



SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture LPS® EFX
Registration number -
Synonyms None.
Part Number 01805, M01805
Issue date 27-February-2014
Version number 01

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

Identified uses A solvent degreaser designed to remove or dissolve grease, grime, oil and other oil-based contaminants from a variety of substrates including automotive or miscellaneous metallic parts.
Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

Supplier Geocel Limited
Company name Western Wood Way, Langage Science Park, Plympton,
Address Plymouth, PL7 5BG
United Kingdom
Telephone +44 (0)1752 202060 / +44 (0)1752 334384
In Case of Emergency +001 703-527-3887
Manufacturer
Company name LPS Laboratories, a division of Illinois Tool Works, Inc.
Address 4647 Hugh Howell Rd., Tucker, GA 30084 (U.S.A.)
Website <http://www.lpslabs.com>
e-mail sds@lpslabs.com

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Directive 67/548/EEC or 1999/45/EC as amended

Classification F;R11, Xn;R65, Xi;R36/38, R67, N;R50/53

The full text for all R-phrases is displayed in section 16.

Classification according to Regulation (EC) No 1272/2008 as amended

Physical hazards

Flammable liquids Category 2 H225 - Highly flammable liquid and vapour.

Health hazards

Skin corrosion/irritation Category 2 H315 - Causes skin irritation.

Serious eye damage/eye irritation Category 2 H319 - Causes serious eye irritation.

Specific target organ toxicity - single exposure Category 3 narcotic effects H336 - May cause drowsiness or dizziness.

Aspiration hazard Category 1 H304 - May be fatal if swallowed and enters airways.

Environmental hazards

Hazardous to the aquatic environment, acute aquatic hazard Category 1 H400 - Very toxic to aquatic life.

Hazardous to the aquatic environment, long-term aquatic hazard Category 1 H410 - Very toxic to aquatic life with long lasting effects.

Hazard summary

Physical hazards Highly flammable.

| | |
|------------------------------|---|
| Health hazards | Irritating to eyes and skin. Harmful: may cause lung damage if swallowed. Vapours may cause drowsiness and dizziness. Occupational exposure to the substance or mixture may cause adverse health effects. |
| Environmental hazards | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
| Specific hazards | Highly flammable. In use, may form flammable/explosive vapour-air mixture. Harmful: may cause lung damage if swallowed. Irritating to eyes and skin. Do not breathe dust/fume/gas/mist/vapors/spray. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
| Main symptoms | Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Vapours have a narcotic effect and may cause headache, fatigue, dizziness and nausea. May cause redness and pain. |

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Acetone, Heptane, Isopropanol

Hazard pictograms



Signal word Danger

Hazard statements

| | |
|------|---|
| H225 | Highly flammable liquid and vapour. |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H336 | May cause drowsiness or dizziness. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |

Precautionary statements

Prevention

| | |
|------|--|
| P210 | Keep away from heat/sparks/open flames/hot surfaces. - No smoking. |
| P233 | Keep container tightly closed. |
| P240 | Ground/bond container and receiving equipment. |
| P241 | Use explosion-proof electrical/ventilating/lighting equipment. |
| P242 | Use only non-sparking tools. |
| P243 | Take precautionary measures against static discharge. |
| P261 | Avoid breathing mist or vapour. |
| P264 | Wash thoroughly after handling. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/eye protection/face protection. |

Response

| | |
|--------------------|--|
| P391 | Collect spillage. |
| P301 + P310 | IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician. |
| P303 + P361 + P353 | IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P304 + P340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P312 | Call a POISON CENTRE or doctor/physician if you feel unwell. |
| P321 | Specific treatment (see this label). |
| P331 | Do NOT induce vomiting. |
| P332 + P313 | If skin irritation occurs: Get medical advice/attention. |
| P337 + P313 | If eye irritation persists: Get medical advice/attention. |
| P362 | Take off contaminated clothing and wash before reuse. |
| P370 + P378 | In case of fire: Use appropriate media for extinction. |

Storage

| | |
|-------------|--|
| P235 | Keep cool. |
| P403 + P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P405 | Store locked up. |

Disposal

| | |
|------|---|
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations. |
|------|---|

Supplemental label information 20 % of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 20 % of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

2.3. Other hazards None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

| Chemical name | % | CAS-No. / EC No. | REACH Registration No. | INDEX No. | Notes |
|------------------------|---|-----------------------|------------------------|--------------|-------|
| Heptane | 80 - < 90 | 142-82-5 205-563-8 | - | 601-008-00-2 | # |
| Classification: | DSD: F;R11, Xn;R65, Xi;R38, R67, N;R50/53 | | | | |
| | CLP: Flam. Liq. 2;H225, Asp. Tox. 1;H304, Skin Irrit. 2;H315, STOT SE 3;H336, Aquatic Acute 1;H400, Aquatic Chronic 1;H410 | | | | |
| Acetone | 10 - < 20 | 67-64-1 200-662-2 | - | 606-001-00-8 | # |
| Classification: | DSD: F;R11, Xi;R36, R66-67 | | | | |
| | CLP: Flam. Liq. 2;H225, Eye Irrit. 2;H319, STOT SE 3;H336 | | | | |
| Isopropanol | 10 - < 20 | 67-63-0 200-661-7 | - | 603-117-00-0 | |
| Classification: | DSD: F;R11, Xi;R36, R67 | | | | |
| | CLP: Flam. Liq. 2;H225, Eye Irrit. 2;H319, STOT SE 3;H336 | | | | |

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

M: M-factor

vPvB: very persistent and very bioaccumulative substance.

PBT: persistent, bioaccumulative and toxic substance.

#: This substance has been assigned Community workplace exposure limit(s).

Composition comments The full text for all R- and H-phrases is displayed in section 16.

SECTION 4: First aid measures

General information

Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

4.1. Description of first aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTRE or doctor/physician if you feel unwell.

Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if symptoms occur.

Eye contact

Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention immediately.

Ingestion

Call a physician or poison control centre immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

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

Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Direct contact with eyes may cause temporary irritation. Vapours have a narcotic effect and may cause headache, fatigue, dizziness and nausea. May cause redness and pain.

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

Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards

Highly flammable liquid and vapour.

5.1. Extinguishing media

Suitable extinguishing media

Powder. Alcohol resistant foam. Dry sand. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

By heating and fire, harmful vapours/gases may be formed. In contact with water releases flammable gases which may ignite spontaneously.

5.3. Advice for firefighters

Special protective equipment for firefighters

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection.

Special fire fighting procedures

In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Fully encapsulating, vapour protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapours or mists. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.

For emergency responders

Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil etc) away from spilled material.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

6.4. Reference to other sections

Use personal protection recommended in Section 8 of the SDS. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Vapours may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not get in eyes, on skin, on clothing. Do not taste or swallow. Avoid prolonged exposure. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Avoid release to the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store locked up. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep in an area equipped with sprinklers.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

| Components | Type | Value |
|---------------------------|------|------------|
| Acetone (CAS 67-64-1) | MAK | 1200 mg/m3 |
| | | 500 ppm |
| | STEL | 4800 mg/m3 |
| Isopropanol (CAS 67-63-0) | | 2000 ppm |
| | MAK | 500 mg/m3 |
| | STEL | 200 ppm |
| | | 2000 mg/m3 |
| | | 800 ppm |

Belgium. Exposure Limit Values.

| Components | Type | Value |
|---------------------------|------|------------------------------------|
| Acetone (CAS 67-64-1) | STEL | 2420 mg/m ³ 1000 ppm |
| | TWA | 1210 mg/m ³ 500 ppm |
| Heptane (CAS 142-82-5) | STEL | 2085 mg/m ³ 500 ppm |
| | TWA | 1664 mg/m ³ 400 ppm |
| Isopropanol (CAS 67-63-0) | STEL | 1000 mg/m ³ 400 ppm |
| | TWA | 500 mg/m ³ 200 ppm |

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

| Components | Type | Value |
|---------------------------|------|------------------------|
| Acetone (CAS 67-64-1) | STEL | 1400 mg/m ³ |
| | TWA | 600 mg/m ³ |
| Heptane (CAS 142-82-5) | TWA | 1600 mg/m ³ |
| Isopropanol (CAS 67-63-0) | STEL | 1225 mg/m ³ |
| | TWA | 980 mg/m ³ |

Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.

