Acetone

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

Product Name: Acetone
Chemical Name:
Supplier: Jacobson Chemicals Ltd
Unit 4
Newman Lane Industrial Estate
Alton
Hants
GU34 2QR
Telephone: 01420 86934
Fax: 01420 549574
E-mail: sales@jacobsonchemicals.co.uk

2. COMPOSITION

Substance:
Substance Name:
EC Index No: 606-001-00-8
CAS Number: 67-64-1
Gross Formula: C3-H6-O

Constituents	CAS No	STD	LT EXP 8 hrs	ST EXP. 15 mins
Acetone	67-64-1	OES	750ppm	1500ppm

3. HAZARD INDENTIFICATION

The most important hazards are: Highly flammable.
Inhalation: Vapours may cause drowsiness and dizziness.
Skin Contact: Repeated exposure may cause skin dryness and cracking.
Eye Contact: Irritation of eyes and mucus membranes
Ingestion: Swallowing concentrated chemical may cause severe internal injury. Central and/or peripheral nervous system damage.

4. FIRST AID MEASURES

Immediate medical attention: Yes
Professional assistance from physician required? Yes
Inhalation: Move the exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. When breathing is difficult, properly trained personnel may assist affected person by administering 100% oxygen. Keep the affected person warm and at rest. Get prompt medical attention.
Skin Contact: Remove affected person from source of contamination. Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as

Acetone

above. Get medical attention immediately.

Eye Contact: Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

Ingestion: Never make an unconscious person vomit or drink fluids! Promptly get affected personnel to drink large volumes of water to dilute the swallowed chemical. After the liquid has been swallowed, try to induce vomiting by having affected person touch back of his throat with his finger. Get medical attention immediately!

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water spray, fog or mist. Dry chemicals, sand, dolomite etc. Do not extinguish fire unless flow can be stopped first. Halon, powder, foam or CO2.

Special fire fighting procedures: Water may be ineffective but use to keep fire-exposed containers cool. If a leak or spill has not ignited, use water spray to disperse vapours and protect personnel stopping the leak. Water spray may be used to flush spills away from exposures and dilute spills to non-flammable mixtures. Keep run off water out of sewers and water sources. Dike for water control. Avoid water in straight hose stream, will scatter and spread fire. Cool containers exposed to flames with water until well after fire is out. Move container from fire area if it can be done without risk. Withdraw immediately if case of rising sound from venting safety device or any discolouration of tanks due to fire. Use water spray to reduce vapours. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out. If risk of water pollution occurs, notify appropriate authorities.

Unusual fire and explosion hazards: Forms explosive mixtures with air. May explode in a fire. May travel considerable distance to source of ignition and flash back. Vapour explosion and poison hazard indoors, outdoors and in sewers.

Acetone

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: N/a

Methods of Cleaning: Ventilate well, stop flow of gas or liquid if possible. Remove ignition sources. Do not allow chemical to enter confined spaces such as sewers due to explosion risk. Sewers designed to preclude formation of explosion concentrations of vapours may be permitted. Absorb small quantities with paper towels and evaporate in safe place (fume hood). Allow sufficient time for vapours to completely clear the hood ducts, then burn the paper in a location away from combustible materials. Collect for reclamation or absorb in vermiculite, dry sand or similar material. Let evaporate. Keep out of confined spaces because of explosion risk. Clean-up personnel should use respiratory and/or liquid contact protection. Provide ventilation and confine spill. Do not allow runoff to sewer.

7. HANDLING & STORAGE

Handling: Keep away from heat, sparks and open flame. Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Read and follow manufacturer's recommendations. Do not use contact lenses.

Storage: Flammable/combustible – Keep away from oxidizers, heat and flames. May attack some plastics, rubber and coatings. Keep in cool, dry, ventilated storage and closed containers. Ground container and transfer equipment to eliminate static electric sparks. Flammable liquid storage.

Acetone

8. EXPOSURE CONTROLS

Take measures to prevent:	Inhaling vapours.
Exposure to control limits:	
Ventilation:	Explosion-proof general and local exhaust ventilation. Work in fume cupboard.
Respirators:	GMOVc, Gas mask with organic vapour canister (chin-style). GMOVfb, Gas mask w/organic vapour canister (front or back mounted). SAF, supplied air respirator with full face piece, helmet or hood. SCBAF, Self contained breathing apparatus with full face piece.
Eye Protection:	Wear approved chemical safety goggles where eye exposure is reasonably probable. Contact lenses should not be worn when working with this chemical.
Skin Protection:	Use protective gloves made of: Butyl rubber or P.T.F.E. (Teflon).
Other Protection:	Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station and safety shower. Wear appropriate clothing to prevent repeated or prolonged skin contact. Wear air-supplied mask in confined areas.
Hygienic work practices:	Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet. Promptly remove any clothing that becomes wet or contaminated. Do not smoke in work area! Isolate contaminated clothing and wash before reuse. Use appropriate hand lotion to prevent defatting and cracking of skin.

