

**Safety Data Sheet**  
 acc. to OSHA HCS

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Version number: 2

## 1 Identification

- **Product identifier**
- **Trade name:** Acetone Technical grade
- **Article number:** A2300
- **CAS Number:**  
67-64-1
- **EC number:**  
200-662-2
- **Index number:**  
606-001-00-8
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture**  
Chemical for various applications  
Laboratory chemical  
Chemical analytics  
Chemical production
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
AppliChem GmbH  
Ottoweg 4  
D-64291 Darmstadt  
Tel.: +49 (0)6151 93570  
msds@applichem.com
- **Information department:** Abteilung Qualitätskontrolle / Dep. Quality Control
- **Emergency telephone number:**  
+49(0)6151 93570 (während der normalen Geschäftszeiten / Inside normal business hours)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Irritant

Irritating to eyes.



Highly flammable

Highly flammable.

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USA

**Trade name: Acetone Technical grade**

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*Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.*

· **Information concerning particular hazards for human and environment:**

*At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.*

· **Label elements**

· **Labelling according to EU guidelines:**

*The product has been classified and marked in accordance with directives on hazardous materials.*

· **Code letter and hazard designation of product:**



Irritant  
Highly flammable

· **Risk phrases:**

*Highly flammable.*

*Irritating to eyes.*

*Repeated exposure may cause skin dryness or cracking.*

*Vapours may cause drowsiness and dizziness.*

· **Safety phrases:**

*Keep container in a well-ventilated place.*

*Keep away from sources of ignition - No smoking.*

*In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.*

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 3

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 1

Fire = 3

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

67-64-1 acetone

· **Identification number(s)**

· **EC number:** 200-662-2

· **Index number:** 606-001-00-8

### 4 First-aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**

*Immediately rinse with water.*

*If skin irritation continues, consult a doctor.*

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**Trade name: Acetone Technical grade**

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- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Rinse out mouth.  
Do not induce vomiting; immediately call for medical help.  
Risk of aspiration!  
Keep airways free.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**  
Combustible.  
Vapours are heavier than air and may spread along floors.  
Forms explosive mixtures with air at ambient temperatures.  
Beware of backfiring.
- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.  
Wear fully protective suit.
- **Additional information**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
Collect contaminated fire fighting water separately. It must not enter the sewage system.  
Contain escaping vapours with water.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Do not inhale steams/aerosols.  
Keep away from ignition sources  
Avoid substance contact.  
Ensure adequate ventilation
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (AppliSorb).  
Clean up affected area.  
Dispose of the collected material according to regulations.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## 7 Handling and storage

- **Precautions for safe handling**  
Open and handle receptacle with care.  
Work only in fume cabinet.  
Do not inhale substance.  
Avoid generation of vapours/aerosols.

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- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Away from sources of ignition and heat.
- **Further information about storage conditions:**  
Keep receptacle tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.  
Store receptacle in a well ventilated area.  
Store only outside or in explosion proof rooms.
- **Recommended storage temperature:** 15-25 °C
- **Storage class:** 3
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

### 67-64-1 acetone

PEL ( )	Long-term value: 2400 mg/m <sup>3</sup> , 1000 ppm
REL ( )	Long-term value: 590 mg/m <sup>3</sup> , 250 ppm
TLV ( )	Short-term value: (1782) NIC-1187 mg/m <sup>3</sup> , (750) NIC-500 ppm
	Long-term value: (1188) NIC-594 mg/m <sup>3</sup> , (500) NIC-250 ppm
BEI	

· **Ingredients with biological limit values:**

### 67-64-1 acetone

BEI ( )	50 mg/L
	Medium: urine
	Time: end of shift
	Parameter: Acetone (nonspecific)

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Breathing equipment:**  
Respiratory protection required when vapours/aerosols are generated.  
Filter AX
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· **For the permanent contact gloves made of the following materials are suitable:**

Recommended thickness of the material:  $\geq 0.7$  mm

Butyl rubber, BR

Value for the permeation: Level  $\geq 480$  min

· **As protection from splashes gloves made of the following materials are suitable:**

Recommended thickness of the material:  $\geq 0.7$  mm

Natural rubber, NR

Value for the permeation: Level  $\geq 10$  min

· **Eye protection:**



Tightly sealed goggles

· **Body protection:**

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Fluid

Color: Colorless

· **Odor:** Fruit-like

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range:  $-94$  °C ( $-137$  °F)

Boiling point/Boiling range:  $56$  °C ( $133$  °F)

· **Flash point:**  $< -18$  °C ( $< -0$  °F)

· **Ignition temperature:**  $465$  °C ( $869$  °F)

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

Lower: 2.2 Vol %

Upper: 12.8 Vol %

· **Vapor pressure at 20 °C (68 °F):** 233 hPa (175 mm Hg)

· **Density at 20 °C (68 °F):**  $0.791$  g/cm<sup>3</sup> (6.601 lbs/gal)

· **Solubility in / Miscibility with**

Water: Fully miscible.