| Components | Type | Value |
|---------------------------|------|------------------------|
| Acetone (CAS 67-64-1) | TWA | 2400 mg/m ³ |
| | | 1000 ppm |
| Isopropanol (CAS 67-63-0) | TWA | 980 mg/m ³ |
| | | 400 ppm |

Czech Republic. OELs. Government Decree 361

| Components | Type | Value |
|---------------------------|---------|------------------------|
| Acetone (CAS 67-64-1) | Ceiling | 1500 mg/m ³ |
| | TWA | 800 mg/m ³ |
| Heptane (CAS 142-82-5) | Ceiling | 2000 mg/m ³ |
| | TWA | 1000 mg/m ³ |
| Isopropanol (CAS 67-63-0) | Ceiling | 1000 mg/m ³ |
| | TWA | 500 mg/m ³ |

Denmark. Exposure Limit Values

| Components | Type | Value |
|---------------------------|------|-----------------------|
| Acetone (CAS 67-64-1) | TLV | 600 mg/m ³ |
| | | 250 ppm |
| Heptane (CAS 142-82-5) | TLV | 820 mg/m ³ |
| | | 200 ppm |
| Isopropanol (CAS 67-63-0) | TLV | 490 mg/m ³ |
| | | 200 ppm |

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

| Components | Type | Value |
|---------------------------|------|------------------------|
| Acetone (CAS 67-64-1) | TWA | 1210 mg/m ³ |
| | | 500 ppm |
| Heptane (CAS 142-82-5) | TWA | 2085 mg/m ³ |
| | | 500 ppm |
| Isopropanol (CAS 67-63-0) | STEL | 600 mg/m ³ |
| | | 250 ppm |
| | | 350 mg/m ³ |
| | TWA | 150 ppm |

Finland. Workplace Exposure Limits

| Components | Type | Value |
|-----------------------|------|------------------------|
| Acetone (CAS 67-64-1) | STEL | 1500 mg/m ³ |
| | | 630 ppm |
| | | 1200 mg/m ³ |
| | TWA | 500 ppm |

Finland. Workplace Exposure Limits

| Components | Type | Value |
|---------------------------|------|-----------------------------------|
| Heptane (CAS 142-82-5) | STEL | 2100 mg/m ³ 500 ppm |
| | TWA | 1200 mg/m ³ 300 ppm |
| Isopropanol (CAS 67-63-0) | STEL | 620 mg/m ³ 250 ppm |
| | TWA | 500 mg/m ³ 200 ppm |

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

| Components | Type | Value |
|---------------------------|------|------------------------------------|
| Acetone (CAS 67-64-1) | VLE | 2420 mg/m ³ 1000 ppm |
| | VME | 1210 mg/m ³ 500 ppm |
| Heptane (CAS 142-82-5) | VLE | 2085 mg/m ³ 500 ppm |
| | VME | 1668 mg/m ³ 400 ppm |
| Isopropanol (CAS 67-63-0) | VLE | 980 mg/m ³ 400 ppm |

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

| Components | Type | Value |
|---------------------------|------|-----------------------------------|
| Acetone (CAS 67-64-1) | TWA | 1200 mg/m ³ 500 ppm |
| Heptane (CAS 142-82-5) | TWA | 2100 mg/m ³ 500 ppm |
| Isopropanol (CAS 67-63-0) | TWA | 500 mg/m ³ 200 ppm |

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

| Components | Type | Value |
|---------------------------|------|-----------------------------------|
| Acetone (CAS 67-64-1) | AGW | 1200 mg/m ³ 500 ppm |
| Isopropanol (CAS 67-63-0) | AGW | 500 mg/m ³ 200 ppm |

Greece. OELs (Decree No. 90/1999, as amended)

| Components | Type | Value |
|---------------------------|------|-----------------------------------|
| Acetone (CAS 67-64-1) | STEL | 3560 mg/m ³ |
| | TWA | 1780 mg/m ³ |
| Heptane (CAS 142-82-5) | STEL | 2000 mg/m ³ 500 ppm |
| | TWA | 2000 mg/m ³ 500 ppm |
| Isopropanol (CAS 67-63-0) | STEL | 1225 mg/m ³ 500 ppm |
| | TWA | 980 mg/m ³ 400 ppm |

