
<tr>
<td>VOC Content(%)</td>
<td>100</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.358 - 1.359</td>
</tr>
</tbody>
</table>

### 10. Stability and reactivity

**Reactive Hazard**
None known, based on information available

**Stability**
Stable under normal conditions.
11. Toxicological information

Acute Toxicity

Product Information

Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>5800 mg/kg (Rat)</td>
<td>&gt; 15800 mg/kg (rabbit)</td>
<td>76 mg/l, 4 h (rat)</td>
</tr>
</tbody>
</table>

Toxicologically Synergistic Products
Carbon tetrachloride; Chloroform; Trichloroethylene; Bromodichloromethane; Dibromochloromethane; N-nitrosodimethylamine; 1,1,2-Trichloroethane; Styrene; Acetonitrile, 2,5-Hexanediol; Ethanol; 1,2-Dichlorobenzene

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

Irritation
Irritating to eyes

Sensitization
No information available

Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects
No information available

Reproductive Effects
No information available.

Developmental Effects
No information available.

Teratogenicity
No information available.

STOT - single exposure
Central nervous system (CNS)

STOT - repeated exposure
None known

Aspiration hazard
No information available

Symptoms / effects, both acute and delayed
Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: May cause pulmonary edema

Endocrine Disruptor Information
No information available

Other Adverse Effects
The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>NOEC = 430 mg/l (algae; 96 Oncorhynchus mykiss: LC50)</td>
<td>EC50 = 14500 mg/L/15 min</td>
<td>EC50 = 8800 mg/L/48h</td>
<td></td>
</tr>
</tbody>
</table>
Acetone

13. Disposal considerations

Waste Disposal Methods
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

<table>
<thead>
<tr>
<th>Component</th>
<th>RCRA - U Series Wastes</th>
<th>RCRA - P Series Wastes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone - 67-64-1</td>
<td>U002</td>
<td>-</td>
</tr>
</tbody>
</table>

14. Transport information

DOT
- UN-No: UN1090
- Proper Shipping Name: ACETONE
- Hazard Class: 3
- Packing Group: II

TDG
- UN-No: UN1090
- Proper Shipping Name: ACETONE
- Hazard Class: 3
- Packing Group: II

IATA
- UN-No: UN1090
- Proper Shipping Name: ACETONE
- Hazard Class: 3
- Packing Group: II

IMDG/IMO
- UN-No: UN1090
- Proper Shipping Name: ACETONE
- Hazard Class: 3
- Packing Group: II

15. Regulatory information

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>DSL</th>
<th>NDSL</th>
<th>TSCA</th>
<th>TSCA Inventory notification - Active-Inactive</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td></td>
<td></td>
<td>X</td>
<td>active-200-662-2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IESC</th>
<th>KECL</th>
<th>ENCS</th>
<th>ISHL</th>
<th>TCSI</th>
<th>AICS</th>
<th>NZIoC</th>
<th>PICCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>X</td>
<td>KE-29367</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Legend:
X - Listed  '-' - Not Listed
KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)
Acetone

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
ENCS - Japanese Existing and New Chemical Substances
AICS - Australian Inventory of Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

<table>
<thead>
<tr>
<th>Component</th>
<th>Canada - National Pollutant Release Inventory (NPRI)</th>
<th>Canadian Environmental Protection Agency (CEPA) - List of Toxic Substances</th>
<th>Canada’s Chemicals Management Plan (CEPA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>Part 4 Substance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other International Regulations

Authorisation/Restrictions according to EU REACH

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>-</td>
<td>Use restricted. See item 75. (see link for restriction details)</td>
<td>-</td>
</tr>
</tbody>
</table>

REACH links

Safety, health and environmental regulations/legislation specific for the substance or mixture

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>OECD HPV</th>
<th>Persistent Organic Pollutant</th>
<th>Ozone Depletion Potential</th>
<th>Restriction of Hazardous Substances (RoHS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>Listed</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Annex I - Y42</td>
</tr>
</tbody>
</table>

16. Other information

Prepared By: Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date: 28-April-2009
Revision Date: 13-October-2023
Print Date: 13-October-2023
Revision Summary: This document has been updated to comply with the requirements of WHMIS 2015 to align with the Globally Harmonised System (GHS) for the Classification and Labelling of Chemicals.

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS