**PROCHEMICAL GROUP, s.r.o.**
Nabrezie Sv. Cyrila 47 Reg.No.: 45492409
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

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|---|---|
| Substance name: | Acetone |
| Synonyms: | Propane-2-one<br>2-Propanone<br>Dimethyl ketone |
| EC Name: | Acetone |
| Index No:<br>(Annex VI to Regulation (EC) No 1272/2008) | 606-001-00-8 |
| EC No: | 200-662-2 |
| CAS No: | 67-64-1 |
| REACH Registration No:<br>(assigned under Article 20(3) of Regulation (EC) No 1907/2006) | 01-2119498062-37-0000 |

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

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|---|---|
| Identified uses: | Acetone is used as intermediate (chemical feedstock) in production of other chemicals; formulating solvent for commercial products; industrial process solvent.<br><br>The CSR defines the following uses (IU) of acetone:<br><br>IU0 [importation and storage –INDUSTRIAL USE];<br>IU1 [Intermediate in production of other substances –INDUSTRIAL USE]; IU2 [Industrial process solvent –INDUSTRIAL USE];<br>IU3 [Formulating component in manufacture of preparations – INDUSTRIAL USE];<br>IU4 [Solvent for professional use –PROFESSIONAL USE];<br>IU5 [Formulating solvent for commercial products –CONSUMER USE]<br><br>The Use Descriptors for acetone are listed as follows:<br><br>Sectors of end use (SU): SU3; SU10; SU21; SU22.<br>Process category (PROC): PROC1; PROC2; PROC3; PROC4; PROC5; PROC7; PROC8b; PROC9; PROC10; PROC11; PROC13; PROC19. Market sector by type of chemical product: PC1; PC9a; PC18; PC19; PC23; PC26; PC34; PC35; PC40.<br>Environmental release category (ERC): ERC1; ERC2; ERC3; ERC4; ERC6a; ERC8a; ERC8b.<br><br>For details on Use Descriptors, refer Section 16 of this eSDS. |
| Uses advised against: | Acetone shall not be used in contradiction to all relevant national/regional restrictions applied to this substance, including, but not limited to, those prescribed by REACH regulation. |
| Exposure scenario(s): | For detailed information on exposure assessment, please, refer Annex I to this eSDS. |

1.3. Details of the supplier of the safety data sheet

| | |
|---|---|
| Manufacturer: | Open Joint Stock Company "Ufaorgsyntez"<br>Ufa, 450037<br>Republic of Bashkortostan<br>Russian Federation |
| Only Representative: | **PROCHEMICAL GROUP, s.r.o.**<br>Nabrezie Sv. Cyrila 47<br>Prievidza 97101, Slovakia<br><br>tel.: +421 911 993183 web:<br>www.prochemical.eu mail:<br>sales@prochemical.eu |

1.4. Emergency telephone number

| | |
|---|---|
| Manufacturer Emergency number: | Tel: +7 (347) 249-69-72, 242-12-79, 264-89-91, 235-88-22 |
| European Country Emergency Number: | Please, refer to Annex II of this eSDS for the list of Emergency telephones of European Poisons Centers.<br><br>NOTE: The list of emergency telephone numbers is provided here for reference only. It may not be complete or correct. Please, consult with your local/national competent authorities for the emergency number in your country. |

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.1. Classification according to the criteria of Regulation (EC) No 1272/2008 (CLP Regulation) (Annex VI, table 3.1):

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|---|---|
| for physical-chemical properties: | Flammable liquids: Category 2; H225: Highly flammable liquid and vapour. |
| for health hazards: | ➢ Eye irritation: Category 2; H319: Causes serious eye irritation.<br>➢ Specific target organ toxicity - single: STOT Single Exp. Category 3; H336: May cause drowsiness or dizziness.<br>➢ EUH066: Repeated exposure may cause skin dryness or cracking. |
| for environmental hazards: | Not classified. |

2.1.2. Classification according to the DSD/DPD criteria of Annex I of Directive 67/548/EEC and as reported in Regulation (EC) No 1272/2008 (Annex VI, table 3.2):

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|---|---|
| for physical-chemical properties: | Flammability: F; R11 Highly flammable |

| | |
|---|---|
| for health hazards: | ➢ Acute toxicity: R67; Vapours may cause drowsiness and dizziness.<br>➢ Irritation / Corrosion: Xi; R36 Irritant; Irritating to eyes.<br>➢ R66 Repeated exposure may cause skin dryness or cracking. |
| for environmental hazards: | Not classified. |

2.2. Label elements

2.2.1. Labelling according to the GHS criteria of Regulation (EC) No 1272/2008 (CLP Regulation):

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| Signal word: | Danger |
| Hazard pictograms: | GHS02: flame GHS07:exclamation mark   |
| Hazard statements: | H225: Highly flammable liquid and vapour.<br>H319: Causes serious eye irritation.<br>H336: May cause drowsiness or dizziness.<br>EUH066: Repeated exposure may cause skin dryness or cracking |

| | |
|---|---|
| Precautionary statements: | *Prevention:*<br>P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.<br>P233: Keep container tightly closed.<br>P240: Ground/bond container and receiving equipment.<br>P241: Use explosion-proof electrical/ventilating/lighting/ other equipment.<br>P242: Use only non-sparking tools.<br>P243: Take precautionary measures against static discharge.<br>P261: Avoid breathing fume/gas/mist/vapours/spray.<br>P264: Wash hands thoroughly after handling.<br>P271: Use only outdoors or in a well-ventilated area.<br>P280: Wear protective gloves/protective clothing/eye protection/face protection.<br><br>*Response:*<br>P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.<br>P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P312: Call a POISON CENTER or doctor/physician if you feel unwell.<br>P337+P313: If eye irritation persists: Get medical advice/attention.<br><br>*Storage:*<br>P403+P233: Store in a well-ventilated place. Keep container tightly closed.<br>P405: Store locked up.<br><br>*Disposal:*<br>P501: Dispose of contents/container in accordance with local/ regional/ national/ international regulation. |

2.2.2. Labelling according to the DSD/DPD criteria of Annex I of Directive 67/548/EEC and as reported in Regulation (EC) No 1272/2008 (CLP Regulation):

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|---|---|
| Indication of danger: | F - highly flammable<br>Xi – irritant |
| R-phrases: | R11 - highly flammable<br>R36 - irritating to eyes<br>R66 - repeated exposure may cause skin dryness or cracking<br>R67 - vapours may cause drowsiness and dizziness |
| S-phrases: | S2 - keep out of the reach of children<br>S9 - keep container in a well-ventilated place |
| | S16 - keep away from sources of ignition - No smoking<br>S26 - in case of contact with eyes, rinse immediately with plenty of water and seek medical advice. |

2.3. Other hazards

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|---|---|
| Physical Chemical Hazards: | Fire and Explosion Hazards:<br>➢ Highly flammable liquid. Will be easily ignited by heat, sparks or flames.<br>➢ Flash point: - 18 deg C (closed cup)<br>➢ Auto-ignition temperature: 465oC<br>➢ Vapours may form explosive mixtures with air. Explosive limits, vol% in air: 2.2 -13<br>➢ Vapor may explode if ignited in an enclosed area.<br><br>Chemical Hazards:<br>➢ The substance can form explosive peroxides on contact with strong oxidants such as acetic acid, nitric acid, hydrogen peroxide (ICSC 0087).<br>➢ Reacts with chloroform and bromoform under basic conditions, causing fire and explosion hazard (ICSC 0087).<br>➢ Incompatible materials: oxidizers, acids, alkalis. |
| Human Health Hazards: | Eye and Skin Contact:<br>➢ The substance (vapour) irritates the eyes and mucous membranes.<br>➢ The liquid defats the skin. Repeated contact with skin may cause dryness and cracking, possibly leading to dermatitis.<br><br>Inhalation:<br>➢ The substance is irritating to the respiratory tract.<br>➢ Exposure at high levels may result in lowering of consciousness.<br><br>Ingestion:<br>➢ Low order of toxicity but very irritating to mucous membranes. |

SECTION 3: Composition/information on ingredients

3.1. Substances

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| Main constituent(s): | Chemical name | CAS No | EC No | Weight % content |
|---|---|---|---|---|
| | Acetone | 67-64-1 | 200-662-2 | ≥ 99.75% |
| Stabilizer(s): | None | | | |
| Other Hazardous Components/ Impurities: | None | | | |

SECTION 4: First aid measures

4.1. Description of first aid measures

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|---|---|
| General notes: | Consult a physician. Show this safety data sheet to the doctor. |
| Following inhalation: | If a person breathes in large amounts of acetone, move the exposed person to fresh air at once. Keep the affected person warm and at rest. Get medical attention immediately. |
| Following skin contact: | Remove contaminated clothes. Rinse skin with plenty of water or shower. If symptoms such as redness or irritation develop, get medical attention. |
| Following eye contact: | If liquid acetone contacts the eyes, they shall be thoroughly irrigated with clean water. Remove contact lenses if present and easy to do. Medical assistance shall be promptly provided in cases of eye splashes. |
| Following ingestion: | Rinse mouth. Do not induce vomiting. Volatile chemicals have a high risk of being aspirated into the lungs during vomiting which increases the medical problems. Obtain medical attention immediately. |

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

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| Inhalation: | ➢ The substance is irritating to the respiratory tract.<br>➢ Inhalation to high concentrations may cause sore throat, cough, confusion, headache, dizziness, drowsiness, unconsciousness.<br>➢ Acetone may be narcotic and cause unconsciousness. |
| Skin/Eye contact: | ➢ The substance is irritating to eyes and mucous membranes.<br>➢ The liquid defats the skin. Repeated contact with skin may cause dryness and cracking. Direct contact with the skin should be avoided. Acetone should never be used as a cleaning agent for the skin. |
| Ingestion: | Do not induce vomiting. Volatile chemicals have a high risk of being aspirated into the lungs during vomiting which increases the medical problems. |

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

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|---|---|
| Acute exposure: | For special medical treatment and/or advice immediately refer to medical professionals. |

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SECTION 5: Firefighting measures

5.1. Extinguishing media

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|---|---|
| Suitable extinguishing media: | Alcohol-resistant foam, water spray, fog, dry chemical, carbon dioxide. |
| Unsuitable extinguishing media: | Do not use water jet (straight streams) to extinguish. |

5.2. Special hazards arising from the substance or mixture

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|---|---|
| Hazardous combustion products: | Gives off toxic and irritant fumes when heated or burning. |
| Fire and Explosion Hazards: | ➢ Highly flammable liquid. Will be easily ignited by heat, sparks or flames. Dangerous disaster hazard due to fire and explosion hazard.<br>➢ Flash point: - 18oC (closed cup).<br>➢ Auto-ignition temperature: 465oC.<br>➢ Vapours may form explosive mixtures with air. Explosive limits, vol% in air: 2.2 -13.<br>➢ Vapor may explode if ignited in an enclosed area. Vapour explosion hazard indoors, outdoors or in sewers. |
| Unusual fire and explosion hazards: | ➢ Gives off toxic and irritant fumes when heated or burning.<br>➢ Vapours may travel to source of ignition and flash back.<br>➢ The vapour may be invisible and is heavier than air. It may spread along the ground and collect in low or confined areas (sewers, basements, tanks).<br>➢ Runoff to sewer may create fire or explosion hazard.<br>➢ Heating of container(s) will cause pressure rise with risk of bursting and subsequent explosion. Containers may explode when heated. |

5.3. Advice for firefighters

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| Special fire fighting procedures: | ➢ To fight fire use alcohol-resistant foam, water spray, fog, dry chemical, carbon dioxide.<br>➢ Do not use water jet to extinguish.<br>➢ Use water spray to knock down fire fumes if possible.<br>➢ Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.<br>➢ Cool containers with flooding quantities of water until well after fire is out. Apply water from as far a distance as possible.<br>➢ Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire. |

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| | ➢ Avoid unnecessary run-off of extinguishing media which may cause pollution. |
| Personal protection: | ➢ Self-Contained Breathing Apparatus (SCBA) with appropriate chemical protection suit.<br>➢ Fire fighter's clothing conforming to European standard EN469. |
| First aid: | ➢ If substance has got into eyes, wash out with water for at least 15 minutes and seek immediate medical attention.<br>➢ Remove contaminated clothing immediately and drench affected skin with plenty of water.<br>➢ Persons who have been in contact with the substance or have inhaled fumes should get immediate medical attention. Pass on all available product information. |
| | ➢ In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing adhering to skin. Get immediate medical attention. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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| Protective equipment: | Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. |

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| Emergency procedures: | ➢ If employees are required to clean up spills, they must be properly trained and equipped.<br>➢ Avoid breathing vapors. Keep upwind.<br>➢ Do not touch or walk through spilled material. Do not handle broken packages without protective equipment.<br>➢ Wash away any material, which may have contacted the body with copious amounts of water or soap and water.<br>➢ Work clothing that becomes wet should be immediately removed due to its flammability hazard.<br>➢ Keep sparks, flames, and other sources of ignition away.<br>➢ Collect leaking and spilled liquid in sealable containers as far as possible.<br>➢ Absorb remaining liquid in sand or inert absorbent and remove to safe place. Then wash away with plenty of water.<br>➢ Do not wash away into sewer.<br>➢ Keep material out of water sources and sewers.<br>➢ Attempt to stop leak if without undue personnel hazard.<br>➢ Use water spray or mist to disperse vapors and dilute standing pools of liquid.<br>➢ Do not let this chemical enter the environment. |

6.1.2. For emergency responders:

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| Emergency Response in case of Spill and Leak: | ➢ Evacuate and restrict persons not wearing protective equipment from area of spill or leak until cleanup is complete. Remove all ignition sources.<br>➢ It may be necessary to contain and dispose of this chemical as a hazardous waste.<br>➢ If material or contaminated runoff enters waterways, notify downstream users of potentially contaminated waters. Contact the responsible authority in your country/region for specific recommendations.<br>➢ If employees are required to clean up spills, they must be properly trained and equipped. |
| Public Safety Hazard: | Minimize number of personnel in risk area. |

6.2. Environmental precautions

| | |
|---|---|
| Accidental Spills and Releases: | ➢ Do not wash away into sewer.<br>➢ Keep away from drains, surface and ground water. Do not let this chemical enter the environment.<br>➢ If substance has entered a water course or sewer, inform the responsible authority. |

6.3. Methods and material for containment and cleaning up

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|---|---|
| For containment: | ➢ Prevent further leakage or spillage if safe to do so.<br>➢ It may be necessary to contain and dispose of this chemical as a hazardous waste. |
| | ➢ Evacuate and restrict persons not wearing protective equipment from area of spill or leak until cleanup is complete. Remove all ignition sources.<br>➢ It may be necessary to contain and dispose of this chemical as a hazardous waste.<br>➢ If material or contaminated runoff enters waterways, notify downstream users of potentially contaminated waters. Contact the responsible authority in your country/region for specific recommendations.<br>➢ If employees are required to clean up spills, they must be properly trained and equipped.<br>➢ If spilled, the following steps should be undertaken:<br>**Small spill:** Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place.<br>**Land spill:** Dig a pit, pond, lagoon, holding area to contain liquid or solid material. Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete. Absorb bulk liquid with fly ash, or commercial sorbents.<br>**Water spill:** Use natural barriers or oil spill control booms to limit spill travel. Remove trapped material with suction hoses. **Air spill:** Apply water spray or mist to knock down vapors |

6.4. Reference to other sections

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| Other information: | For more information, refer to Sections 8 and 13 of this Safety Data Sheet. |

SECTION 7: Handling and storage

7.1. Precautions for safe handling

7.1.1. Protective measures

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| Training: | ➢ Any person who comes into contact with the substance needs to be trained in proper handling and safety per applicable federal, state and local laws and regulations.<br>➢ Employers must advise employees of all areas and operations where exposure to the substance might occur. |

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| | ➢ All workers who may be potentially exposed to this substance shall be kept informed of the hazards, relevant symptoms, effects |
| | of overexposure to, and proper precautions concerning safe use and handling of this chemical.<br>➢ The hazard information shall be readily available to workers at all places of employment where acetone is manufactured, used, transported or stored. |
| Measures to prevent fire: | Normal measures for preventive fire protection when handling highly flammable liquid substances. Keep sparks, flames, and other sources of ignition away. No smoking. Take measures to prevent the build up of electrostatic charge. |
| Measures to prevent aerosol and dust generation: | ➢ Avoid formation of aerosols and mists.<br>➢ Avoid inhalation of aerosols and mist.<br>➢ Avoid contact with skin and eyes.<br>➢ Use in a well ventilated area. |
| Measures to protect the environment: | ➢ Do not wash away into sewer.<br>➢ Keep away from drains, surface and ground water. Do not let this chemical enter the environment.<br>➢ If substance has entered a watercourse or sewer, inform the responsible authority. |

7.1.2. Advice on general occupational hygiene:

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|---|---|
| Handling: | ➢ Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink, or smoke during work. Wash hands before eating, after handling the substance, before breaks and at the end of workday.<br>➢ Wash skin: The worker should immediately wash the skin when it becomes contaminated.<br>➢ The liquid defats the skin. Repeated contact with skin may cause dryness and cracking. Direct contact with the skin should be avoided. Acetone should never be used as a cleaning agent for the skin.<br>➢ Work clothing that becomes wet should be immediately removed due to its flammability hazard. |

7.2. Conditions for safe storage, including any incompatibilities

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|---|---|
| Technical measures and storage conditions: | ➢ Store in cool place. Keep container tightly closed in a dry and well-ventilated place.<br>➢ Keep away from heat, sparks, and flames.<br>➢ Store separated from incompatible substances. |
| Packaging materials: | Containers, which are opened, must be carefully resealed and kept upright to prevent leakage. |