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

| Components | Type | Value |
|---------------------------|------|------------------------|
| Acetone (CAS 67-64-1) | STEL | 2420 mg/m ³ |
| | TWA | 1210 mg/m ³ |
| Heptane (CAS 142-82-5) | STEL | 8000 mg/m ³ |
| | TWA | 2000 mg/m ³ |
| Isopropanol (CAS 67-63-0) | STEL | 2000 mg/m ³ |
| | TWA | 500 mg/m ³ |

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

| Components | Type | Value |
|-----------------------|------|-----------------------|
| Acetone (CAS 67-64-1) | TWA | 600 mg/m ³ |

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

| Components | Type | Value |
|---------------------------|------|-----------|
| Heptane (CAS 142-82-5) | TWA | 250 ppm |
| | | 820 mg/m3 |
| Isopropanol (CAS 67-63-0) | TWA | 200 ppm |
| | | 490 mg/m3 |
| | | 200 ppm |

Ireland. Occupational Exposure Limits

| Components | Type | Value |
|---------------------------|------|------------|
| Acetone (CAS 67-64-1) | TWA | 1210 mg/m3 |
| | | 500 ppm |
| Heptane (CAS 142-82-5) | TWA | 2085 mg/m3 |
| | | 500 ppm |
| Isopropanol (CAS 67-63-0) | STEL | 400 ppm |
| | TWA | 200 ppm |

Italy. Occupational Exposure Limits

| Components | Type | Value |
|---------------------------|------|------------|
| Acetone (CAS 67-64-1) | TWA | 1210 mg/m3 |
| | | 500 ppm |
| Heptane (CAS 142-82-5) | TWA | 2085 mg/m3 |
| | | 500 ppm |
| Isopropanol (CAS 67-63-0) | STEL | 400 ppm |
| | TWA | 200 ppm |

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

| Components | Type | Value |
|---------------------------|------|------------|
| Acetone (CAS 67-64-1) | TWA | 1210 mg/m3 |
| | | 500 ppm |
| Heptane (CAS 142-82-5) | STEL | 2085 mg/m3 |
| | | 500 ppm |
| | TWA | 350 mg/m3 |
| | | 85 ppm |
| Isopropanol (CAS 67-63-0) | STEL | 600 mg/m3 |
| | TWA | 350 mg/m3 |

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

| Components | Type | Value |
|---------------------------|------|------------|
| Acetone (CAS 67-64-1) | STEL | 2420 mg/m3 |
| | | 1000 ppm |
| | TWA | 1210 mg/m3 |
| Heptane (CAS 142-82-5) | STEL | 500 ppm |
| | | 3128 mg/m3 |
| | TWA | 750 ppm |
| | | 2085 mg/m3 |
| Isopropanol (CAS 67-63-0) | STEL | 500 ppm |
| | | 600 mg/m3 |
| | TWA | 250 ppm |
| | | 350 mg/m3 |
| | | 150 ppm |

Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A

| Components | Type | Value |
|------------------------|------|------------|
| Acetone (CAS 67-64-1) | TWA | 1210 mg/m3 |
| | | 500 ppm |
| Heptane (CAS 142-82-5) | TWA | 2085 mg/m3 |
| | | 500 ppm |

Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)

| Components | Type | Value |
|------------------------|------|------------|
| Acetone (CAS 67-64-1) | TWA | 1210 mg/m3 |
| | | 500 ppm |
| Heptane (CAS 142-82-5) | TWA | 2085 mg/m3 |
| | | 500 ppm |

Netherlands. OELs (binding)

| Components | Type | Value |
|------------------------|------|------------------------|
| Acetone (CAS 67-64-1) | STEL | 2420 mg/m ³ |
| | TWA | 1210 mg/m ³ |
| Heptane (CAS 142-82-5) | STEL | 1600 mg/m ³ |
| | TWA | 1200 mg/m ³ |

Norway. Administrative Norms for Contaminants in the Workplace

| Components | Type | Value |
|---------------------------|------|-----------------------|
| Acetone (CAS 67-64-1) | TLV | 295 mg/m ³ |
| | | 125 ppm |
| Heptane (CAS 142-82-5) | TLV | 800 mg/m ³ |
| | | 200 ppm |
| Isopropanol (CAS 67-63-0) | TLV | 245 mg/m ³ |
| | | 100 ppm |

Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment

| Components | Type | Value |
|---------------------------|------|------------------------|
| Acetone (CAS 67-64-1) | STEL | 1800 mg/m ³ |
| | TWA | 600 mg/m ³ |
| Heptane (CAS 142-82-5) | STEL | 2000 mg/m ³ |
| | TWA | 1200 mg/m ³ |
| Isopropanol (CAS 67-63-0) | STEL | 1200 mg/m ³ |
| | TWA | 900 mg/m ³ |

Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)

| Components | Type | Value |
|------------------------|------|------------------------|
| Acetone (CAS 67-64-1) | TWA | 1210 mg/m ³ |
| | | 500 ppm |
| Heptane (CAS 142-82-5) | TWA | 2085 mg/m ³ |
| | | 500 ppm |

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

| Components | Type | Value |
|---------------------------|------|---------|
| Acetone (CAS 67-64-1) | STEL | 750 ppm |
| | TWA | 500 ppm |
| Heptane (CAS 142-82-5) | STEL | 500 ppm |
| | TWA | 400 ppm |
| Isopropanol (CAS 67-63-0) | STEL | 400 ppm |
| | TWA | 200 ppm |

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

| Components | Type | Value |
|---------------------------|------|------------------------|
| Acetone (CAS 67-64-1) | TWA | 1210 mg/m ³ |
| | | 500 ppm |
| Heptane (CAS 142-82-5) | TWA | 2085 mg/m ³ |
| | | 500 ppm |
| Isopropanol (CAS 67-63-0) | STEL | 500 mg/m ³ |
| | | 203 ppm |
| | | 200 mg/m ³ |
| | TWA | 81 ppm |

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

| Components | Type | Value |
|---------------------------|------|------------------------|
| Acetone (CAS 67-64-1) | TWA | 1210 mg/m ³ |
| | | 500 ppm |
| Heptane (CAS 142-82-5) | TWA | 2085 mg/m ³ |
| | | 500 ppm |
| Isopropanol (CAS 67-63-0) | STEL | 1000 mg/m ³ |
| | | 400 ppm |
| | | 500 mg/m ³ |
| | TWA | 200 ppm |

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

| Components | Type | Value |
|---------------------------|------|------------------------|
| Acetone (CAS 67-64-1) | TWA | 1210 mg/m ³ |
| | | 500 ppm |
| Heptane (CAS 142-82-5) | TWA | 2085 mg/m ³ |
| | | 500 ppm |
| Isopropanol (CAS 67-63-0) | TWA | 500 mg/m ³ |
| | | 200 ppm |

Spain. Occupational Exposure Limits

| Components | Type | Value |
|---------------------------|------|------------------------|
| Acetone (CAS 67-64-1) | TWA | 1210 mg/m ³ |
| | | 500 ppm |
| Heptane (CAS 142-82-5) | TWA | 2085 mg/m ³ |
| | | 500 ppm |
| Isopropanol (CAS 67-63-0) | STEL | 1000 mg/m ³ |
| | | 400 ppm |
| | TWA | 500 mg/m ³ |
| | | 200 ppm |

Sweden. Occupational Exposure Limit Values

| Components | Type | Value |
|---------------------------|------|------------------------|
| Acetone (CAS 67-64-1) | STEL | 1200 mg/m ³ |
| | | 500 ppm |
| | TWA | 600 mg/m ³ |
| Isopropanol (CAS 67-63-0) | STEL | 250 ppm |
| | | 600 mg/m ³ |
| | TWA | 250 ppm |
| | | 350 mg/m ³ |
| | | 150 ppm |

Switzerland. SUVA Grenzwerte am Arbeitsplatz

| Components | Type | Value |
|---------------------------|------|------------------------|
| Acetone (CAS 67-64-1) | STEL | 2400 mg/m ³ |
| | | 1000 ppm |
| | TWA | 1200 mg/m ³ |
| Isopropanol (CAS 67-63-0) | STEL | 500 ppm |
| | | 1000 mg/m ³ |
| | TWA | 400 ppm |
| | | 500 mg/m ³ |
| | | 200 ppm |

