HPC Standards GmbH
Am Wieseneck 7
04451 Cunnersdorf
Phone 0049 34291 3372-36
Fax 0049 34291 3372-39
www.hpc-standards.com
contact@hpc-standards.com

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 22 Apr 2024

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

1.1. Product name:

1-Ethyl-2-pyrrolidone

1.1. Catalog No.:

688127

1.2. Relevant identified uses of the substance or mixture

Identified uses: Laboratory chemical
R&D

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
Classification according to Regulation (EC) No 1272/2008
Serious eye damage (Category 1), H318
Reproductive toxicity (Category 1B), H360D

2.2. Label elements

2.2.1. Pictogram

2.2.2.

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008
Pictogram Signal word Danger Hazard statement(s)
H318 Causes serious eye damage.
H360D May damage the unborn child.

HPC Standards GmbH
Am Wieseneck 7
04451 Cunnersdorf
Phone 0049 34291 3372-36
Fax 0049 34291 3372-39
www.hpc-standards.com
contact@hpc-standards.com

Precautionary statement(s)
P201 Obtain special instructions before use.
P280 Wear eye protection/ face protection.
P305 + P351 + P338 +
P310
IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue
rinsing. Immediately call a POISON CENTER/ doctor.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
Supplemental Hazard
Statements
none
Restricted to professional users.
2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
Formula : C6H11NO
Molecular weight : 113,16 g/mol
CAS-No. : 2687-91-4
EC-No. : 220-250-6
Index-No. : 616-208-00-5
Component Classification Concentration
1-ethylpyrrolidin-2-one
CAS-No.
EC-No.
Index-No.
2687-91-4
220-250-6
616-208-00-5
Eye Dam. 1; Repr. 1B;
H318, H360D
<= 100 %

3.1.1. Formula

C6H11NO

3.1.2. Molecular Weight (g/mol)

113.16

HPC Standards GmbH
Am Wieseneck 7
04451 Cunnersdorf
Phone 0049 34291 3372-36
Fax 0049 34291 3372-39
www.hpc-standards.com
contact@hpc-standards.com

3.1.3. CAS-No.

2687-91-4

4. FIRST AID MEASURES

4.1 Description of first-aid measures
General advice
Consult a physician. Show this material 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.
Unsuitable extinguishing media
Do NOT use water jet.
5.2 Special hazards arising from the substance or mixture
Carbon oxides
Nitrogen oxides (NOx)
5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.
5.4 Further information
Use water spray to cool unopened containers

6. ACCIDENTAL RELEASE MEASURES

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 vapors accumulating to form explosive concentrations. Vapors 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 non-combustible absorbent material, (e.g. sand,

earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.
6.4 Reference to other sections
For disposal see section 13

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Advice on safe handling
Avoid exposure - obtain special instructions before use.Advice on safe handling Avoid inhalation of vapor or mist.
Advice on protection against fire and explosion
Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge.
Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
For precautions see section 2.2.
7.2 Conditions for safe storage, including any incompatibilities
Storage conditions
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. Store in cool place.
7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Ingredients with workplace control parameters
Derived No Effect Level (DNEL)
Application Area Routes of exposure
Health effect Value
Workers Inhalation Long-term systemic effects 11 mg/m3
Workers Skin contact Long-term systemic effects 4mg/kg BW/d
Workers Inhalation Long-term local effects 13 mg/m3
Workers Inhalation Acute local effects 26 mg/m3
Predicted No Effect Concentration (PNEC)
Compartment Value
Soil 0,235 mg/kg
Sea water 0,025 mg/l
Fresh water 0,25 mg/l
Sea sediment 0,191 mg/kg
Fresh water sediment 1,91 mg/kg
Onsite sewage treatment plant 10 mg/l
8.2 Exposure controls
Personal protective equipment
Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles
Skin protection
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use.
Body Protection
protective clothing
Respiratory protection
Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds
The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory

protective devices are carried out according to the instructions of the producer.
These measures have to be properly documented.
Control of environmental exposure
Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
a) Appearance Form: liquid
Color: colorless, to, yellow
b) Odor amine-like
c) Odor Threshold No data available
d) pH 8 - 9 at 100 g/l at 20 °C
e) Melting
point/freezing point
Melting point/freezing point: < -75 °C - OECD Test Guideline
102
f) Initial boiling point
and boiling range
97 °C at 27 hPa - lit.
g) Flash point 91 °C - Pensky-Martens closed cup
h) Evaporation rate No data available
i) Flammability (solid,
gas)
No data available
j) Upper/lower
flammability or
explosive limits
Upper explosion limit: 7,7 %(V)
Lower explosion limit: 1,3 %(V)
k) Vapor pressure 0,18 hPa at 20 °C - Regulation (EC) No. 440/2008, Annex, A.4
l) Vapor density 3,90
m) Relative density 0,9974 at 20 °C - Regulation (EC) No. 440/2008, Annex, A.3
n) Water solubility 1.000 g/l at 23 °C - OECD Test Guideline 105- completely
miscible o) Partition coefficient:
n-octanol/water
log Pow: -0,2 at 23 °C - OECD Test Guideline 107 -
Bioaccumulation is not expected.
p) Autoignition
temperature
The substance or mixture is not classified as pyrophoric.
q) Decomposition
temperature
No data available
r) Viscosity Viscosity, kinematic: 2,1 mm2/s at 20 °C - OECD Test Guideline
114
Viscosity, dynamic: No data available
s) Explosive properties No data available
t) Oxidizing properties No data available
9.2 Other safety information
Surface tension 69 mN/m at 1g/l at 20 °C
- OECD Test Guideline 115
Relative vapor
density
3,90