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| Requirements for storage rooms and vessels: | Store in an area without drain or sewer access. |
| Further information on storage conditions: | Store separated from food and feedstuffs. |

7.3. Specific end use(s)

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| Fire/Explosion prevention: | ➢ No open flames. No contact with hot surfaces.<br>➢ Standard measures for preventive fire protection when handling highly flammable liquid substances.<br>➢ Work clothing that becomes wet should be immediately removed due to its flammability hazard. |
| Recommendations: | For detailed information on exposure scenarios, please, refer Annex I to this Safety Data Sheet. |

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National Occupational Exposure limit values

Substance: Acetone
CAS No. 67-64-1

| **Country** | **Limit value – 8 hours** | | **Limit value - Short term (15 minutes)** | | **Legal basis** |
|---|---|---|---|---|---|
| | **ppm** | **mg/m³** | **ppm** | **mg/m³** | |
| European Union | 500 | 1210 | - | - | Indicative Occupational Exposure Limits (IOELVs)/ DIR 2000/39/CE |
| Austria | 500 | 1200 | 2000 | 4800 | Maximum Workplace Concentrations (“Maximale Arbeitsplatzkonzentrationen” – MAK) |
| Belgium | 500 | 1210 | 1000 | 2420 | Occupational exposure limits (Valeurs limites d'exposition professionnelle – VLEP/ Grenswaarden voor beroepsmatige blootstelling – GWBB) |
| Bulgaria | No data available | | | | |
| Cyprus | No data available | | | | |
| Czech Republic | No data available | | | | |
| Denmark | 250 | 600 | 500 | 1200 | No data available |

| | | | | | |
|---|---|---|---|---|---|
| Estonia | No data available | | | | |
| Finland | No data available | | | | |
| France | 500 | 1210 | 1000 | 2420 | Occupational exposure limit values for occupational exposure to chemical agents in France |
| Germany | 500 | 1200 | 1000 | 2400 | Occupational Limit Values (Arbeitsplatzgrenzwerte – AGW) |
| | 500 | 1200 | 1000 | 2400 | MAK values derived by the "DFG Commission for |
| | | | | | the Investigation of Health Hazards of Chemical Compounds in the Work Area" |
| Greece | No data available | | | | |
| Hungary | - | 1210 | - | 2420 | Hungarian decree No. 25/2000 (IX.30) on the Chemical Safety of Workplaces issued by the Ministry of Social Affairs and Health |
| Ireland | No data available | | | | |
| Italy | 500 | 1210 | - | - | No data available |
| Latvia | No data available | | | | |
| Lithuania | No data available | | | | |
| Luxembourg | No data available | | | | |
| Malta | No data available | | | | |
| Netherlands | - | 1210 | - | 2420 | Limit values/The Netherlands: Dutch Legal Public Limit Values |
| Poland | - | 600 | - | 1800 | The Interdepartmental Commission for Maximum<br>Admissible Concentrations and Intensities for Agents Harmful to Health in the Working Environment |
| Portugal | No data available | | | | |
| Romania | No data available | | | | |
| Slovakia | No data available | | | | |
| Slovenia | No data available | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Spain | 500 | 1210 | - | - | Spanish legislation on chemical agents (Royal Decree 374/2001 transposing Directive 98/24/EC). |
| Sweden | 250 | 600 | 500 | 1200 | No data available |
| United Kingdom | 500 | 1210 | 1500 | 3620 | Workplace Exposure Limits (WELs) |

| | |
|---|---|
| Source: | Based on GESTIS International Limit values Database available at http://www.dguv.de/ifa/en/gestis/limit_values/index.jsp |
| NOTE: | All currently adopted by the national/regional competent authority levels on safe exposure to this chemical shall apply. |

8.1.2. International Occupational Exposure limit values Substance: Acetone
CAS No. 67-64-1

| **Country/ Organization** | **Limit value – 8 hours** | | **Limit value - Short term (15 minutes)** | | **Specific Notations** |
|---|---|---|---|---|---|
| | **ppm** | **mg/m³** | **ppm** | **mg/m³** | |
| ACGIH | 500 | - | 750 | - | A4 (Not Classifiable as a Human Carcinogen) |
| Switzerland | 500 | 1200 | 1000 | 2400 | Swiss occupational exposure limit values |
| USA-NIOSH | 250 | 590 | - | - | Recommended Exposure Limit (REL) |
| USA-OSHA | 1000 | 2400 | - | - | Permissible Exposure Limits (PELs) |

NOTE: All currently adopted by the national/regional competent authority levels on safe exposure to this chemical shall apply.

8.1.3. The Derived No Effect Levels (DNELs)/ Derived Minimal Effect Levels (DMELs) and Predicted No Effect Concentrations (PNECs)

8.1.3.1. DNEL/DMEL from the CSR in accordance with REACH regulation

Substance: Acetone
CAS No. 67-64-1

| **Route of exposure** | **Workers** | **Consumers** |
|---|---|---|

| | **Acute effect local** | **Acute effects systemic** | **Chronic effects local** | **Chronic effects systemic** | **Acute effects local** | **Acute effects systemic** | **Chronic effects local** | **Chronic effects systemic** |
|---|---|---|---|---|---|---|---|---|
| Oral | Not required | | | | No DNEL/DMEL is proposed | | | |
| Inhalation | Workplace exposure:<br>DNEL/DMEL:<br>1210 mg/m3 (500 ppm) -8-h TWA. | | | | No DNEL/DMEL is proposed | | | |
| Dermal | No DNEL/DMEL is proposed | | | | No DNEL/DMEL is proposed | | | |

NOTE: These values are not legally binding and referred here for recommendation purpose only. All currently adopted by the national/regional competent authority levels on safe exposure to this chemical shall apply.

8.1.3.2. PNECs from the CSR in accordance with REACH regulation:

Substance: Acetone
CAS No. 67-64-1

| **Environmental protection target** | **PNEC** |
|---|---|
| **Fresh water:** | ➢➢ PNEC = 30.21 mg/L |
| **Freshwater sediments:** | ➢➢ No PNEC is proposed |
| **Marine water:** | ➢➢ PNEC = 30.21 mg/L |
| **Marine sediments:** | ➢➢ No PNEC is proposed |
| **Food chain:** | ➢➢ No PNEC is proposed |
| **Microorganisms in sewage treatment:** | ➢➢ No PNEC is proposed |
| **Soil (agricultural):** | ➢➢ No PNEC is proposed |
| **Air:** | ➢➢ No PNEC is proposed |

NOTE: These values are not legally binding and referred here for recommendation purpose only. All currently adopted by the national/regional competent authority levels on safe exposure to this chemical shall apply.

8.2. Exposure controls

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| Appropriate engineering controls: | ➢ Engineering controls should be sufficient to reduce exposures to this chemical to the lowest level achievable.<br>➢ Hazard communication: The transmittal of hazard information to workers is to be accomplished by such means as container labelling and other forms of warning, material safety data sheets, and employee training.<br>➢ Housekeeping and Hygiene Facilities: The workplace should be kept clean, orderly, and in a sanitary condition. Adequate washing facilities shall be provided and maintained in a sanitary condition. Comply with principles of good industrial hygiene and safety practice. Do not eat, drink, or smoke during work. Wash hands before eating, before breaks and at the end of workday. |
| Personal Protection | ➢ Eye/face protection: If there is a potential that this chemical can come in contact with eye or skin, appropriate eye and skin protective equipment shall be provided and used. Appropriate eye and face protection may be necessary to prevent contact with this |

| | |
|---|---|
| | substance. Suitable protective clothing and eye protection should be in accordance with national, or regional standards and regulations.<br>➢ Skin protection: Handle with appropriate gloves. Gloves must be inspected prior to use. Use proper glove removal method –without touching glove's outer surface –to avoid skin contact with this product.<br>➢ Respiratory protection: Personal Protective Equipment/ Respiratory Protection: should be used in accordance with company and applicable national regulatory requirements. Respiratory protection should be used to supplement the engineering controls and work practices. Persons should not be assigned to tasks requiring the use of respirators unless it has been determined they are physically able to perform the work and are trained to use the equipment.<br>➢ Chemical Protective Clothing: The level of protection selected should be based on the potential substance concentration and likelihood of contact/ exposure. Suitable protective clothing and eye protection should be in accordance with national, or regional standards and regulations.<br>➢ All protective clothing shall be well aired and inspected for physical defects before re-use.<br>➢ Take off contaminated clothing and wash before re-use. Work clothing that becomes wet should be immediately removed due to its flammability hazard |

8.3. Environmental Exposure controls

| | |
|---|---|
| Measures to prevent exposure: | ➢ Apply all necessary Risk Management Measures to ensure compliance with relevant national or regional legislation requirements.<br>➢ Engineering controls and good work practices;<br>➢ Regular monitoring for leak detection;<br>➢ Hazard communication;<br>➢ Housekeeping and Hygiene Facilities |
| Waste-related Measures: | The transportation, storage, treatment, and disposal of the waste material must be conducted in compliance with local regulations for hazardous wastes. Disposal can occur only in properly permitted facilities. Check state and local regulation of any additional requirements for disposal conditions. |