UK. EH40 Workplace Exposure Limits (WELs)

| Components | Type | Value |
|---------------------------|------|------------------------|
| Acetone (CAS 67-64-1) | STEL | 3620 mg/m ³ |
| | | 1500 ppm |
| | TWA | 1210 mg/m ³ |
| Heptane (CAS 142-82-5) | TWA | 500 ppm |
| | | 2085 mg/m ³ |
| | TWA | 500 ppm |
| Isopropanol (CAS 67-63-0) | STEL | 1250 mg/m ³ |
| | | 500 ppm |
| | TWA | 999 mg/m ³ |
| | | 400 ppm |

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

| Components | Type | Value |
|------------------------|------|------------------------|
| Acetone (CAS 67-64-1) | TWA | 1210 mg/m ³ |
| | | 500 ppm |
| Heptane (CAS 142-82-5) | TWA | 2085 mg/m ³ |
| | | 500 ppm |

Biological limit values

France. Biological indicators of exposure (IBE) (National Institute for Research and Security (INRS, ND 2065)

| Components | Value | Determinant | Specimen | Sampling time |
|-----------------------|----------|-------------|----------|---------------|
| Acetone (CAS 67-64-1) | 100 mg/l | Acétone | Urine | * |

* - For sampling details, please see the source document.

Germany. TRGS 903, BAT List (Biological Limit Values)

| Components | Value | Determinant | Specimen | Sampling time |
|---------------------------|---------|-------------|----------|---------------|
| Acetone (CAS 67-64-1) | 80 mg/l | Aceton | Urine | * |
| Isopropanol (CAS 67-63-0) | 25 mg/l | Aceton | Urine | * |
| | 25 mg/l | Aceton | Blood | * |

* - For sampling details, please see the source document.

Slovakia. BLVs (Biological Limit Value). Regulation no. 355/2006 concerning protection of workers exposed to chemical agents, Annex 2

| Components | Value | Determinant | Specimen | Sampling time |
|-----------------------|------------|-------------|---------------------|---------------|
| Acetone (CAS 67-64-1) | 53,36 mg/g | Acetone | Creatinine in urine | * |
| | 80 mg/l | Acetone | Urine | * |

* - For sampling details, please see the source document.

Spain. Biological Limit Values (VLBs), Occupational Exposure Limits for Chemical Agents, Table 4

| Components | Value | Determinant | Specimen | Sampling time |
|---------------------------|---------|-------------|----------|---------------|
| Acetone (CAS 67-64-1) | 50 mg/l | Acetona | Urine | * |
| Isopropanol (CAS 67-63-0) | 40 mg/l | Acetona | Urine | * |

* - For sampling details, please see the source document.

Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)

| Components | Value | Determinant | Specimen | Sampling time |
|---------------------------|---------|-------------|----------|---------------|
| Acetone (CAS 67-64-1) | 80 mg/l | Aceton | Urine | * |
| Isopropanol (CAS 67-63-0) | 25 mg/l | Aceton | Urine | * |
| | 25 mg/l | Aceton | Blood | * |

* - For sampling details, please see the source document.

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no-effect level (DNEL) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls Provide adequate general and local exhaust ventilation. Provide eyewash station.

Individual protection measures, such as personal protective equipment

General information Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Use personal protective equipment as required.

Eye/face protection Do not get in eyes. Wear safety glasses with side shields (or goggles). Eye wash fountain is recommended.

Skin protection

- Hand protection Chemical resistant gloves are recommended.

- Other Avoid contact with the skin. Wear appropriate chemical resistant clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards None known.

Hygiene measures When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Environmental exposure controls Contain spills and prevent releases and observe national regulations on emissions. Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance Liquid.

Physical state Liquid.

