

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH) Classifications according to Regulation (EC) No 1272/2008. Printdate 09 Aug 2023

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product name:

Aliskiren

1.1. Catalog No.:

688601

1.2. Relevant identified uses of the substance or mixture Identified: Laboratory chemical uses: R&D

uses:

1.3. Uses advised against:

HPC Standards GmbH Am Wieseneck 7

04451 Cunnersdorf Deutschland

Tel. +49 34291 3372-36 Fax. +49 34291 3372-39 contact@hpc-standards.com

1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36 This number is only available during office hours.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 4), H302 Acute toxicity, Inhalation (Category 4), H332 Acute toxicity, Dermal (Category 4), H312 Eye irritation (Category 2), H319 For the full text of the H-Statements mentioned in this Section, see Section 16.

F Highly flammable R11 Xn Harmful R20/21/22 Xi Irritant R36

2.2. Label elements

2.2.1. Pictogram





2.2.2.

Signal word Danger Hazard statement(s)

Highly flammable liquid and vapour. Harmful if swallowed, in contact with skin or if inhaled. Causes serious eye irritation. Wear protective gloves and protective clothing. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing vapour. Do not eat, drink or smoke when using this product. IF INHALED: Call a POISON CENTER or doctor if you feel unwell. Dispose of contents and container in accordance with all local, regional, national and international regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances Synonyms : Methyl cyanide ACN Formula : C2H3N Molecular Weight : 41,05 g/mol CAS-No. : 75-05-8 EC-No. : 200-835-2 Index-No. : 608-001-00-3 Registration number : 01-2119471307-38-XXXX Hazardous ingredients Component Classification Concentration Acetonitrile CAS-No. EC-No. Index-No. Registration number 75-05-8 200-835-2 608-001-00-3 01-2119471307-38-XXXX Flam. Liq. 2; Acute Tox. 4; Eye Irrit. 2; H225, H302 + H312 + H332, H319 <= 100 % Hazardous ingredients Component Classification Concentration Acetonitrile CAS-No. EC-No. Index-No. Registration number 75-05-8 200-835-2 608-001-00-3 01-2119471307-38-XXXX F, Xn, R11 - R20/21/22 - R36 <= 100 %

3.1.1. Formula C30H53N3O6



3.1.2. Molecular Weight (g/mol)

551.76

3.1.3. CAS-No.

173334-57-1

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice Consult a physician. Show this safety data sheet to the doctor in attendance. If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in

section 11

4.3 Indication of any immediate medical attention and special treatment needed no data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. 5.2 Special hazards arising from the substance or mixture no data available 5.3 Advice for firefighters Wear self contained breathing apparatus for fire fighting if necessary. 5.4 Further information Use water spray to cool unopened containers.



6.1 Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

6.2 Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). 6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. 7.2 Conditions for safe storage, including any incompatibilities Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Recommended storage temperature: 2 - 8 °C 7.3 Specific end uses no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters Components with workplace control parameters Derived No Effect Level (DNEL) Application Area Workers Exposure routes Inhalation Health effect Acute local effects, Acute systemic effects Health effect Acute local effects, Acute systemic effects Value 68 mg/m3 Application Area Workers Exposure routes Skin contact Health effect Long-term systemic effects Value 32,2mg/kg BW/d Application Area Workers Exposure routes Inhalation Health effect Long-term local effects, Long-term systemic effects Value 68 mg/m3 Application Area Workers Exposure routes Inhalation Exposure routes Inhalation Health effect Long-term local effects, Long-term systemic effects Value 68 mg/m3 Application Area Consumers Exposure routes Inhalation Health effect Acute local effects Value 220 mg/m3 **Application Area Consumers** Exposure routes Inhalation Health effect Acute systemic effects Value 22 mg/m3 Application Area Consumers Exposure routes Inhalation Health effect Long-term systemic effects Value 4,8 mg/m3



Predicted No Effect Concentration (PNEC) Compartment Value Water 10 mg/l 2,41 mg/kg 1 mg/l Soil Marine water 10 mg/l Fresh water Fresh water sediment 7,53 mg/kg Onsite sewage treatment plant 32 mg/l

