

**Safety data sheet**  
according to 1907/2006/EC, Article 31

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

- **1.1 Product identifier**
- **Trade name:** Acetone ultrapure
- **Article number:** 381007
- **CAS Number:**  
67-64-1
- **EC number:**  
200-662-2
- **Index number:**  
606-001-00-8
- **Registration number** 01-2119471330-49-XXXX
- **1.2 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
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
AppliChem GmbH  
Ottoweg 4  
D-64291 Darmstadt
- **Further information obtainable from:** Dept. Compliance
- **1.4 Emergency telephone number:** +49(0)6151 93570 (Inside normal business hours)

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**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
  - **Classification according to Regulation (EC) No 1272/2008**  
Flam. Liq. 2 H225 Highly flammable liquid and vapour.  
Eye Irrit. 2 H319 Causes serious eye irritation.  
STOT SE 3 H336 May cause drowsiness or dizziness.
  - **2.2 Label elements**
  - **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.
  - **Hazard pictograms**
- 

- GHS02   GHS07
- **Signal word** *Danger*
  - **Hazard-determining components of labelling:**  
acetone
  - **Hazard statements**  
H225 Highly flammable liquid and vapour.  
H319 Causes serious eye irritation.

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*H336 May cause drowsiness or dizziness.*

· **Precautionary statements**

*P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*

*P233 Keep container tightly closed.*

*P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*

· **Additional information:**

*EUH066 Repeated exposure may cause skin dryness or cracking.*

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

· **3.1 Chemical characterisation: Substances**

· **CAS No. Description**

*67-64-1 acetone*

· **Identification number(s)**

· **EC number:** 200-662-2

· **Index number:** 606-001-00-8

### SECTION 4: First aid measures

· **4.1 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.*

· **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; call for medical help immediately.*

*Risk of aspiration!*

*Keep airways free.*

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**

*No further relevant information available.*

### SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

*CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.*

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **5.2 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.*

· **5.3 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.*

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*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.*

## **SECTION 6: Accidental release measures**

· **6.1 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*

· **6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.**

· **6.3 Methods and material for containment and cleaning up:**

*Absorb with liquid-binding material (AppliSorb).*

*Clean up affected area.*

*Dispose of the material collected according to regulations.*

· **6.4 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.*

## **SECTION 7: Handling and storage**

· **7.1 Precautions for safe handling**

*Open and handle receptacle with care.*

*Work only in fume cupboard.*

*Do not inhale substance.*

*Avoid generation of vapours/aerosols.*

· **Information about fire - and explosion protection:**

*Keep ignition sources away - Do not smoke.*

*Protect against electrostatic charges.*

· **7.2 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 container 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*

· **7.3 Specific end use(s)** *No further relevant information available.*

## **SECTION 8: Exposure controls/personal protection**

· **Additional information about design of technical facilities:** *No further data; see item 7.*

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· **8.1 Control parameters**

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

**67-64-1 acetone**

WEL	Short-term value: 3620 mg/m <sup>3</sup> , 1500 ppm Long-term value: 1210 mg/m <sup>3</sup> , 500 ppm
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· **DNELs**

**67-64-1 acetone**

Oral	Long-term - systemic effects, general population	62 mg/kg
Dermal	Long-term - systemic effects, worker	186 mg/kg
	Long term - systemic effects, general population	62 mg/kg
Inhalative	Acute - local effects, worker	2420 mg/m <sup>3</sup>
	Long-term - systemic effects, worker	1210 mg/m <sup>3</sup>
	Long-term - systemic effects, general population	200 mg/m <sup>3</sup>

· **PNECs**

**67-64-1 acetone**

Aquatic compartment - freshwater	10.6 mg/L
Aquatic compartment - marine water	1.06 mg/L
Aquatic compartment - water, intermittent releases	21 mg/L
Aquatic compartment - sediment in freshwater	30.4 mg/kg
Aquatic compartment - sediment in marine water	3.04 mg/kg
Terrestrial compartment - soil	29.5 mg/kg
Sewage treatment plant	100 mg/L

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 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.