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions
No data available
10.4 Conditions to avoid
Heat, flames and sparks.
10.5 Incompatible materials
Strong bases, Acid chlorides, Strong oxidizing agents
10.6 Hazardous decomposition products
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute toxicity
LD50 Oral - Rat - male and female - 3.200 mg/kg
(OECD Test Guideline 401)
LC50 Inhalation - Rat - male and female - 4 h - > 5,1 mg/l
(OECD Test Guideline 403)
Symptoms: Cough, Possible damages:, mucosal irritations LD50 Dermal - Rat - male and female - > 2.000 mg/kg
(OECD Test Guideline 402)
Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 4 h
(OECD Test Guideline 404)
Serious eye damage/eye irritation
Eyes - Rabbit
Result: Irreversible effects on the eye
(OECD Test Guideline 405)
Lacrimal irritation due to vapours.
Respiratory or skin sensitization
Local lymph node assay (LLNA) - Mouse
Result: negative
(OECD Test Guideline 429)
Germ cell mutagenicity
Ames test
Escherichia coli/Salmonella typhimurium
Result: negative
In vitro mammalian cell gene mutation test
Chinese hamster ovary cells
Result: negative
OECD Test Guideline 474
Mouse - male - Bone marrow
Result: negative
OECD Test Guideline 475
Mouse - male - Bone marrow
Result: negative
Carcinogenicity
IARC: No ingredient 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
May damage the unborn child.
Specific target organ toxicity - single exposure
No data available
Acute inhalation toxicity - Cough, Possible damages:, mucosal irritations
Specific target organ toxicity - repeated exposure
No data available
Aspiration hazard
No data available
11.2 Additional Information
Repeated dose toxicity - Rat - male and female - Oral - 3 Months - NOAEL (No observed adverse effect level) - 100 mg/kg - LOAEL (Lowest observed adverse effect level) - 100 mg/kg
RTECS: UY5769250 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
After absorption:
Dizziness
Nausea
Gastrointestinal disturbance
Vomiting
Diarrhea
Drowsiness

Other dangerous properties can not be excluded.
Handle in accordance with good industrial hygiene and safety practice

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to fish static test LC50 - Danio rerio (zebra fish) - > 464 - 999 mg/l - 96 h
(OECD Test Guideline 203)
Toxicity to daphnia
and other aquatic
invertebrates
static test EC50 - Daphnia magna (Water flea) - > 104 mg/l - 48 h
(OECD Test Guideline 202)
Toxicity to algae static test ErC50 - Desmodesmus subspicatus (green algae) - > 101 mg/l - 72 h
(OECD Test Guideline 201)
Toxicity to bacteria static test EC20 - activated sludge - > 1.000 mg/l - 30 min
(OECD Test Guideline 209)
12.2 Persistence and degradability
Biodegradability aerobic - Exposure time 28 d
Result: 90 - 100 % - Readily biodegradable.
(OECD Test Guideline 301A)
Chemical Oxygen
Demand (COD)
2.110 mg/g
Remarks: (External MSDS)
12.3 Bioaccumulative potential
No data available
12.4 Mobility in soil
No data available
12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
12.6 Other adverse effects
Additional ecological
information
Bactericidal effect Discharge into the environment must be avoided

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.
Contaminated packaging
Dispose of as unused product

HPC Standards GmbH
Am Wieseneck 7
04451 Cunnersdorf
Phone 0049 34291 3372-36
Fax 0049 34291 3372-39
www.hpc-standards.com
contact@hpc-standards.com

14. TRANSPORT INFORMATION

14.1 UN number
ADR/RID: - IMDG: - IATA: -
14.2 UN proper shipping name
ADR/RID: Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods
14.3 Transport hazard class(es)
ADR/RID: - IMDG: - IATA: -
14.4 Packaging group
ADR/RID: - IMDG: - IATA: -
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

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
Authorisations and/or restrictions on use
National legislation
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
: Not applicable
15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

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!