

Product name : ACETONE
Cod. CEPSA : 350250000

Date of issue:27/11/2007.
Version: 2.01

1. Identification of the substance/preparation and company/undertaking

Trade name: ACETONE
CAS no. : 67-64-1
EINECS : 200-662-2
Chemical formula : CH₃-CO-CH₃
Molecular weight: 58.08 g/mole
Physical state: Liquid.
Purity: 99.5 %
Synonym: 2-Propanone, Dimethylcetone
Use of the substance/preparation: The manufacture of methyl methacrylate, The manufacture of Bisphenol A, Solvents

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2. Hazards identification

The substance is classified as dangerous according to Directive 67/548/EEC and its amendments.

Classification : F; R11
Xi; R36
R66, R67
Physical/chemical hazards : Highly flammable.
Human health hazards : Irritating to eyes.
Repeated exposure may cause skin dryness or cracking.
Vapours may cause drowsiness and dizziness.

3. Composition/information on ingredients

Substance/preparation Substance

Ingredient name	CAS number	%	EC number	Classification
Acetone	67-64-1	100	200-662-2	F; R11 Xi; R36 R66, R67

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4. First-aid measures

- Inhalation :** Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Ingestion :** Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Obtain medical attention if symptoms occur. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact :** Wash skin thoroughly with soap and water or use recognised skin cleanser. Get medical attention if irritation occurs. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Eye contact :** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.
- Protection of first-aiders :** No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

5. Fire-fighting measures

Extinguishing media

- Suitable:** Dry chemical powder for small fires.
With large fires, fog water mist may first be used to dilute the product, followed by anti-alcohol foam to inhibit the fire.
Stay upwind.
- Not suitable :** Exposure to combustion gases must be avoided.
Do not use a direct water jet.
- Special protective equipment for fire-fighters:** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Hazardous thermal decomposition products:** These products are carbon oxides (CO, CO₂).
- Special exposure hazards :** Highly flammable liquid and vapour. Vapour may cause flash fire. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

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6. Accidental release measures

- Personal precautions :** Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment. Do not touch or walk through spilt material
- Environmental precautions :** Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
- Methods for cleaning up :** If emergency personnel are unavailable, contain spilt material. For small spills, add absorbent (soil may be used in the absence of other suitable materials) and use a non-sparking or explosion-proof means to transfer material to a sealable, appropriate container for disposal. For large spills, dyke spilt material or otherwise contain material to ensure runoff does not reach a waterway. Place spilt material in an appropriate container for disposal.

7. Handling and storage

Storage : Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Packaging materials

Recommended : Tanks: Carbon steel
Hoses: Polypropylene
Gaskets: Polypropylene
Valves: Carbon steel with inner components of stainless steel

8. Exposure controls/personal protection

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
Acetone	INSHT (Spain, 1/2005). VLA-ED: 1210 mg/m ³ 8 hour/hours. Form: All forms VLA-ED: 500 ppm 8 hour/hours. Form: All forms

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Respiratory protection: In atmospheres where the product is present, compressed-air respiratory protective device must be used, with a visor covering the whole face.

Hand protection: PVC gloves.
Neoprene gloves.

Eye protection: Chemical splash goggles or face shield.

Skin protection: Chemical-resistant protective suit.

Rubber boots.

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable level:

9. Physical and chemical properties

General information

Appearance

Physical state: Liquid.
Colour: Colourless.
Odour: Pungent, sweet and penetrating

Boiling point: 56.2°C (133.2°F)
Melting point: -95.3°C (-139.5°F)
Flash point: Closed cup: -18.15°C (-0.7°F). Open cup: -17.8°C (0°F)
Explosion limits: Lower: 2.6% Upper: 12.8%
Vapour pressure: 30.2 kPa (226.3 mm Hg) (at 20°C)
Relative density: 0.791 (Water = 1)
Miscible with water in all proportions: Yes.
Vapour density: 2 (Air = 1)
Evaporation rate (butyl acetate = 1): 6.06 compared with Butyl acetate.
Auto-ignition temperature: 537°C (998.6°F)

10. Stability and reactivity

Stability: The product is stable.
Conditions and materials to avoid: Extremely reactive or incompatible with the following materials: oxidizing materials and acids.
Incompatible with chloroformates.