· **Respiratory protection:**

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.

· **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

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· **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.

## SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Fruit-like

· **pH-value:** Not determined.

· **Change in condition**

<b>Melting point/freezing point:</b>	-94 °C
<b>Initial boiling point and boiling range:</b>	56.5 °C

· **Flash point:** <-20 °C

· **Ignition temperature:** 465 °C

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

<b>Lower:</b>	2.2 Vol %
<b>Upper:</b>	12.8 Vol %

· **Vapour pressure at 20 °C:** 233 hPa

· **Density at 20 °C:** 0.79 g/cm<sup>3</sup>

· **Solubility in / Miscibility with water:** Fully miscible.

· **Partition coefficient: n-octanol/water:** Not determined.

· **Viscosity:**

<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.

· **Solvent content:**

<b>Organic solvents:</b>	100.0 %
<b>VOC (EC)</b>	100.00 %

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

## SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.

· **10.2 Chemical stability**

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

· **10.3 Possibility of hazardous reactions**

Reacts with reducing agents.

Reacts with strong acids and oxidising agents.

Forms explosive gas mixture with air.

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- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** In the event of fire: See chapter 5

## SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC50 values 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)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**  
Causes serious eye irritation.
- **After inhalation:** No irritant effect.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**  
May cause drowsiness or dizziness.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

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

Type of test	Effective concentration	Method	Assessment
<b>67-64-1 acetone</b>			
Inhalative	LC50/4 h	76 mg/l	(rat)
	LC50/48 h	8800 mg/l	(daphnia magna)
	LC50/96 h	11000 mg/l	(fish)

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

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Chemicals must be disposed of in compliance with the respective national regulations.



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- **Uncleaned packaging:**
- **Recommendation:**  
Disposal must be made according to official regulations.  
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

## SECTION 14: Transport information

- |  |   |
|--|---|
| · <b>14.1 UN-Number</b>  |   |
| · <b>ADR, IMDG, IATA</b>   | UN1090  |
| · <b>14.2 UN proper shipping name</b>  |   |
| · <b>ADR, IMDG, IATA</b>   | ACETONE   |
| · <b>14.3 Transport hazard class(es)</b>   |   |
| · <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>14.4 Packing group</b>  |   |
| · <b>ADR, IMDG, IATA</b>   | II  |
| · <b>14.5 Environmental hazards:</b>   |   |
| · <b>Marine pollutant:</b>   | No  |
| · <b>14.6 Special precautions for user</b>   | Warning: Flammable liquids.   |
| · <b>Danger code (Kemler):</b>   | 33  |
| · <b>EMS Number:</b>   | F-E,S-D   |
| · <b>Stowage Category</b>  | E   |
| · <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>   | Not applicable.   |
| · <b>Transport/Additional information:</b>   |   |
| · <b>ADR</b>   |   |
| · <b>Limited quantities (LQ)</b>   | 1L  |
| · <b>Excepted quantities (EQ)</b>  | Code: E2<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 500 ml |
| · <b>Transport category</b>  | 2   |
| · <b>Tunnel restriction code</b>   | D/E   |
| · <b>IMDG</b>  |   |
| · <b>Limited quantities (LQ)</b>   | 1L  |
| · <b>Excepted quantities (EQ)</b>  | Code: E2<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 500 ml |

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**Trade name: Acetone ultrapure**

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· **UN "Model Regulation":**

UN 1090 ACETONE, 3, II

### **SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **Seveso category P5c** FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### **SECTION 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 SDS:** Dept. Compliance
- **Contact:** Mr. Th. Stöckle
- **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 Organisation
  - 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
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - DNEL: Derived No-Effect Level (REACH)
  - PNEC: Predicted No-Effect Concentration (REACH)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 2: Flammable liquids – Category 2
  - Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
  - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- **\* Data compared to the previous version altered.**

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