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Appearance: | Colorless liquid substance. |
| Odour: | Characteristic sweetish, acetone-like odour. |
| Odour threshold: | Air: 9.5 mg/m3 (4 ppm) - detection; 237-332 mg/m3 (100-140 ppm) - 100% odour recognition (WHO, 1998).<br>Water: 20 mg/L (WHO, 1998). |
| pH: | No data available. |
| Melting point/freezing point: | -95°C |
| Initial boiling point and boiling range: | 56°C |
| Flash point: | -18oC (closed cup) |
| Evaporation rate: | No data available. |
| Flammability: | Highly Flammable Liquid. |
| Upper/lower flammability or explosive limits: | Lower flammable limit: 2.2% by volume; Upper flammable limit: 13% by volume. |
| Vapour pressure: | 249 mm Hg ; 33.2 kPa /QSAR estimated at 25 °C/ |
| Vapour density: | No data available. |
| Relative density: | 0.790 g/cm3 (at 20°C) |
| Solubility(ies): | Miscible with water.<br>Readily soluble in organic solvents. |
| Partition coefficient: noctanol/ water: | Log Kow = - 0.24 /QSAR estimated/ |
| Auto-ignition temperature: | 465°C |
| Decomposition temperature: | No data available. |
| Viscosity: | No data available. |
| Explosive properties: | Not explosive. |
| Oxidising properties: | Not oxidizing. |

9.2. Other information

| | |
|---|---|
| Henry's law constant (HLC): | 3.97x10-5 atm-m3/mole; 4.02 Pa-m3/mole /QSAR estimate at 25 °C/. |
| Conversion factors (in air at 25°C): | 1 ppm = 2.374 mg/m3; 1 mg/m3 = 0.421 ppm (WHO, 1998). |

SECTION 10: Stability and reactivity

10.1. Reactivity

| | |
|---|---|
| Reactivity Hazards: | ➢ The substance can form explosive peroxides on contact with strong oxidants such as acetic acid, nitric acid, hydrogen peroxide (ICSC 0087).<br>➢ Reacts with chloroform and bromoform under basic conditions, causing fire and explosion hazard (ICSC 0087).<br>➢ Incompatible materials: oxidizers, acids, alkalis. |

10.2. Chemical stability

| | |
|---|---|
| Stability/ Shelf-life: | ➢ Stable under recommended storage conditions.<br>➢ No hazardous reaction when handled and stored according to provisions. |

10.3. Possibility of hazardous reactions

| | |
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| Special precautions: | ➢ Materials to avoid: incompatible materials.<br>➢ Conditions to avoid: Heat, flames and sparks. |

10.4. Conditions to avoid

| | |
|---|---|
| Conditions contributing to instability: | ➢ Heat, flames and sparks. |

10.5. Incompatible materials

| | |
|---|---|
| Incompatibilities: | ➢ Materials to avoid: oxidizers, acids, alkalis. |

10.6. Hazardous decomposition products

| | |
|---|---|
| Hazardous decomposition products: | ➢ Carbon oxides. |

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| | |
|---|---|
| Toxicokinetics (absorption, metabolism, distribution and elimination): | ➢ Acetone occurs naturally throughout the body and it is one of three biochemical substances collectively referred to as ketone bodies. Acetone is formed endogenously in the liver of the mammals as a result of fatty acid oxidation. Endogenously produced acetone is eliminated from the body either by excretion in urine and exhaled air or by enzymatic metabolism (WHO, 1998).<br>➢ Acetone is rapidly absorbed via the respiratory and gastrointestinal tracts and is distributed among non-adipose tissues. Acetone does not accumulate in adipose tissue. Excretion of acetone from the body is rapid and most of acetone (and its metabolite, carbon dioxide) is cleared via exhalation. Urinary excretion of acetone and its metabolites is reported as a minor route of elimination (WHO, 1998).<br>➢ Acetone was reported to metabolize to a variety of products used as building blocks for the synthesis of glucose, amino acids, and other complex biochemical substances (OECD, 1999). |
| Acute toxicity: | ➢ <u>Experimental data:</u><br>LD50 (oral, adult rats) = 5800-7138 mg/kg bw (WHO, 1998).<br>LD50 (Mice, oral) =5200 mg/kg bw (Bingham et al, 2001).<br><br>LC50 (Rats, 4-h inhalation) = 31,994 ppm (76 000 mg/m3; 76 mg/L) (ATSDR, 1994).<br><br>LD50 (Rabbit, dermal)> >20 mL/kg (>15,688 mg/kg bw) (ATSDR, 1994).<br>LD50 (Guinea pigs, dermal)>9.4 mL/kg (>7,373 mg/kg) (ATSDR, 1994).<br>➢ <u>Discussion:</u> |

| | |
|---|---|
| | The experimental data set on acute toxicity of acetone includes studies by inhalation, oral and dermal exposure performed in rodents. These data are, generally, well above the threshold for classification of acetone for acute toxicity (i.e. > 2000 mg/kg bw via oral and dermal exposure routes, and >20 mg/L via inhalation exposure route).<br><br>QSARs modeling data based on the Cramer method (Estimation of toxic hazard- a decision tree approach) suggests low acute toxicity of acetone. Particularly, when concluding the low acute toxicity of acetone, the model assumes that acetone is: Normal constituent of the body.<br><br>The data on acute toxicity of acetone in humans report that very high concentrations of acetone may result in respiratory tract irritation and narcotic effects, including sore throat, cough, dizziness, drowsiness, headache, and unconsciousness.<br><br>Overall, acetone is considered to be of low acute toxicity. |
| Skin corrosion/irritation: | ➢ Acetone defats the skin and repeated contact with skin may result in dryness and cracking, possibly leading to dermatitis (ICSC 0087). |
| Serious eye damage/irritation: | ➢ Acetone is reported to cause eye irritation, redness, pain, blurred vision (ICSC 0087).<br>➢ Acetone has harmonized at EU level classifications and it is classified as Xi; R36 – Irritating to eyes, in accordance with Directive 67/548/EEC, and Eye Irritant, Hazard Category 2, H319: Causes serious eye irritation, in accordance with the GHS criteria of Regulation (EC) No 1272/2008. |
| Respiratory irritation: | ➢ From the data available for acetone, it is likely that liquid acetone or high concentrations of acetone vapour in the air may cause irritation of respiratory tract. |
| Respiratory or skin sensitization: | ➢ **Skin sensitisation:** not considered to be a skin sensitizer.<br>➢ **Respiratory sensitisation:** not considered to be a respiratory sensitizer. |

| | |
|---|---|
| Germ cell mutagenicity: | ➢ Acetone was not genotoxic when tested in in vitro bacterial experimental systems and in in vivo studies (WHO, 1998). Moreover, application of available QSAR model suggests that this substance is not mutagenic. |
| | Overall, acetone is not considered as genotoxic/ mutagenic substance. |
| Carcinogenicity: | ➢ Acetone is considered as A4: Not classifiable as a human carcinogen substance (ACGIH, 2008). Moreover, acetone has been used extensively as a solvent vehicle in skin carcinogenicity studies and is not considered as carcinogenic when applied to the skin.<br><br>Overall, acetone is not considered as carcinogenic substance. |
| Reproductive toxicity: | ➢ Acetone is not considered as reproductive or developmental toxicant. |
| STOT- single & repeated exposure: | ➢ Repeated dose exposure to acetone may result in toxicity effects on CNS, liver and kidney.<br>➢ The experimental toxicity studies of acetone in rodents performed by the NTP (drinking water studies) identified testis, kidney and hematopoietic system as the target organs of repeated dose toxicity of acetone in male rats and liver –as target organ of repeated dose toxicity of acetone in male/female mice (NTP, 1991):<br><br>Rats (90-day study):<br>LOAEL (male) =20 000 ppm (1700 mg/kg bw/day); NOAEL =900 mg/kg bw/day LOAEL (female): not identified; NOAEL =3100 mg/kg bw/day<br><br>Mice (90-day study):<br>LOAEL (male) =20 000 ppm (4858 mg/kg bw/day); NOAEL =2258 mg/kg bw/day LOAEL (female) =50 000 ppm (11298 mg/kg bw/day); NOAEL =5945 mg/kg bw/day.<br><br>➢ Inhalation toxicity: The NOAEL for the CNSrelated effects of acetone via inhalation =2375 mg/m3 (OECD, 1999).<br><br>Overall, acetone is considered of low repeated dose systemic toxicity. |