| | |
|---|--|
| Form | Liquid. |
| Colour | Colorless |
| Odour | Characteristic. |
| Odour threshold | Not established |
| pH | Not applicable |
| Melting point/freezing point | Not established |
| Initial boiling point and boiling range | 60,5 °C (140,9 °F) |
| Flash point | -6,0 °C (21,2 °F) Tag closed cup -- dispensed liquid |
| Evaporation rate | 1,6 (Water = 1) |
| Flammability (solid, gas) | Not available. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | 1,5 % |
| Flammability limit - upper (%) | 9 % |
| Vapour pressure | Not established |
| Vapour density | 2,8 estimated |
| Relative density | Not available. |
| Solubility(ies) | |
| Solubility (water) | < 10 % |
| Solubility (other) | Not available. |
| Partition coefficient (n-octanol/water) | > 1 |
| Auto-ignition temperature | 306 °C (582,8 °F) |
| Decomposition temperature | Not established |
| Viscosity | < 3 cSt @ 25°C |
| Explosive properties | Not available. |
| Oxidizing properties | Not available. |
| 9.2. Other information | |
| Heat of combustion | > 30 kJ/g |
| Percent volatile | 100 % |
| Specific gravity | 0,65 - 0,68 @ 20°C |
| VOC (Weight %) | 90 % per US State and Federal Consumer Product Regulations |

SECTION 10: Stability and reactivity

| | |
|---|---|
| 10.1. Reactivity | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| 10.2. Chemical stability | Material is stable under normal conditions. |
| 10.3. Possibility of hazardous reactions | Hazardous polymerisation does not occur. |
| 10.4. Conditions to avoid | Heat, flames and sparks. Avoid temperatures exceeding the flash point. Contact with incompatible materials. |
| 10.5. Incompatible materials | Strong oxidising agents. |
| 10.6. Hazardous decomposition products | Irritating and/or toxic fumes and gases may be emitted upon the products decomposition. |

SECTION 11: Toxicological information

| | |
|---|--|
| General information | Occupational exposure to the substance or mixture may cause adverse effects. |
| Information on likely routes of exposure | |
| Ingestion | Harmful if swallowed. May be fatal if swallowed and enters airways. |
| Inhalation | Vapours have a narcotic effect and may cause headache, fatigue, dizziness and nausea. |
| Skin contact | Causes skin irritation. |
| Eye contact | Causes serious eye irritation. |
| Symptoms | Discomfort in the chest. Shortness of breath. Coughing. Narcosis. Behavioural changes. Decrease in motor functions. Skin irritation. Irritation of eyes and mucous membranes. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. |

11.1. Information on toxicological effects

Acute toxicity Narcotic effects. Harmful if swallowed.

| Components | Species | Test results |
|--|---|--|
| Acetone (CAS 67-64-1) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | > 15800 mg/kg 20 ml/kg |
| <i>Inhalation</i> | | |
| LC50 | Rat | 55700 ppm 76 mg/l, 4 Hours 50,1 mg/l 50,1 mg/l, 8 Hours |
| <i>Oral</i> | | |
| LD50 | Mouse | 3000 mg/kg |
| | Rabbit | 5340 mg/kg |
| | Rat | 5800 mg/kg 2,2 ml/kg |
| <i>Other</i> | | |
| LD50 | Mouse | 1297 mg/kg |
| | Rat | 5500 mg/kg |
| Heptane (CAS 142-82-5) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | > 2000 mg/kg |
| <i>Inhalation</i> | | |
| LC50 | Rat | > 29,29 mg/l 103 mg/l, 4 Hours |
| LD50 | Mouse | 75 mg/l, 2 Hours |
| <i>Oral</i> | | |
| LD50 | Rat | > 5000 mg/kg |
| <i>Other</i> | | |
| LD50 | Mouse | 222 mg/kg |
| Isopropanol (CAS 67-63-0) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | 12800 mg/kg 16,4 ml/kg |
| <i>Inhalation</i> | | |
| LC50 | Rat | > 10000 ppm |
| <i>Oral</i> | | |
| LD50 | Dog | 4797 mg/kg |
| | Mouse | 3600 mg/kg |
| | Rabbit | 5,03 g/kg |
| | Rat | 4,7 g/kg |
| <i>Other</i> | | |
| LD50 | Mouse | 1509 mg/kg |
| | Rat | 1099 mg/kg |
| Skin corrosion/irritation | Causes skin irritation. | |
| Serious eye damage/eye irritation | Causes serious eye irritation. | |
| Respiratory sensitisation | Based on available data, the classification criteria are not met. | |
| Skin sensitisation | Based on available data, the classification criteria are not met. | |

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

ACGIH Carcinogens

Acetone (CAS 67-64-1) Not classifiable as a human carcinogen. A4
Isopropanol (CAS 67-63-0) Not classifiable as a human carcinogen. A4

Reproductive toxicity Based on available data, the classification criteria are not met.

