

SAFETY DATA SHEET
ACETONE AR

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product name	ACETONE AR
Product number	1196
REACH registration number	01-2119471330-49-XXXX
CAS number	67-64-1
EU index number	606-001-00-8
EC number	200-662-2

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Solvent. Laboratory reagent.
Uses advised against	Use only for intended applications.

1.3. Details of the supplier of the safety data sheet**Supplier**

Reagent Chemical Services
18 Aston Fields Road
Whitehouse Industrial Estate
Runcorn
Cheshire WA7 3DL

T: 01928 716903 (08.30 - 17.00)
F: 01928 716425
E: info@reagent.co.uk

1.4. Emergency telephone number

Emergency telephone	OHES Environmental Ltd 24-7 Tel. 0333 333 9939 (24 hour)
---------------------	---

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification (EC 1272/2008)**

Physical hazards	Flam. Liq. 2 - H225
Health hazards	Eye Irrit. 2 - H319 STOT SE 3 - H336
Environmental hazards	Not Classified

2.2. Label elements

EC number	200-662-2
-----------	-----------

ACETONE AR

Pictogram



Signal word

Danger

Hazard statements

H225 Highly flammable liquid and vapour.
 H319 Causes serious eye irritation.
 H336 May cause drowsiness or dizziness.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P313 Get medical advice/ attention.
 P501 Dispose of contents / container to hazardous waste depot.
 P261 Avoid breathing mist/vapours/spray

Supplementary precautionary statements

P233 Keep container tightly closed.
 P240 Ground/ bond container and receiving equipment.
 P241 Use explosion-proof electrical/ ventilating /lighting/.../ equipment.
 P242 Use only non-sparking tools.
 P243 Take precautionary measures against static discharge.
 P264 Wash ... thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P312 Call a POISON CENTER/ doctor if you feel unwell.
 P337 If eye irritation persists:
 P370+P378 In case of fire: Use ... for extinction.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P405 Store locked up.

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.1. Substances

Product name	ACETONE AR
REACH registration number	01-2119471330-49-XXXX
EU index number	606-001-00-8
CAS number	67-64-1
EC number	200-662-2

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Remove affected person from source of contamination. Keep affected person away from heat, sparks and flames.

ACETONE AR

Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical advice/attention if you feel unwell.
Ingestion	Never give anything by mouth to an unconscious person. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Rinse mouth thoroughly with water. Get medical attention.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Care should be taken to avoid contact with contaminants when removing contaminated clothing. Get medical attention if irritation persists after washing.
Eye contact	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub eye. Get medical attention if irritation persists after washing.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue. If it is suspected that airborne contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus.

4.2. Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Vapours may cause headache, fatigue, dizziness and nausea. May cause respiratory irritation.
Ingestion	Prolonged or repeated exposure may cause the following adverse effects: Nausea, vomiting. Fatigue. Intoxication.
Skin contact	Prolonged or repeated exposure may cause the following adverse effects: Skin irritation. Redness. Dry skin.
Eye contact	Causes serious eye irritation. Profuse watering of the eyes. Irritation and redness, followed by blurred vision.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.
Specific treatments	No specific chemical antidote is known to be required after exposure to this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	The product is highly flammable. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. Containers can burst violently or explode when heated, due to excessive pressure build-up.
Hazardous combustion products	Carbon monoxide (CO). Carbon dioxide (CO ₂).

5.3. Advice for firefighters

ACETONE AR

Protective actions during firefighting Fight fire from safe distance or protected location. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Control run-off water by containing and keeping it out of sewers and watercourses.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Wear chemical protective suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. No smoking, sparks, flames or other sources of ignition near spillage. Take precautionary measures against static discharges. Avoid inhalation of vapours and contact with skin and eyes. Treat the spilled material according to the instructions in the clean-up section. Wash thoroughly after dealing with a spillage.

For emergency responders Wear protective clothing as described in Section 8 of this safety data sheet. Treat the spilled material according to the instructions in the clean-up section. Wash thoroughly after dealing with a spillage.

6.2. Environmental precautions

Environmental precautions To prevent release, place container with damaged side up. Do not discharge into drains or watercourses or onto the ground. Use appropriate containment to avoid environmental contamination.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Stop leak if safe to do so. No smoking, sparks, flames or other sources of ignition near spillage. Small Spillages: Absorb small quantities with paper towels and evaporate in a safe place. Large Spillages: To prevent release, place container with damaged side up. Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. For waste disposal, see Section 13. Wash thoroughly after dealing with a spillage.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Do not handle until all safety precautions have been read and understood. Avoid inhalation of vapours and contact with skin and eyes. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Earth container and transfer equipment to eliminate sparks from static electricity. Use explosion-proof electrical, ventilating and lighting equipment.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product. Good personal hygiene procedures should be implemented. Clean equipment and the work area every day. Take off immediately all contaminated clothing and wash it before reuse. Care should be taken to avoid contact with contaminants when removing contaminated clothing.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep away from oxidising materials, heat and flames. Earth container and transfer equipment to eliminate sparks from static electricity. Store away from incompatible materials (see Section 10).