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166(EU). Skin protection

Skin protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Scenario. Body Protection Complete suit protecting against chemicals, Flame retardant antistatic protective bitters. The type of protective equipment must be selected according to the clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties a) Appearance Form: clear, liquid Colour: colourless b) Odour ether-like
c) Odour Threshold no data available
d) pH no data available
c) Matting a patrice patr e) Melting point/freezing point Melting point/range: -48 °C f) Initial boiling point and boiling range 81 - 82 °C g) Flash point 2,0 °C - closed cup h) Evapouration rate 5,8 Flammability (solid, gas) no data available j) Upper/lower flammability or explosive limits Upper explosion limit: 16 %(V) Lower explosion limit: 3 %(V) k) Vapour pressure 73,18 hPa at 15 °C 121,44 hPa at 25 °C 413,23 hPa at 55 °C 98,64 hPa at 20 °C Napour density 1,42 - (Air = 1.0)
 Relative density 0,786 g/mL at 25 °C



n) Water solubility completely soluble o) Partition coefficient: noctanol/ water log Pow: -0,54 at 25 °C p) Auto-ignition temperature 524,0 °C q) Decomposition temperature no data available r) Viscosity no data available s) Explosive properties Not explosive t) Oxidizing properties The substance or mixture is not classified as oxidizing. 9.2 Other safety information Surface tension 29,0 mN/m at 20,0 °C Relative vapour density 1,42 - (Air = 1.0)

10. STABILITY AND REACTIVITY

10.1 Reactivity
no data available
10.2 Chemical stability
no data available
10.3 Possibility of hazardous reactions
no data available
10.4 Conditions to avoid
Heat, flames and sparks. Extremes of temperature and direct sunlight.
10.5 Incompatible materials
acids, Bases, Oxidizing agents, Alkali metals
10.6 Hazardous decomposition products
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects Acute toxicity LD50 Oral - rat - male - 1.320 - 6.690 mg/kg LC50 Inhalation - mouse - 4 h - 3587 ppm (OECD Test Guideline 403) LC50 Inhalation - rat - 4 h - 26,8 mg/l LD50 Dermal - rabbit - male and female - > 2.000 mg/kg (OECD Test Guideline 402) Skin corrosion/irritation Skin - rabbit Result: No skin irritation (OECD Test Guideline 404) Serious eye damage/eye irritation Eyes - rabbit Result: Irritating to eyes. (OECD Test Guideline 405) Respiratory or skin sensitisation Buehler Test - guinea pig Did not cause sensitisation on laboratory animals. (OECD Test Guideline 406) Germ cell mutagenicity Hamster ovary Result: negative Mutation in mammalian somatic cells. Ames test



S. typhimurium Result: Not mutagenic in Ames Test. Hamster ovary Result: Equivocal evidence. Sister chromatid exchange Mutagenicity (micronucleus test) mouse Result: Positive results were obtained in some in vivo tests. Carcinogenicity No evidence of carcinogenicity in animal studies (when indicated) IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. Reproductive toxicity Animal testing did not show any effects on fertility. Specific target organ toxicity - single exposure The substance or mixture is not classified as specific target organ toxicant, single exposure. Specific target organ toxicity - repeated exposure The substance or mixture is not classified as specific target organ toxicant, repeated exposure. Aspiration hazard Aspiration hazard No aspiration toxicity classification Additional Information RTECS: AL7700000 Treat as cyanide poisoning., Always have on hand a cyanide first-aid kit, together with proper instructions., The onset of symptoms is generally delayed pending conversion to cyanide., Nausea, Vomiting, Diarrhoea, Headache, Dizziness, Rash, Cyanosis, excitement, depression, Drowsiness, impaired judgment, Lack of coordination, stupor, death

12. ECOLOGICAL INFORMATION

- 12.1 Toxicity
- no data available 12.2 Persistence and degradability
- no data available 12.3 Bioaccumulative potential
- no data available
- 12.4 Mobility in soil no data available
- 12.5 Results of PBT and vPvB assessment
- no data available
- 12.6 Other adverse effects
- no data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contaminated packaging

Dispose of as unused product.



14. TRANSPORT INFORMATION

14.1 UN number ADR/RID: 1648 IMDG: 1648 IATA: 1648 14.2 UN proper shipping name ADR/RID: ACETONITRILE IMDG: ACETONITRILE IATA: Acetonitrile 14.3 Transport hazard class(es) ADR/RID: 3 IMDG: 3 IATA: 3 14.4 Packaging group ADR/RID: 11 IMDG: 11 IATA: II 14.5 Environmental hazards ADR/RID: no IMDG Marine Pollutant: no IATA: no 14.6 Special precautions for user no data available

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of the regulation named on the first page of this SDS. 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture no data available 15.2 Chemical Safety Assessment no data available

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!