9. PHYSICAL & CHEMICAL PROPERTIES

Appearance:	Liquid
Odour:	Characteristic. Acetone, Ketone.
Colour:	Colourless
Solubility Description:	Miscible with water. Miscible with alcohol, ether.
Solubility Value (g/100g H20 20°C):	100.00
Mol. Weight:	58.08
Boiling Point (°C, interval):	~56
Melt/Freez. Point (°C, interval):	~-95
Density/specific gravity (g/ml):	0.79 @ 20°C
Vapour Density (air=1):	2
Vapour Pressure:	182 at 20°C
Evaporation Rate:	7.70
Evaporation Factor:	1.40
Volatile by vol (%):	100
Odour threshold, lower:	100 ppm
Flash Point (°C):	~-18
Auto Ignition Temp (°C):	540
Flammability Limit - Lower (%):	2.15
Flammability Limit - Upper (%):	13.30

Acetone

10. STABILITY & REACTIVITY

Conditions to avoid:	Heat, sparks, flames. Normally stable.
Materials to avoid:	Activated Carbon, Antimony Pentaflouride, Barium Hydroxide, Boron Trifluoride, Bromine, Tribromomethane, Trichloromethane, Chromium Oxychloride, Chromium Trioxide, Decaborane, Hydrogen Peroxide, 2-Methylbuta-1, 3-Diene, Methyl Ethyl Ketone Peroxide, Nitric Acid, Oleum, Potassium-tert-Butoxide, Potassium Sulphate, Sodium Hydroxide, Sulphur Dichloride, Sulphuric Acid, Trichloromelamine. Strong oxidizing agents.
Hazardous decomposition products:	Highly flammable gases/vapours/fumes of: Carbon Monoxide (CO), Carbon Dioxide (CO2).

11. TOXICOLOGICAL INFORMATION

Toxic Dose – LD50:	9750 mg/kg (oral rat)
Health Warnings:	Gas or vapour is harmful on prolonged exposure or in high concentration. Irritant of eyes and mucous membranes. Narcotic effect. CNS depressant. Vapour from this chemical can be hazardous when inhaled. Repeated exposure may cause chronic eye irritation. Defatting, drying and cracking of skin. Swallowing concentrated chemical may cause severe internal injury. Central and/or peripheral nervous system damage. Prolonged or repeated inhalation may cause: wounds in nasal mucosa and throat. Prolonged or repeated exposure to vapour may cause: sore throat, irritation of nose, throat and airway.
Route of entry:	Inhalation. Skin absorption, ingestion, skin and/or eye contact.
Target organs:	Central nervous system. Eyes. Gastro-intestinal tract. Respiratory system. Lungs. Skin.
Medical systems:	Irritation of eyes and mucous membranes. Rhinitis (inflammation of the nasal mucous membranes). Upper respiratory irritation. General respiratory distress, unproductive cough. Skin irritation. Nausea, vomiting, Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo. Mild intoxincation (incl. Fatigue, lassitude, irritability , headache, nausea). Hypotension (low blood pressure).
Medical Conditions:	Skin disorders and allergies.

12. ECOLOGICAL INFORMATION

Possible effects:	N/a
Behaviour:	N/a
Environmental fate:	N/a

Acetone

13. DISPOSAL CONSIDERATIONS

Likely residues / waste products:

Safe handling of and residues/waste products: Incinerate in suitable combustion chamber. Absorb in vermiculite or dry sand, dispose in licensed special waste. Confirm disposal procedures with environmental engineer and local regulations.

14. TRANSPORT INFORMATION

ROAD TRANSPORT:

Un No. Road:	1090
ADR Class No:	Class: 3 Flammable liquids
ADR Class:	3
ADR Item No:	3(b)
ADR Hazard No:	33 Highly flammable (flash point below 23ºC)
ADR Marginal:	2301
ADR Label No:	3
Hazchem Code:	2yE
CEFIC TEC(R) No:	30

RAIL TRANSPORT:

RID Class No:	3
RID Item No:	3(b)

SEA TRANSPORT:

IMDG Class:	3.1
IMDG Pack No:	3102
IMDG Pack GR:	II
Marine Pollutant:	No

AIR TRANSPORT:

ICAO Class:	3
Air Pack GR:	II

15. REGULATORY INFORMATION

Supply label information: Highly flammable, irritant

Hazard Symbol: F+, Xi

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

Safety Phrases:
S2 – Keep out of the reach of children.
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.

UK Regulatory Information: Classification. Packing and Labeling Regulations 1984. Highly Flammable Liquid Regulations 1972. Health and Safety at Work Act 1974. The Control of Substances Hazardous to Health Regulations 1988.

Acetone

16. OTHER INFORMATION

a)	**Training needs:**	For further information contact our office.
b)	**Recommended uses and restrictions:**	
c)	**Further references:**	
d)	**Key data sources:**	Dangerous Properties of Industrial Chemicals, 6 edition N.Sax, 1984. OSHA Air Contaminants – Permissible Exposure Limits (Title 29). Handbook of Toxic and Hazardous Chemicals and Carcinogens, Sittig, 1985. Hazardous Materials, Emergency Response Guidebook. DOT-P 5800.3, 1984. Material Safety Data Sheet, Misc. manufacturers. NIOSH/OSHA Pocket Guide to Chemical Hazards, 1978. Chemical Hazards of the Workplace, Protor & Hughes, Lippincott, 1978. The Condensed Chemical Directory, Hawley, 11th edition, 1987. The Merck Index, 11 edition, 1989. Threshold Limit Values and Biological Exposure Indicies for 1985-86. Chemical Safety Data Guide. Bureau of National Affairs, 1985.

The data contained in this Safety Data Sheet has been supplied as required, by the Chemicals (Hazard Identification and Packaging) Regulations 1994, as amended, for the purposes of protecting the health and safety of industrial and commercial users who are deemed capable of understanding and acting on the information provided.

Please ensure that it is passed to the appropriate person in your company, who is capable of acting on the information.

NOTE:
This data sheet does not constitute a user's assessment of workplace risk as required by HSW Act, COSHH, Management of Health and Safety at Work regulations, or other Health & Safety at Work regulations.