ACETONE AR

Storage class Flammable liquid storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

Long-term exposure limit (8-hour TWA): WEL 500 ppm 1210 mg/m³

Short-term exposure limit (15-minute): WEL 1500 ppm 3620 mg/m³

WEL = Workplace Exposure Limit

DNEL

Industry - Inhalation; Short term systemic effects: 1210 mg/m³

Industry - Inhalation; Short term local effects: 2420 mg/m³

Industry - Dermal; Long term systemic effects: 186 mg/kg Industry - Dermal; Long term systemic effects 22 mg/kg/day

General population - Inhalation; Long term systemic effects: 200 mg/m³

General population - Dermal; Long term systemic effects: 62 mg/kg

General population - Oral; Long term systemic effects: 62 mg/kg

PNEC

- Fresh water; 10.6 mg/l

- Marine water; 1.06 mg/l

- Intermittent release; 21 mg/l

- STP; 100 mg/l

- Sediment (Freshwater); 30.4 mg/kg

- Sediment (Marinewater); 3.04 mg/kg

- Soil; 29.5 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Use explosion-proof general and local exhaust ventilation.

Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield. Personal protective equipment for eye and face protection should comply with European Standard EN166. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection

Wear protective gloves. Frequent changes are recommended. To protect hands from chemicals, gloves should comply with European Standard EN374. For exposure up to 8 hours, wear gloves made of the following material: Butyl rubber. Thickness: ~ 0.5 mm The breakthrough time for any glove material may be different for different glove manufacturers. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.

Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible. For the greatest protection, clothing should include anti-static overalls, boots and gloves. Wear suitable protective clothing made of the following material: Butyl rubber.

ACETONE AR

Hygiene measures	Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.
Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Respirator selection must be based on exposure levels, the hazards of the product and the safe working limits of the selected respirator. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140. Check that the respirator fits tightly and the filter is changed regularly. Wear a respirator fitted with the following cartridge: Organic vapour filter. Gas filter, type AX.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Sweetish.
Odour threshold	13 ppm
pH	pH (diluted solution): 5-6 (400 g/l, water, 20°C)
Melting point	-94.7°C
Initial boiling point and range	55.8 - 56.6°C
Flash point	-17°C CC (Closed cup).
Evaporation rate	2.0 (Ether = 1), 5.0 (n-BuAc = 1)
Flammability (solid, gas)	Scientifically unjustified.
Vapour pressure	233 hPa @ °C
Vapour density	2.1
Relative density	0.79 @ °C
Solubility(ies)	Miscible with water.
Partition coefficient	log Pow: -0.24
Auto-ignition temperature	465°C
Decomposition Temperature	No specific test data are available.
Viscosity	0.32 (Dynamic) mPa s @ 20°C
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Refractive index	1.358 - 1.359
Molecular weight	58.09

ACETONE AR

Saturation concentration 550 g/m³ @ 20c

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Reactions with the following materials may cause explosions: Strong acids. Strong alkalis. Strong oxidising agents.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions May generate heat. Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition. Static electricity and formation of sparks must be prevented.

10.5. Incompatible materials

Materials to avoid Avoid contact with acids. Avoid contact with alkalis. Avoid contact with strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,800.0

Species Rat

Notes (oral LD₅₀) REACH dossier information.

ATE oral (mg/kg) 5,800.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 15,800.0

Species Rabbit

Notes (dermal LD₅₀) REACH dossier information.

ATE dermal (mg/kg) 15,800.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 76.0

Species Rat

ATE inhalation (vapours mg/l) 76.0

Skin corrosion/irritation

ACETONE AR

Skin corrosion/irritation	Based on available data the classification criteria are not met.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Causes eye irritation. REACH dossier information.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Based on available data the classification criteria are not met.
<u>Skin sensitisation</u>	
Skin sensitisation	Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Bacterial reverse mutation test: Negative., With and without metabolic activation.
Genotoxicity - in vivo	Chromosome aberration: Negative.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	- LOAEL 10000 mg/l, Oral, Rat P
Reproductive toxicity - development	Maternal toxicity: - LOAEC: 11000 mg/l, Inhalation, Rat
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Vapours may cause drowsiness and dizziness.
Target organs	Eyes Respiratory system, lungs Brain
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	NOAEL 900 mg/kg, Oral, Rat
Target organs	Kidneys Respiratory and haematopoietic systems Reproductive organs
<u>Aspiration hazard</u>	
Aspiration hazard	Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
<u>General information</u>	
General information	Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.
Inhalation	Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Headache. Fatigue. Nausea, vomiting. Vapours may cause drowsiness and dizziness.
Ingestion	Gastrointestinal symptoms, including upset stomach. May cause stomach pain or vomiting. May cause nausea, headache, dizziness and intoxication.
Skin contact	Prolonged or repeated exposure may cause the following adverse effects: Irritating to skin. Dry skin.
Eye contact	Irritating to eyes. Symptoms following overexposure may include the following: Corneal damage.
Route of entry	Inhalation Oral Skin and/or eye contact
Target organs	Eyes Respiratory system, lungs

SECTION 12: Ecological Information

ACETONE AR

Ecotoxicity The product is not expected to be hazardous to the environment. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Toxicity REACH dossier information.