SECTION 12: Ecological information

12.1. Toxicity

12.1.1. Aquatic Environment

| | |
|---|---|
| Acute (short-term) toxicity: | ➢ Fish: LC50 (96-hr, QSAR) =4144.8 mg/L to 6829.1 mg/L.<br>➢ Crustacea: LC50 (48-hr, QSAR) =1679.7 mg/L to 20356.9 mg/L.<br>➢ Algae/aquatic plants (Green Algae): EC50 (96hr, QSAR) =302.0 mg/L.<br>➢ Other organisms: No data available |
| Chronic (long-term) toxicity: | ➢ Fish: NOEC (QSAR) =167.1 mg/L to 371.8 mg/L<br>➢ Crustacea: NOEC (QSAR) =136.7 mg/L -3412.4 mg/L.<br>➢ Algae/aquatic plants (Green Algae): NOEC (QSAR) =79.5 mg/L.<br>➢ Other organisms: No data available |

12.1.2. Terrestrial Environment

| | |
|---|---|
| Acute (short-term) toxicity: | ➢ Soil macro-organisms: LC50 (14-day, QSAR, earthworm) =172.19 mg/L (ppm).<br>➢ Terrestrial plants: No data available.<br>➢ Soil micro-organisms: No data available<br>➢ Other terrestrial organisms: No data available |
| Chronic (long-term) toxicity: | ➢ Soil macro-organisms: No data available<br>➢ Terrestrial plants: No data available<br>➢ Soil micro-organisms: No data available<br>➢ Other terrestrial organisms: No data available<br>➢ No direct or indirect exposure of the soil compartment to acetone is expected. |

12.2. Persistence and degradability

| | |
|---|---|
| Hydrolysis: | ➢ Evaluation of acetone structure shows that it is not expected to hydrolyze appreciably in the environment on the basis of a lack of hydrolysable functional groups. |

| | |
|---|---|
| Phototransformation/ photolysis: | ➢ A half-life of 52.43 days is estimated for reaction of acetone with hydroxyl radicals in the atmosphere at 25o C [AOPWIN Program, v.1.92]. |
| Biodegradation: | ➢ The QSAR models predict timeframe within days-weeks for primary biodegradation of acetone and weeks for its ultimate degradation.<br><br>Overall ready biodegradability prediction provided by a number of BIOWIN (v.4.10) models suggests acetone is ready biodegradable in the environment. |

12.3. Bioaccumulative potential

| | |
|---|---|
| Aquatic bioaccumulation: | ➢ BCF/BAF (QSAR estimated) = 0.93 -3.16 L/kg. |
| Terrestrial bioaccumulation: | ➢ No data available. |

12.4. Mobility in soil

| | |
|---|---|
| Known or predicted distribution to environmental compartments: | ➢ There are no experimental data on environmental distribution of acetone. QSAR modeling predicts that acetone will volatize rapidly from surface water with DT50 = 0.56 days (river) and 8.81 days (lake).<br><br>The low value for soil organic carbon-water partition coefficient (logKoc = 0.37 -0.99) suggests that acetone will not adsorb onto soil and sediment and, therefore, together with its high volatility, will not persist in these environmental media.<br><br>The data on environmental distribution of acetone obtained from the level III fugacity model suggest that acetone will not persist in the environment and depending on various emission scenarios, approximately half of acetone will be degraded by both biotic and abiotic mechanisms and another half will be physically removed (advected) from the environment. |
| Surface tension: | ➢ No data available. |
| Adsorption/Desorption: | log Koc (QSAR estimated) =0.37 L/kg to 0.99 L/kg. |

12.5. Results of PBT and vPvB assessment

| | |
|---|---|
| Persistence Assessment: | ➢ The half-lives of acetone in water, sediment and soil are 15 days, 135 days and 30 days, respectively.<br><br>Therefore, acetone meets the Persistence criteria for sediment (fresh- or estuarine water sediment). |
| Bioaccumulation Assessment: | ➢ The BCF (fish) of acetone = 3.16 L/kg wet-wt.<br><br>Therefore, acetone does not meet the criteria for Bioaccumulation. |
| Toxicity Assessment: | ➢ Acetone does not meet the PBT criteria for toxicity. |
| Conclusions on PBT or vPvB Properties: | ➢ Acetone is considered persistent in sediment and is not considered bioaccumulative or toxic substance. Therefore, acetone is not a PBT or vPvB substance. |

12.6. Other adverse effects

| | |
|---|---|
| Other adverse effects: | ➢ No data available. |

12.7. Additional information

| | |
|---|---|
| Conclusion on the environmental hazard assessment: | ➢ Acetone is not classified as a substance hazardous to aquatic environment. |

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|---|---|
| Product/ Packaging disposal: | ➢ This substance, when discarded or disposed of, is a hazardous waste. The transportation, storage, treatment, and disposal of this waste material must be conducted in compliance with local regulations for hazardous wastes.<br><br>Disposal can occur only in properly permitted facilities. Contact a licensed professional waste disposal service to dispose of this substance. Check state and local regulation of any additional requirements for disposal conditions. |
| Sewage disposal-relevant information: | ➢ Waste should not be disposed of by release to sewers. |

| | |
|---|---|
| Other disposal recommendations: | ➢ Disposal of containers: Please, refer your local/national/regional requirements on disposal. |

SECTION 14: Transport information

14.1. UN number

| | |
|---|---|
| UN No: | ➢ 1090 |

14.2. UN proper shipping name

| | |
|---|---|
| UN Proper Shipping Name: | ➢ ACETONE |

14.3. Transport hazard class(es)

| | |
|---|---|
| Hazard Class or Division: | ➢ 3 |

14.4. Packing group

| | |
|---|---|
| UN Packing Group: | ➢ II |

14.5. Environmental hazards

| | |
|---|---|
| Environmental Hazards: | ➢ Acetone is not classified as a substance hazardous to aquatic environment. |

14.6. Special precautions for user

| | |
|---|---|
| Note: | ➢ A number of restrictions may apply to materials subject to local/national/regional classifications requirements. Please refer to the appropriate regulation for specific details regarding classification requirements and restrictions. |

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

| | |
|---|---|
| Transportation in bulk: | ➢ A number of restrictions may apply to materials subject to bulk transportation. Please, refer relevant regulation for specific information on bulk transportation requirements. |

SECTION 15: Regulatory information

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

| | |
|---|---|
| Export and Import of Dangerous Chemicals (Regulation (EC) No 689/2008) Information: | ➢ This substance is not listed in the Annex I of Regulation (EC) No 689/2008. |
| CLP Regulation (EC) No 1272/2008: | ➢ This substance is listed in Annex VI (tables 3.1 and 3.2) to CLP regulation. |

| | |
|---|---|
| REACH Regulation (EC) No 1907/2006: | ➢ Registration requirement (Article 5, REACH regulation): This substance is registered in accordance with provisions of REACH regulation. For registration number, please refer section 1.1 of this eSDS. |

15.2. Chemical safety assessment

| | |
|---|---|
| CSA: | ➢ Chemical Safety Assessment has been carried out for this chemical in accordance with provisions of REACH regulation. |

SECTION 16: Other information

| | |
|---|---|
| Use Descriptors: | ➢ SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites.<br>➢ SU 10: Formulation [mixing] of preparations and/or repackaging (excluding alloys).<br>➢ SU21: Consumer uses.<br>➢ SU22: Professional uses.<br>➢ PROC 1: Use in closed process, no likelihood of exposure.<br>➢ PROC 2: Use in closed, continuous process with occasional controlled exposure.<br>➢ PROC 3: Use in closed batch process (synthesis or formulation).<br>➢ PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises.<br>➢ PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact).<br>➢ PROC7: Industrial Spraying.<br>➢ PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities |

| | |
|---|---|
| | ➢ PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing).<br>➢ PROC10: Roller application or brushing.<br>➢ PROC11: Non Industrial spraying.<br>➢ PROC13: Treatment of articles by dipping and pouring<br>➢ PROC19: Hand-mixing with intimate contact and only PPE available.<br>➢ PC1: Adhesives, sealants.<br>➢ PC9a: Coatings and paints, thinners, paint removers.<br>➢ PC18: Ink and toners.<br>➢ PC 19: Intermediate.<br>➢ PC23: Leather tanning, dye, finishing, impregnation and care products<br>➢ PC26: Paper and board dye, finishing and impregnation products: including bleaches and other processing aids;<br>➢ PC34: Textyle dyes, finishing and impregnating products; including bleaches and other processing aids.<br>➢ PC35: Washing and cleaning products (including solvent based products).<br>➢ PC40: Extraction agents.<br>➢ ERC1: Manufacture of substances.<br>➢ ERC2: Formulation of preparations.<br>➢ ERC3: Formulation of materials.<br>➢ ERC4: Industrial use of processing aids in processes and products, not becoming part of articles.<br>➢ ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates).<br>➢ ERC8a: Wide dispersive indoor use of processing aids in open systems.<br>➢ ERC8b: Wide dispersive outdoor use of processing aids in open systems. |

Abbreviations and acronyms:

| | |
|---|---|
| ACGIH | The American Conference of Governmental Industrial Hygienists |
| BAF | Bio Accumulation Factor |
| BCF | Bio Concentration Factor |
| CAS No | Chemical Abstracts Service number |