11. Toxicological information

Potential acute health effects

Inhalation: Harmful by inhalation.
Ingestion: No known significant effects or critical hazards.
Skin contact: Slightly irritating to the skin.
Eye contact: Irritating to eyes.

Acute toxicity

<u>Product/ingredient name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
Acetone	LD50	5800 mg/kg	Oral	Rat
	LD50	5340 mg/kg	Oral	Rabbit

Potential chronic health effects

Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Reproductive toxicity: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation: No known significant effects or critical hazards.
Ingestion: No known significant effects or critical hazards.
Skin: No known significant effects or critical hazards.

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Target organs: Causes damage to the following organs: upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

12. Ecological information

Ecotoxicity data

Product/ingredient name	Species	Period	Result
Acetone	Daphnia magna (EC50)	48 hour/hours	23.5 mg/l
	Pimephales promelas (EC50)	48 hour/hours	8990 mg/l
	Daphnia magna (EC50)	48 hour/hours	13500 mg/l
	Pimephales promelas (LC50)	96 hour/hours	>100 mg/l
	Daphnia magna (LC50)	96 hour/hours	>100 mg/l
	Oncorhynchus mykiss (LC50)	96 hour/hours	5540 mg/l

Other adverse effects: No known significant effects or critical hazards.




13. Disposal considerations

Methods of disposal: The generation of waste should be avoided or minimised wherever possible. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Hazardous waste: The classification of the product may meet the criteria for a hazardous waste.


14. Transport information

International transport regulations

Regulatory information	UN number	Proper shipping name	Class	PG*	Label	Additional information
ADR/RID Class	UN1090	ACETONE	3	II		Hazard identification number 33 Limited quantity LQ4 CEPIC Tremcard 30S1090
ADNR Class	UN1090	ACETONE	3	II		-
IMDG Class	UN1090	ACETONE	3	II		Emergency schedules (EmS) F-E, S-D

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IATA Class	UN1090	Acetone	3	II		<p>Passenger and Cargo Aircraft Quantity limitation: 5 Packaging instructions: 305</p> <p>Cargo Aircraft Only Quantity limitation: 60 Packaging instructions: 307</p> <p>Limited Quantities - Passenger Aircraft Quantity limitation: 1 Packaging instructions: Y305</p>
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PG* : Packing group

15. Regulatory information

EU regulations

Hazard symbol/symbols



Highly flammable, Irritant

Risk phrases:

R11- Highly flammable.
 R36- Irritating to eyes.
 R66- Repeated exposure may cause skin dryness or cracking.
 R67- Vapours may cause drowsiness and dizziness.

Safety phrases

S9- 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.

Product use:

Classification and labelling have been performed according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and the intended use.
 - Industrial applications.

European Union

In accordance to EU Directive 91/155/EEC, as amended by 2001/58/EC

National regulations

Conforms to R.D. 363/95 and 255/03.
 Order 21-2-1997 and subsequent amendments.

16. Other information

Full text of R-phrases referred to in sections 2 and 3 - Spain

R11- Highly flammable.
 R36- Irritating to eyes.
 R66- Repeated exposure may cause skin dryness or cracking.
 R67- Vapours may cause drowsiness and dizziness.

Full text of classifications referred to in sections 2 and 3 - Spain

F - Highly flammable
 Xi - Irritant

History

Date of previous issue: No previous validation.

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✔ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Remarks

THE PRODUCT MUST BE STORED, HANDLED AND USED IN ACCORDANCE WITH SOUND INDUSTRIAL HEALTH AND SAFETY PROCEDURES AND IN ACCORDANCE WITH ANY LEGAL REGULATIONS. THE INFORMATION CONTAINED HEREIN IS BASED ON OUR CURRENT KNOWLEDGE AND IS AN ATTEMPT TO DESCRIBE THE PRODUCT FROM THE POINT OF VIEW OF SAFETY REQUIREMENTS; IT SHOULD THEREFORE NOT BE TAKEN AS A GUARANTEE OF SPECIFIC PROPERTIES.