Acute toxicity - fish LC50, 96 hours: 5540 mg/l, Onchorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 12600 mg/l, Daphnia magna

Acute toxicity - aquatic plants NOEC, 192 hours: 530 mg/l, Freshwater algae

Acute toxicity - microorganisms NOEC, 30 minutes: 1000 mg/l, Activated sludge

Acute toxicity - terrestrial LC₅₀, 48 hours: 0.1 - 1.0 mg/cm², Eisenia Fetida (Earthworm)

Chronic toxicity - fish early life stage Not relevant.

Short term toxicity - embryo and sac fry stages Not available.

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 79 mg/l, Daphnia magna
NOEC, 28 days: 2212 mg/l, Daphnia magna

Toxicity to soil Scientifically unjustified.

Toxicity to terrestrial plants Scientifically unjustified.

12.2. Persistence and degradability

Persistence and degradability The product is more than 80% biodegradable.

Phototransformation Air - Degradation (%) 100: 18.6 - 114.4 days

Stability (hydrolysis) Scientifically unjustified.

Biodegradation The substance is readily biodegradable.
- Degradation (%) 91: 28 days

Biological oxygen demand ~ 1.85 g O₂/g substance

Chemical oxygen demand ~ 1.92 g O₂/g substance

12.3. Bioaccumulative potential

Bioaccumulative potential The product is not bioaccumulating. BCF: 3, REACH dossier information.

Partition coefficient log Pow: -0.24

12.4. Mobility in soil

Mobility The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.

Adsorption/desorption coefficient No specific test data are available.

Henry's law constant ~ 2.93 Pa m³/mol @ @ 25°C

Surface tension ~ 23.3 mN/m @ 20°C

12.5. Results of PBT and vPvB assessment

ACETONE AR

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information When handling waste, the safety precautions applying to handling of the product should be considered. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor.

Disposal methods Reuse or recycle products wherever possible. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

14.1. UN number

UN No. (ADR/RID) 1090

UN No. (IMDG) 1090

UN No. (ICAO) 1090

UN No. (ADN) 1090

14.2. UN proper shipping name

Proper shipping name (ADR/RID) ACETONE

Proper shipping name (IMDG) ACETONE

Proper shipping name (ICAO) ACETONE

Proper shipping name (ADN) ACETONE

14.3. Transport hazard class(es)

ADR/RID class 3

ADR/RID classification code F1

ADR/RID label 3

IMDG class 3

ICAO class/division 3

ADN class 3

Transport labels



14.4. Packing group

ADR/RID packing group II

ACETONE AR

IMDG packing group II

ADN packing group II

ICAO packing group II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS F-E, S-D

ADR transport category 2

Emergency Action Code •2YE

Hazard Identification Number (ADR/RID) 33

Tunnel restriction code (D/E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

National regulations Control of Substances Hazardous to Health Regulations 2002 (as amended).
Dangerous Substances and Explosive Atmospheres Regulations 2002.
Health and Safety at Work etc. Act 1974 (as amended).

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Commission Regulation (EU) No 2015/830 of 28 May 2015.

Guidance Workplace Exposure Limits EH40.

Authorisations (Title VII Regulation 1907/2006) No specific authorisations are known for this product.

Restrictions (Title VIII Regulation 1907/2006) No specific restrictions on use are known for this product.

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

ACETONE AR

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	<p>DNEL: Derived No Effect Level. DMEL: Derived Minimal Effect Level. PNEC: Predicted No Effect Concentration. ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. IATA: International Air Transport Association. IMDG: International Maritime Dangerous Goods. RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.</p>
Classification abbreviations and acronyms	<p>Acute Tox. = Acute toxicity Eye Irrit. = Eye irritation Flam. Liq. = Flammable liquid STOT SE = Specific target organ toxicity-single exposure</p>
General information	<p>This datasheet is not intended to be a replacement for a full risk assessment, these should always be carried out by competent persons.</p>
Key literature references and sources for data	<p>Source: European Chemicals Agency, http://echa.europa.eu/ REACH dossier information.</p>
Classification procedures according to Regulation (EC) 1272/2008	<p>STOT SE 3 - H335, Eye Irrit. 2 - H319, Flam. Liq. 2 - H225: On basis of test data.</p>
Training advice	<p>Only trained personnel should use this material.</p>
Revision date	<p>28/04/2016</p>
Revision	<p>2</p>
Supersedes date	<p>29/07/2015</p>
SDS number	<p>21048</p>
SDS status	<p>Approved.</p>
Hazard statements in full	<p>H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.</p>

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.