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

Identification of the product:
Product number: A1084
Name of material: Acetone

Use of the substance/preparation:
Solvents, analytical chemistry, synthesis of organic products, photography,

2. Composition/information on ingredients

Identification and amount of the components:
Synonyms: Dimethyl ketone, 2-Propanone
CAS number: 67-64-1
Molecular weight: 58.08 g/mol
EC index no: 606-001-00-8
EC number: 200-662-2
Formula: C3H6O

3. Hazards identification

Highly flammable, Irritating to eyes, repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

4. First aid measures

After inhalation: Fresh air. If necessary, apply mechanical ventilation or mouth-to-mouth resuscitation. Keep airways free.
After skin contact: Wash off with plenty of water. Remove contaminated clothing.
After ingestion: Plenty of water to drink. Avoid vomiting (risk of aspiration). Summon doctor. Subsequently administer: Activated charcoal (20 - 40 g in 10% slurry).
Laxative: Sodium sulfate (1 tablespoon/1/4 l water).
Instructions for the doctor: After ingestion (large amounts): Gastric lavage.
After eye contact: Rinse out with plenty of water for at least 10 minutes with the eyelid held wide open. Summon eye specialist.

5. Fire-fighting measures

Suitable extinguishing media: Powder, foam.
Special risks: Combustible. Vapours heavier than air, Formation of explosive mixtures possible with air at normal temperature, Formation of combustion gases or dangerous vapours possible in event of fire.
Special protective equipment for firefighting: Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.
Further information: Keep away from sources of ignition. Prevent fire-fighting water from entering surface water or groundwater. Cool container with spray water from a safe distance. Contain escaping vapours with water.

6. Accidental release measures

Person-related precautionary measures: Avoid substance contact. Do not inhale vapours/aerosols. Ensure supply of fresh air in enclosed rooms.
Environmental precautions: Do not allow to enter sewerage system (risk of explosion!).
Procedures for cleaning/absorption: Take up with liquid-absorbent material. Forward for disposal, clean up.

7. Handling and storage

Storage: Tightly closed in a well-ventilated place, away from sources of ignition and heat. Store at +15°C to +25°C.
8. Exposure controls/personal protection

Exposure controls:
Occupational exposure controls: The personal protective equipment must be selected according to the working place, based on the concentration and amount of the dangerous substance. The supplier should indicate the stability of the personal protective equipment to chemical reagents.
Respiratory protection: Required when vapours/aerosols are generated. Filter: AX (NE371)
Hand protection: Required
Eye protection: Required
Skin protection: Application of skin-protective barrier cream recommended.
Industrial hygiene: Immediately change contaminated clothing. Wash hands and face after working with substance. Work under hood. Do not inhale substance.

9. Physical and chemical properties

General information:
Form: Liquid
Colour: Colourless
Odour: Fruit-like
Important health, safety and environmental information:
PH value (395 g/l H2O, 20 °C): 5 - 6
Boiling temperature: 56 °C
Flash point: < -20 °C
Explosion limits (low): 2.6 Vol%
Explosion limits (high): 13 Vol%
Vapour pressure: (20 °C) 233 hPa
Density (20 °C): 0.79 g/cm3
Solubility in water: (20 °C): Miscible
Solubility in: Ethanol: Miscible Ether: miscible
Partition coefficient n-octanol/water: log P (o/w): -0.24 (experimentally)
Viscosity: (25 °C) 0.31 mPas
Relative vapour density: 2.01
Refractive index: (n 20 °C/D) 1.35868
Melting temperature: -95 °C
Ignition temperature: 540 °C

10. Stability and reactivity

Conditions to be avoided: Heating
Substances to be avoided: Halogens, halogenated hydrocarbons, halogen-halogen compounds, alkali hydroxides, halogen oxides, Metals, nitroso compounds, oxidizing agents (i.a.: chromates, nitric acid, peroxy compounds), ethanolamine.
Hazardous decomposition products: Peroxi compounds.
Further information: Solvents, sensitive to air, light-sensitive.
Unsuitable working materials: rubber, various plastics. Explosible with air in a vaporous/gaseous state.

11. Toxicological information

Acute toxicity:
LD₅₀(oral, rat): 5800 mg/kg
LC₅₀ (inhalation, rat): 76 mg/l /4h.
LD₅₀ (dermal, rabbit): 20000 mg/kg
Specific symptoms in animal studies: Skin irritation test (rabbit): irritations Eye irritation test (rabbit): irritations
Subacute to chronic toxicity:
Impairment of reproductive performance in animal experiments, Sensibilization test (Guinea pig): negative
Carcinogenicity: Noncarcinogenic in animal experiments. Mutagenicity:
Bacterium mutagenicity: Salmonella
typhimurium: negative
E. Coli: Negative Bacillus subtilis: negative Ames-Test: negative
Further toxicological information:
After inhalation: Mucosal irritations, drowsiness, drowsiness. In high concentrations: headache, nausea, vomiting, dizziness, salivation, narcosis. Cannot be excluded: coma
After skin contact: Slight irritations. Degreasing effect on the skin, resulting in rough and chapped skin.
After eye contact: Irritations. Risk of corneal clouding.
After ingestion: Symptoms in: gastrointestinal tract, headache, salivation, nausea, vomiting, dizziness; narcosis; coma.

Further information:
The product should be handled with the care usual when dealing with chemicals.

12. Ecological information

Ecotoxic effects:
Fish toxicity: L. macrochirus CL50: 8300 mg/l /96h.
Daphnia toxicity: Daphnia magna EC50: 12600 - 12700 mg/l /48h.
Algal toxicity: Sc. quadricauda IC5: 7500 mg/l /8d.
Bacterial toxicity: M. aeruginosa CE5: 530 mg/l /8d Ps. putida CE5: 1700 mg/l /16h.
Protozoa toxicity: E. sulcatum EC5: 28 mg/l /72h.
Mobility: log P (o/w): -0.24 (experimentally)
Bioaccumulative potential: Non bioaccumulative.
Bioconcentration factor: 0.69
Persistence and degradability: Biological degradability: 91% /28d. Biological degradability: good

Further ecologic data:
No ecological problems are to be expected when the product is handled and used with due care and attention.

13. Disposal considerations

Product: There are no uniform EU Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EU member countries through corresponding laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste.

Packaging: Disposal in compliance with official regulations. Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

14. Transport information

Road transport:
UN-No: 1090
ADR class: 3 F1 II
Correct technical name: ACETONE

Sea transport:
UN-No: 1090
IMDG class: 3 II
Correct technical name: ACETONE

Air transport:
UN-No: 1090
IATA/ICAO class: 3 II
Correct technical name: ACETONE

15. Regulatory information

Labelling according to EC Directives
Symbol: F (Highly flammable), Xi (Irritant)
R-phrases: 11-36-66-67 highly flammable. Irritating to eyes, repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.
S-phrases: 9-16-26 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.
EC-Index-No: 606-001-00-8
16. Other information

Reason for the revision: General update.
Date: 21/01/2011

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