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| | |
|---|---|
| CLP | Classification Labelling Packaging Regulation ; Regulation (EC) No 1272/2008 |
| CSA | Chemical Safety Assessment |
| CSR | Chemical Safety Report |
| DMEL | Derived Minimal Effect Level |
| DNEL | Derived No Effect Level |
| DPD | Dangerous Preparation Directive 1999/45/EEC |
| DSD | Dangerous Substances Directive 67/548/EEC |
| DT50 | Half life |
| EC | European Commission |
| EC50 | Half maximal effective concentration |
| ECHA | European Chemicals Agency |
| EC-Number | EINECS and ELINCS Number (see also EINECS and ELINCS) |
| EINECS | European Inventory of Existing Commercial Substances |
| ELINCS | European List of notified Chemical Substances |
| ES | Exposure Scenario |
| e-SDS | Extended Safety Data Sheet (SDS with ES attached) |
| EU | European Union |
| GHS | Globally Harmonized System |
| IUPAC | International Union for Pure Applied Chemistry |
| LC50 | Lethal concentration, 50 % |
| LD50 | Median Lethal Dose |
| OEL | Occupational Exposure Limit |
| OSHA PEL | Occupational Safety and Health Administration Permissible Exposure Level |
| PBT | Persistent, Bioaccumulative and Toxic substance |
| PNEC(s) | Predicted No Effect Concentration(s) |
| PPE | Personal Protection Equipment |
| QSAR | Qualitative Structure Activity Relationship |
| SAR | Structure Activity Relationship |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| RMM | Risk Management Measure |
| STOT | Specific Target Organ Toxicity |
| (STOT) RE | Repeated Exposure |
| (STOT) SE | Single Exposure |
| TLV | Threshold limit value |
| TWA | Time-Weighted Average |
| UN | United Nations |

| | |
|---|---|
| vPvB | Very Persistent and Very Bioaccumulative |

**Key Literature References and Sources for data:**

ACGIH (2008) American Conference of Governmental Industrial Hygienists TLVs and BEIs. Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices. Cincinnati, OH, 2008, p. 10.

ATSDR (1994) TOXICOLOGICAL PROFILE FOR ACETONE, U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, Public Health Service, Agency for Toxic Substances and Disease Registry, May 1994.

Bingham, E.; Cohrssen, B.; Powell, C.H.; Patty's Toxicology Volumes 1-9 5th ed. John Wiley and Sons. New York, N.Y. (2001)., p 18.

ICSC: 0087 ACETONE, International Programme on Chemical Safety (IPCS), Prepared in the context of cooperation between the International Programme on Chemical Safety and the Commission of the European Communities IPCS, CEC 2005.
NTP (1991) NTP REPORT ON THE TOXICITY STUDIES OF ACETONE IN F344/N RATS AND B6C3F1 MICE (DRINKING WATER STUDIES). NATIONAL TOXICOLOGY PROGRAM, NTP TOX 3 NIH Publication No. 913122. U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, Public Health Service, National Institutes of Health. January 1991.

OECD SIDS (1999) ACETONE CAS N°: 67-64-1. UNEP Publications

WHO (1998) Environmental Health Criteria 207: Acetone. International Programme on Chemical Safety (IPCS) under the joint sponsorship of the United Nations Environment Programme, the Internati

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**Annex I**

**Exposure Scenarios addressing uses carried out by workers**

1.

| **Intermediate in production of other substances –INDUSTRIAL USE [ES1]** | |
|---|---|
| Free short title: | ES1: Intermediate in production of other substances – INDUSTRIAL USE |
| Systematic title based on use descriptor | Sectors of Use:<br><br>SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites<br>SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)<br><br>Product category:<br><br>PC 19: Intermediate |
| Processes, tasks activities covered | PROC 1: Use in closed process, no likelihood of exposure<br>PROC 2: Use in closed, continuous process with occasional controlled exposure<br>PROC 3: Use in closed batch process (synthesis or formulation)<br>PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities |
| Assessment Method | Qualitative Risk Assessment (Tier I Risk Assessment): |

**2. Operational conditions and risk management measures**

Occupational Exposure:
OELs currently adopted by the national/regional competent authority shall apply.

***International Occupational Exposure Limit values:***

| **Organization** | **Limit value -8-hour** | | **Limit value– Short-term** | |
|---|---|---|---|---|
| | **ppm** | **mg/m3** | **ppm** | **mg/m3** |
| ACGIH (TLV) | TWA | - | 750 | - |

***EU Occupational Exposure Limit values:***

| **Value** | | **Critical endpoint/ Comments** | **Country Threshold type** |
|---|---|---|---|
| Acetone | 1210 mg/m3<br><br>(500 ppm) | TWA | EU, Indicative Occupational Exposure Limit Values (Directive 2000/39/CE) |

| |
|---|
| ***DNEL/DMEL from the CSR:***<br><br>The following critical DN(M)ELs are proposed for occupational exposure to acetone:<br><br>• Workers exposure: DMEL=1210 mg/m3 (8-hour TWA).<br><br>(Note: These values are not legally binding and referred here for recommendation purpose only. All currently adopted by the national/regional competent authority levels on safe exposure to this chemical shall apply). |
| Environmental Release Characterization:<br><br>ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates) |

| **2.1 Control of workers exposure** | |
|---|---|
| Product characteristic: | Physical state: Colourless volatile, highly flammable liquid substance. |
| Risk management measures related to the design of product: | • Avoid inhalation to vapour and mists/ aerosols, skin and eye contact<br>• Use Personal Protective Equipment as required.<br>• Use in a well ventilated area<br>• Keep sparks, flames, and other sources of ignition away. No smoking. Take measures to prevent the build up of electrostatic charge<br>• Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink, or smoke during work. Wash hands before eating, after handling the substance, before breaks and at the end of workday.<br>• Work clothing that becomes wet should be immediately removed due to its flammability hazard. |
| Amounts used: | Not specifically defined |
| Frequency and duration of use/exposure | 8-hour work shift, Not specifically defined |
| Human factors not influenced by risk management | Respiration volume under conditions of use: Heavy work, respiration volume = 30 m3/8h-day; Light work, respiration volume = 10 m3/8h-day - Default values (ECHA Guidance on CSA Chapter R.15, Section R 8.4.2) |
| Other given operational conditions affecting workers exposure | Appropriate Local Exhaust Ventilation relevant to industrial work environment. |
| Technical conditions and measures at process level (source) to prevent release: | Occupational exposure may arise at operations where the substance is used, including storage, loading/unloading areas, leaks in the conveyor systems, loading mixers, maintenance and cleaning operations. |

| | |
|---|---|
| Technical conditions and measures to control dispersion from source towards the worker: | • Engineering controls and good work practices;<br>• Regular monitoring for leak detection;<br>• Use of Respiratory Protection;<br>• Protective clothing and equipment; |
| | • Hazard communication;<br>• Housekeeping and Hygiene Facilities. |
| **2.2 Control of environmental exposure** | |
| Product characteristics | Physical state: Colourless volatile, highly flammable liquid substance. |
| Amounts used | Not specifically defined |
| Frequency and duration of use | Not specifically defined<br>365 d/y Assuming continuous industrial process. |
| Technical conditions and measures at process level (source) to prevent release | • Engineering controls and good work practices;<br>• Regular monitoring for leak detection;<br>• Hazard communication;<br>• Housekeeping and Hygiene Facilities. |
| Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil | Emissions related measures:<br>Apply all necessary RMM to ensure compliance with relevant national or regional legislation requirements.<br><br>Waste related measures:<br>This substance, when discarded or disposed of, is a hazardous waste. The transportation, storage, treatment, and disposal of the waste material must be conducted in compliance with local regulations for hazardous wastes.<br><br>Disposal can occur only in properly permitted facilities. Check state and local regulation of any additional requirements for disposal conditions. |
| **3. Exposure estimation and reference to its source** | |
| Workers exposure: | Occupational exposure may arise at operations where the substance is used, including storage, loading/unloading areas, leaks in the conveyor systems, loading mixers, maintenance and cleaning operations. |
| **4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES** | |
| Workers exposure: | Use in industrial process. Applying all necessary RMM to reduce exposure to acetone and ensure compliance with relevant occupational exposure limits. |

2.

| **Industrial process solvent –INDUSTRIAL USE [ES2]** | |
|---|---|
| Free short title: | ES2: Industrial process solvent –INDUSTRIAL USE |
| Systematic title based on use descriptor | Sectors of Use:<br>SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites<br>SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)<br><br>Product category:<br>Not specified |

| | |
|---|---|
| Processes, tasks activities covered | PROC1: Use in closed process, no likelihood of exposure<br>PROC2: Use in closed, continuous process with occasional controlled exposure<br>PROC3: Use in closed batch process (synthesis or formulation)<br>PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises<br>PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)<br>PROC7: Industrial Spraying<br>PROC8b: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at dedicated facilities<br>PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)<br>PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring |
| Assessment Method | Qualitative Risk Assessment (Tier I Risk Assessment): |
| **2. Operational conditions and risk management measures** | |

Occupational Exposure:
OELs currently adopted by the national/regional competent authority shall apply.