Specific target organ toxicity - single exposure Narcotic effects.

Specific target organ toxicity - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard May be fatal if swallowed and enters airways.

Mixture versus substance information No information available.

Other information None known.

SECTION 12: Ecological information

12.1. Toxicity Very toxic to aquatic life with long lasting effects.

| Components | Species | Test results |
|---------------------------|---------|---|
| Acetone (CAS 67-64-1) | | |
| Aquatic | | |
| Crustacea | EC50 | Water flea (Daphnia magna) 10294 - 17704 mg/l, 48 hours |
| Fish | LC50 | Rainbow trout, donaldson trout (Oncorhynchus mykiss) 4740 - 6330 mg/l, 96 hours |
| Heptane (CAS 142-82-5) | | |
| Aquatic | | |
| Fish | LC50 | Mozambique tilapia (Tilapia mossambica) 375 mg/l, 96 hours |
| Isopropanol (CAS 67-63-0) | | |
| Aquatic | | |
| Fish | LC50 | Bluegill (Lepomis macrochirus) > 1400 mg/l, 96 hours |

12.2. Persistence and degradability Not inherently biodegradable.

12.3. Bioaccumulative potential No data available.

Partition coefficient n-octanol/water (log Kow)

LPS® EFX > 1
Acetone -0,24
Heptane 4,66
Isopropanol 0,05

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment Not available.

12.6. Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

EU waste code The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Disposal methods/information Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Special precautions Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

General IMDG Regulated Marine Pollutant.

ADR

14.1. UN number UN1993
14.2. UN proper shipping name FLAMMABLE LIQUID, N.O.S. (Acetone, Heptane)
14.3. Transport hazard class(es)
 Class 3
 Subsidiary risk -
 Label(s) 3
 Hazard No. (ADR) 33
 Tunnel restriction code D/E
14.4. Packing group II
14.5. Environmental hazards Yes
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

RID

14.1. UN number UN1993
14.2. UN proper shipping name FLAMMABLE LIQUID, N.O.S. (Acetone, Heptane)
14.3. Transport hazard class(es)
 Class 3
 Subsidiary risk -
 Label(s) 3
14.4. Packing group II
14.5. Environmental hazards Yes
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

ADN

14.1. UN number UN1993
14.2. UN proper shipping name Flammable Liquid
14.3. Transport hazard class(es)
 Class 3
 Subsidiary risk -
 Label(s) 3
14.4. Packing group II
14.5. Environmental hazards Yes
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

14.1. UN number UN1993
14.2. UN proper shipping name Flammable liquid, n.o.s. (Acetone, Heptane)
14.3. Transport hazard class(es)
 Class 3
 Subsidiary risk -
14.4. Packing group II
14.5. Environmental hazards Yes
ERG Code 3H
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft Allowed.

Cargo aircraft only Allowed.

5-gal (01805) Cargo Aircraft Only

IMDG

14.1. UN number UN1993

14.2. UN proper shipping name FLAMMABLE LIQUID, N.O.S. (Acetone, Heptane), MARINE POLLUTANT

14.3. Transport hazard class(es)
 Class 3
 Subsidiary risk -

14.4. Packing group II

14.5. Environmental hazards
 Marine pollutant Yes
 EmS F-E, S-E

14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

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

ADN; ADR; IATA; IMDG; RID



Marine pollutant



SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I

Not listed.

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(1) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Acetone (CAS 67-64-1)

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work

Not listed.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding

Not listed.

Other EU regulations

Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances

Not listed.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Acetone (CAS 67-64-1)

Heptane (CAS 142-82-5)

Isopropanol (CAS 67-63-0)

Directive 94/33/EC on the protection of young people at work

Not listed.

Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

National regulations

Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

Not available.

References

Not available.

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any statements or R-phrases and H-statements under Sections 2 to 15

R11 Highly flammable.

R36 Irritating to eyes.

R36/38 Irritating to eyes and skin.

R38 Irritating to skin.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R65 Harmful: may cause lung damage if swallowed.

R66 Repeated exposure may cause skin dryness or cracking.

R67 Vapours may cause drowsiness and dizziness.

H225 Highly flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Revision information

None.

Training information

Follow training instructions when handling this material.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.