· **Viscosity:**

Dynamic: Not determined.

Kinematic: Not determined.

Organic solvents: 100.0 %

· **Other information** No further relevant information available.

## 10 Stability and reactivity

· **Reactivity**

· **Chemical stability**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

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- **Possibility of hazardous reactions**  
Reacts with reducing agents.  
Reacts with strong acids and oxidizing agents.  
Forms explosive gas mixture with air.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** In the event of fire: See chapter 5

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

Components	Type	Value	Species
<b>67-64-1 acetone</b>			
Oral	LD50	5800 mg/kg (rat)	
Dermal	LD50	>15800 mg/kg (rabbit)	
Inhalative	LC50/4 h	76 mg/l (rat)	

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

Substance is not listed.

· **NTP (National Toxicology Program)**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:**

Type of test	Effective concentration	Method	Assessment
<b>67-64-1 acetone</b>			
LC50/48 h	8800 mg/l (daphnia magna)		
LC50/96 h	11000 mg/l (fish)		

- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Assessment by list): slightly hazardous for water  
Do not allow to enter waters, waste water, or soil.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

USA

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**Trade name: Acetone Technical grade**

(Contd. of page 6)

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Chemicals must be disposed of in compliance with the respective national regulations.
- **Uncleaned packagings:**
- **Recommendation:**  
Disposal must be made according to official regulations.  
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

### 14 Transport information

- |   |                            |
|---|----------------------------|
| · <b>UN-Number</b>  | UN1090                     |
| · <b>DOT, ADR, IMDG, IATA</b>   |                            |
| · <b>UN proper shipping name</b>  | Acetone                    |
| · <b>DOT, ADR</b>   | ACETONE                    |
| · <b>IMDG, IATA</b>   |                            |
| · <b>Transport hazard class(es)</b>   |                            |
| · <b>DOT</b>  |                            |
|   |                            |
| · <b>Class</b>  | 3 Flammable liquids        |
| · <b>Label</b>  | 3                          |
| · <b>ADR</b>  |                            |
|  |                            |
| · <b>Class</b>  | 3 (F1) Flammable liquids   |
| · <b>Label</b>  | 3                          |
| · <b>IMDG, IATA</b>   |                            |
|  |                            |
| · <b>Class</b>  | 3 Flammable liquids        |
| · <b>Label</b>  | 3                          |
| · <b>Packing group</b>  | II                         |
| · <b>DOT, ADR, IMDG, IATA</b>   |                            |
| · <b>Environmental hazards:</b>   |                            |
| · <b>Marine pollutant:</b>  | No                         |
| · <b>Special precautions for user</b>   | Warning: Flammable liquids |
| · <b>Danger code (Kemler):</b>  | 33                         |
| · <b>EMS Number:</b>  | F-E,S-D                    |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>    | Not applicable.            |

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**Trade name:** Acetone Technical grade

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· **Transport/Additional information:**

· **ADR**

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN1090, Acetone, 3, II

**15 Regulatory information**

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

· **Sara**

· **Section 355 (extremely hazardous substances):**

Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

· **TSCA (Toxic Substances Control Act):**

Substance is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

67-64-1 acetone

I

· **TLV (Threshold Limit Value established by ACGIH)**

67-64-1 acetone

A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**



Irritant  
Highly flammable

· **Risk phrases:**

Highly flammable.

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**Trade name: Acetone Technical grade**

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*Irritating to eyes.*

*Repeated exposure may cause skin dryness or cracking.*

*Vapours may cause drowsiness and dizziness.*

· **Safety phrases:**

*Keep container in a well-ventilated place.*

*Keep away from sources of ignition - No smoking.*

*In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.*

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Department issuing MSDS:** Abteilung Qualitätskontrolle / Dept. Quality Control

· **Contact:** Hr. / Mr. Th. Stöckle

· **Date of preparation / last revision** 08/14/2014 / 1

· **Abbreviations and acronyms:**

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*

*ICAO: International Civil Aviation Organization*

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*ACGIH: American Conference of Governmental Industrial Hygienists*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*Flam. Liq. 2: Flammable liquids, Hazard Category 2*

*Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2*

*STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3*