***International Occupational Exposure Limit values:***

| **Organization** | **Critical endpoint/ Comments** | | **Limit value– Short-term** | |
|---|---|---|---|---|
| | **ppm** | **mg/m3** | **ppm** | **mg/m3** |
| ACGIH (TLV) | TWA | - | 750 | - |

***EU Occupational Exposure Limit values:***

| **Value** | | **Critical endpoint/ Comments** | **Country Threshold type** |
|---|---|---|---|
| Acetone | 1210 mg/m3<br><br>(500 ppm) | TWA | EU, Indicative Occupational Exposure Limit Values (Directive 2000/39/CE) |

***DNEL/DMEL from the CSR:***
The following critical DN(M)ELs are proposed for occupational exposure to acetone:

- Workers exposure: DMEL=1210 mg/m3 (8-hour TWA).

(Note: These values are not legally binding and referred here for recommendation purpose only. All currently adopted by the national/regional competent authority levels on safe exposure to this chemical shall apply).

Environmental Release Characterization:

ERC1:Manufacture of substances
ERC2: Formulation of preparations ERC3:
Formulation of materials
ERC4: Industrial use of processing aids in processes and products, not becoming part of articles.

| **2.1 Control of workers exposure** | |
|---|---|
| Product characteristic: | Physical state: Colourless volatile, highly flammable liquid substance. |

| | |
|---|---|
| Risk management measures related to the design of product: | • Avoid inhalation to vapour and mists/ aerosols, skin and eye contact.<br>• Use Personal Protective Equipment as required.<br>• Use in a well ventilated area<br>• Keep sparks, flames, and other sources of ignition away. No smoking. Take measures to prevent the build up of electrostatic charge.<br>• Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink, or smoke during work. Wash hands before eating, after handling the substance, before breaks and at the end of workday.<br>• Work clothing that becomes wet should be immediately removed due to its flammability hazard. |
| Amounts used: | Not specifically defined |
| Frequency and duration of use/exposure | 8-hour work shift, Not specifically defined |
| Human factors not influenced by risk management | Respiration volume under conditions of use: Heavy work, respiration volume = 30 m3/8h-day; Light work, respiration volume = 10 m3/8h-day - Default values (ECHA Guidance on CSA Chapter R.15, Section R 8.4.2) |
| Other given operational conditions affecting workers exposure | Appropriate Local Exhaust Ventilation relevant to industrial work environment |
| Technical conditions and measures at process level (source) to prevent release | Occupational exposure may arise at operations where the substance is used, including storage, loading/unloading areas, leaks in the conveyor systems, loading mixers, maintenance and cleaning operations. |
| Technical conditions and measures to control dispersion from source towards the worker: | • Engineering controls and good work practices;<br>• Regular monitoring for leak detection;<br>• Use of Respiratory Protection;<br>• Protective clothing and equipment;<br>• Hazard communication;<br>• Housekeeping and Hygiene Facilities. |
| **2.2 Control of environmental exposure** | |
| Product characteristics | Physical state: Colourless volatile, highly flammable liquid substance. |
| Amounts used | Not specifically defined |
| Frequency and duration of use | Not specifically defined<br>365 d/y Assuming continuous industrial process. |
| Technical conditions and measures at process level (source) to prevent release | • Engineering controls and good work practices;<br>• Regular monitoring for leak detection;<br>• Hazard communication;<br>• Housekeeping and Hygiene Facilities. |

| | |
|---|---|
| Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil | <u>Emissions related measures:</u><br>Apply all necessary RMM to ensure compliance with relevant national or regional legislation requirements.<br><br><u>Waste related measures:</u><br>This substance, when discarded or disposed of, is a hazardous waste. The transportation, storage, treatment, and disposal of the waste material must be conducted in compliance with local regulations for hazardous wastes.<br><br>Disposal can occur only in properly permitted facilities. Check state and local regulation of any additional requirements for disposal conditions. |
| **3. Exposure estimation and reference to its source** | |
| Workers exposure: | Occupational exposure may arise at operations where the substance is used, including storage, loading/unloading areas, leaks in the conveyor systems, loading mixers, maintenance and cleaning operations. |
| **4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES** | |
| Workers exposure: | Use in industrial process. Applying all necessary RMM to reduce exposure to acetone and ensure compliance with relevant occupational exposure limits. |

3.

| **Formulating component in manufacture of preparations –INDUSTRIAL USE [ES3]** | |
|---|---|
| Free short title: | ES3: Use as formulating component in manufacture of preparations – INDUSTRIAL USE |
| Systematic title based on use descriptor | <u>Sectors of Use:</u><br><br>SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites<br>SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)<br><br><u>Product category:</u><br><br>Not specifically defined.<br><br><u>Market sector by type of chemical product:</u><br><br>PC1: Adhesives, sealants |

| | |
|---|---|
| | PC9a: Coatings and paints, thinners, paint removers.<br>PC18:Ink and toners<br>PC23: Leather tanning, dye, finishing, impregnation and care products<br>PC26: Paper and board dye, finishing and impregnation products: including bleaches and other processing aids;<br>PC34: Textyle dyes, finishing and impregnating products; including bleaches and other processing aids.<br>PC35: Washing and cleaning products (including solvent based products) PC40: Extraction agents |
| Processes, tasks activities covered | PROC 3: Use in closed batch process (synthesis or formulation)<br>PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises<br>PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)<br>PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities |
| Assessment Method | Qualitative Risk Assessment (Tier I Risk Assessment): |

**2. Operational conditions and risk management measures**

Occupational Exposure:
OELs currently adopted by the national/regional competent authority shall apply.

***International Occupational Exposure Limit values:***

| **Organization** | **Limit value -8-hour** | | **Limit value – Short-term** | |
|---|---|---|---|---|
| | **ppm** | **mg/m3** | **ppm** | **mg/m3** |
| ACGIH (TLV) | 500 ppm | - | 750 | - |

***EU Occupational Exposure Limit values:***

| **Value** | | **Critical endpoint/ Comments** | **Country Threshold type** |
|---|---|---|---|
| Acetone | 1210 mg/m3<br><br>(500 ppm) | TWA | EU, Indicative Occupational Exposure Limit Values (Directive 2000/39/CE) |

**DNEL/DMEL from the CSR:**
The following critical DN(M)ELs are proposed for occupational exposure to acetone:

- Workers exposure: DMEL=1210 mg/m3 (8-hour, TWA).

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|---|
| (Note: These values are not legally binding and referred here for recommendation purpose only. All currently adopted by the national/regional competent authority levels on safe exposure to this chemical shall apply). |

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| <u>Environmental Release Characterization:</u><br>ERC2: Formulation of preparations<br>ERC3: Formulation of materials |

| **2.1 Control of workers exposure** | |
|---|---|
| Product characteristic: | <u>Physical state:</u> Colourless volatile, highly flammable liquid substance. |
| Risk management measures related to the design of product: | • Avoid inhalation to vapour and mists/ aerosols, skin and eye contact<br>• Use Personal Protective Equipment as required.<br>• Use in a well ventilated area<br>• Keep sparks, flames, and other sources of ignition away. No smoking. Take measures to prevent the build up of electrostatic charge.<br>• Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink, or smoke during work. Wash hands before eating, after handling the substance, before breaks and at the end of workday.<br>• Work clothing that becomes wet should be immediately removed due to its flammability hazard. |
| Amounts used: | Not specifically defined |

| | |
|---|---|
| Frequency and duration of use/exposure | 8-hour work shift, Not specifically defined |
| Human factors not influenced by risk management | Respiration volume under conditions of use: Heavy work, respiration volume = 30 m3/8h-day; Light work, respiration volume = 10 m3/8h-day - Default values (ECHA Guidance on CSA Chapter R.15, Section R 8.4.2) |
| Other given operational conditions affecting workers exposure | Appropriate Local Exhaust Ventilation relevant to industrial work environment |
| Technical conditions and measures at process level (source) to prevent release: | Occupational exposure may arise at operations where the substance is used, including storage, loading/unloading areas, leaks in the conveyor systems, loading mixers, maintenance and cleaning operations. |
| Technical conditions and measures to control dispersion from source towards the worker: | • Engineering controls and good work practices;<br>• Regular monitoring for leak detection;<br>• Use of Respiratory Protection;<br>• Protective clothing and equipment;<br>• Hazard communication;<br>• Housekeeping and Hygiene Facilities |
| **2.2 Control of environmental exposure** | |
| Product characteristics | Physical state: Colourless volatile, highly flammable liquid substance. |
| Amounts used | Not specifically defined |
| Frequency and duration of use | Not specifically defined<br>365 d/y Assuming continuous industrial process. |
| Technical conditions and measures at process level (source) to prevent release | • Engineering controls and good work practices;<br>• Regular monitoring for leak detection; |
| | • Hazard communication;<br>• Housekeeping and Hygiene Facilities. |
| Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil | Emissions related measures:<br>Apply all necessary RMM to ensure compliance with relevant national or regional legislation requirements.<br><br>Waste related measures:<br>This substance, when discarded or disposed of, is a hazardous waste. The transportation, storage, treatment, and disposal of the waste material must be conducted in compliance with local regulations for hazardous wastes.<br><br>Disposal can occur only in properly permitted facilities. Check state and local regulation of any additional requirements for disposal conditions. |
| **3. Exposure estimation and reference to its source** | |

| | |
|---|---|
| Workers exposure: | Occupational exposure may arise at operations where the substance is used, including storage, loading/unloading areas, leaks in the conveyor systems, loading mixers, maintenance and cleaning operations. |
| **4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES** | |
| Workers exposure: | Use in industrial process. Applying all necessary RMM to reduce exposure to acetone and ensure compliance with relevant occupational exposure limits. |

**Annex II**

| **IPCS directory of poison centres: European Region** | |
|---|---|
| Info from the International Programme on Chemical Safety (IPCS) publicly available at http://www.who.int/ipcs/poisons/centre/directory/euro/en/ (data retrieved in November 2010) | |
| **Austria**<br><br>Telephone: +43 1 40 400 2222 | Vienna Wien<br>Vergiftungsinformationszentrale (Poisons Information Centre)<br>Allgemeines KrankenhausWaehringer Geurtel 18-20 Vienna 1090 |
| **Belgium**<br><br>Emergency telephone: +32 70 245 245 | Brussels Bruxelles<br>Centre Anti-Poisons/Antigifcentrum<br>Hôpital Militaire Reine Astrid<br>Rue Bruyn<br>Brussels B -1120 |
| **Bulgaria**<br><br>Emergency telephone: +359 2 9154 409 | Sofia<br>National Toxicological Information Centre<br>National Clinical Toxicology Centre<br>Emergency Medical Institute "Pirogov"<br>21 Totleben Boulevard<br>1606 SOFIA<br>Information Centre: Telephone: +359 2 950 0975 |
| **Croatia**<br><br>Emergency telephone: +385 1 234 8342 | Zagreb<br>Poisons Control Centre<br>Institute of Medical Research & Occupational Health<br>Ksaverska Cesta 2<br>P.O. Box 291<br>Zagreb HR-10000 |
| **Czech Republic**<br><br>Emergency telephone: +42 2 2491 9293 or +42 2 2491 5402 | Prague Praha<br>Poisons Information Centre<br>Clinic For Occupational Medicine, 1st Medical Faculty, Charles University<br>Na Bojisti 1<br>128 00 Prague 2 |

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web: www.prochemical.eu
mail: sales@prochemical.eu

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|---|---|
| **Denmark**<br><br>Emergency telephone, health sector: +45 35 31 55 55<br>Emergency telephone, public: +45 82 12 12 12 | Copenhagen<br>Poison Information Centre<br>Bispebjerg Hospital<br>Bispebjerg Bakke 23, 60, 1<br>DK-2400 Copenhagen NV |
| **Finland**<br><br>Emergency telephone: +358 9 471 977 | Helsinki<br>Poison Information Centre<br>P.O.B 790 (Tukholmankatu 17)<br>SF - 00029 HUS<br>Helsinki |
| **France**<br><br>Emergency telephone: +33 1 40 05 48 48 | Paris<br>Centre Antipoison et de Toxicovigilance de Paris<br>Hôpital Fernand Widal<br>200 rue du Faubourg Saint-Denis<br>75475 Paris Cedex 10 |
| **Germany**<br><br>Emergency telephone: +49 30 19240 | Giftnotruf Berlin<br>Berliner Betrieb für Zentrale Gesundheitliche Aufgaben |
| | Institut für Toxikologie<br>Klinische Toxikologie und Giftnotruf Berlin<br>Oranienburger Strasse 285<br>13437 Berlin |
| **Greece**<br><br>Emergency telephone: +30 10 779 3777 | Athens Athinai<br>Poisons Information Centre<br>Children's Hospital "Aglaia. Kyriakou"<br>Athens 11527 |
| **Hungary**<br><br>Emergency telephone number: +36 80 20 11 99 | Budapest<br>Országos Kémiai Biztonsági Intézet (National Institute of Chemical Safety)<br>Egészségügyi Toxikológiai Tájékoztató Szolgálat (Health Toxicological Information Service)<br>1097 Budapest, Nagyvárad tér 2. 1437<br>Budapest PO Box 839 |
| **Iceland**<br><br>Emergency telephone: +354 525 111, +354 543 2222 | Reykjavik<br>Iceland Poisons Information Centre<br>Landspitali University Hospital<br>Fossvogi<br>Reykjavik 108 |
| **Ireland (Republic of)**<br><br>Emergency telephone: +353 1 8379964 | Dublin<br>National Poisons Information Centre<br>Beaumont Hospital<br>P.O. BOX 1297<br>Beaumont Road<br>Dublin 9 |

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|---|---|
| **Israel**<br><br>Emergency telephone: +972 4 854 1900 | Haifa<br>Israel Poisons Information Centre<br>Rambam Medical Centre<br>PO Box 9602<br>Haifa 31096 |
| **Italy**<br><br>Emergency telephone: +39 06 305 4343 | Rome Roma<br>Centro Antiveleni (Poisons Centre)<br>Dipartimento di Tossicologia Clinica<br>Universita Cattolica del Sacro Cuore<br>Largo Agostino Gemelli 8<br>I-00168 Roma |
| **Latvia**<br><br>Emergency telephone: +371 704 2468 | Riga<br>Latvian Poisons Information Centre<br>Clinical Hospital "Gailezers"<br>2 Hipocrate Street<br>Riga LV 1038 |
| **Lithuania**<br><br>Emergency telephone: +370 2 36 20 52, +370 2 36 20 92 | Vilnius<br>Poisons Control and Information Bureau<br>Siltnamiu 29<br>2043 Vilnius |
| **Netherlands**<br><br>Emergency telephone: +31 30 274 88 88 | Bilthoven<br>this service is only available to health professionals<br>National Poisons Information Centre<br>National Institute for Public Health and the Environment<br>P.O. Box 1 |

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|---|---|
| **Norway**<br><br>Emergency telephone: +47 22 591300 | Oslo<br>Poisons Information<br>Directorate of Health and Social Affairs<br>P.O. Box 7000<br>St. Olavs Plass<br>0130 Oslo |
| **Poland**<br><br>Emergency telephone: +48 22 619 66 54; +48 22 619 08 97 | Warsaw Warszawa<br>Warsaw Poison Control and Information Centre<br>Praski Hospital<br>Al. Solidarnosci 67<br>P-03 401 Warszawa |
| **Portugal**<br><br>Emergency telephone: 808 250 143 (for use only in Portugal), +351 21 330 3284 | Lisbon Lisboa<br>Centro de Informação Antivenenos – Dra Arlinda Borges<br>Instituto Nacional de Emergência Médica (INEM)<br>Rua Almirante Barroso, 36<br>1000-013 Lisboa |
| **Romania**<br><br>Emergency telephone: +40 21 230 8000 | Department of Clinical Toxicology<br>Spitalul de Urgenta Floreasca<br>Calea Floreasca |

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|---|---|
| | Bucharest |
| **Slovakia**<br><br>Emergency telephone: +421 2 54 77 4 166 | Bratislava<br>National Toxicological Information Centre<br>University Hospital Bratislava<br>Limbová 5<br>833 05 Bratislava |
| **Slovenia**<br><br>Emergency telephone: + 386 41 650 500 | Ljubljana<br>Poison Centre<br>Division of Internal Medicine<br>University Clinical Centre Zaloska 7,<br>1525 Ljubljana |
| **Spain**<br><br>Emergency telephone: +34 91 562 04 20 | Madrid<br>Servicio de Información Toxicológica<br>Instituto Nacional de Toxicología<br>Departamento de Madrid<br>Calle Luis Cabrera 9<br>E-28002 Madrid |
| **Sweden**<br><br>Emergency telephone: +46 8 33 12 31<br>(International) 112 (National) | Stockholm<br>Giftinformationscentralen (Swedish Poisons Information Centre)<br>Karolinska Hospital<br>SE-171 76 Stockholm |
| **Switzerland**<br><br>Emergency telephone: +41 44 251 5151 | Zurich<br>Centre Suisse d'Information Toxicologique<br>(Swiss Toxicological Information Centre)<br>Freiestrasse 16<br>CH-8032<br>Zurich |
| **United Kingdom** | The UK National Poisons Emergency number is 0870 600 6266 (Outside the UK: +44 870 600 6266) |
| **NOTE:** *The list of emergency telephone numbers is provided here for reference only. It may not be complete or correct. Please, consult with your local/national competent authorities for the emergency number in your country.* | |