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Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 30 May 2023

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

1.1. Product name:

1,2-Pentanediol

1.1. Catalog No.:

684919

1.2. Relevant identified uses of the substance or mixture

Identified uses: Laboratory chemical
R&D

1.3. Uses advised against:

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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
Eye irritation (Category 2), H319

2.2. Label elements

2.2.1. Pictogram

2.2.2.

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008
Signal Word Warning
Hazard statement(s)
H319 Causes serious eye irritation.
Precautionary statement(s)

P264 Wash skin thoroughly after handling.
P280 Wear eye protection/ face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
Supplemental Hazard Statements
none
Reduced Labeling (<= 125 ml)
Signal Word Warning
Hazard statement(s) none
Precautionary statement(s)
none
Supplemental Hazard Statements
none
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
Component: 1,2-Pentanediol CAS-Nr. : 5343-92-0 EC-Nr. : 226-285-3
Classification: Eye Irrit. 2; H319
Concentration: <= 100 %

3.1.1. Formula

C5H12O2

3.1.2. Molecular Weight (g/mol)

104.15

3.1.3. CAS-No.

5343-92-0

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4. FIRST AID MEASURES

4.1 Description of first-aid measures
General advice
Show this material safety data sheet to the doctor in attendance.
If inhaled
After inhalation: fresh air.
In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
In case of eye contact
After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.
If swallowed
After swallowing: immediately make victim drink water (two glasses at most). 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
Water Foam Carbon dioxide (CO2) Dry powder
Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.
5.2 Special hazards arising from the substance or mixture
Carbon oxides
Combustible.
Vapors are heavier than air and may spread along floors.
Forms explosive mixtures with air on intense heating.
Development of hazardous combustion gases or vapours possible in the event of fire.
5.3 Advice for firefighters
In the event of fire, wear self-contained breathing apparatus.
5.4 Further information
Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.
6.2 Environmental precautions
Do not let product enter drains.
6.3 Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.
6.4 Reference to other sections
For disposal see section 13.

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7. HANDLING AND STORAGE

7.1 Precautions for safe handling
For precautions see section 2.2.
7.2 Conditions for safe storage, including any incompatibilities
Storage conditions
Tightly closed.
Hygroscopic.
Storage class
Storage class (TRGS 510): 10: Combustible liquids
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
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). Safety glasses
Skin protection
required
Body Protection
protective clothing
Respiratory protection
required when vapours/aerosols are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.
Recommended Filter type: Filter type ABEK
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) Physical state clear, viscous liquid
b) Color colorless, to, light yellow
c) Odor odorless
d) Melting
point/freezing point
No data available
e) Initial boiling point
and boiling range
206 °C - lit.
f) Flammability (solid,
gas)
No data available
g) Upper/lower
flammability or
explosive limits
No data available
h) Flash point 110 °C - closed cup
i) Autoignition
temperature
380 °C

at 1.013,25 hPa - DIN 51794
j) Decomposition
temperature
No data available
k) pH No data available
l) Viscosity Viscosity, kinematic: 79,4 mm2/s at 20 °C - OECD Test
Guideline 114
Viscosity, dynamic: No data available
m) Water solubility 1.000 g/l at 20 °C - completely miscible
n) Partition coefficient:
n-octanol/water
log Pow: 0,06 at 25 °C - Bioaccumulation is not expected.
o) Vapor pressure No data available
p) Density 0,971 g/cm3 at 25 °C - lit.
Relative density No data available
q) Relative vapor
density
No data available
r) Particle
characteristics
No data available
s) Explosive properties No data available
t) Oxidizing properties none
9.2 Other safety information
No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
Forms explosive mixtures with air on intense heating.
A range from approx. 15 Kelvin below the flash point is to be rated as critical.
10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .
10.3 Possibility of hazardous reactions
Violent reactions possible with:
Strong oxidizing agents
10.4 Conditions to avoid
Strong heating.
10.5 Incompatible materials
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 - > 5.000 mg/kg
(OECD Test Guideline 401)
Remarks: Behavioral:Excitement.
Behavioral:Somnolence (general depressed activity).
Behavioral:Muscle weakness.
LC50 Inhalation - Rat - male and female - 4 h - > 7.015 mg/l - vapor
(OECD Test Guideline 403)
Dermal: No data available
Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 72 h
(OECD Test Guideline 404)
Serious eye damage/eye irritation

Eyes - Rabbit
Result: Eye irritation - 21 d
(OECD Test Guideline 405)
Respiratory or skin sensitization
Maurer optimisation test - Guinea pig
Result: Not a skin sensitizer.
(OECD Test Guideline 406)
Germ cell mutagenicity
Test Type: Ames test
Test system: S. typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Carcinogenicity
No data available
Reproductive toxicity
No data available
Specific target organ toxicity - single exposure
No data available
Specific target organ toxicity - repeated exposure
No data available
Aspiration hazard
No data available
11.2 Additional Information
Endocrine disrupting properties
Product:
Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Repeated dose toxicity - Rat - male and female - Oral
RTECS: SA0455000
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to fish static test LC50 - Danio rerio (zebra fish) - > 1.096 mg/l - 96 h
(OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates
static test EC50 - Daphnia magna (Water flea) - 500 mg/l - 48 h
Remarks: (ECHA)
Toxicity to algae static test EC50 - Desmodesmus subspicatus (green algae) - 9.334,69 mg/l - 72 h
(DIN 38412)
Toxicity to bacteria static test EC50 - Pseudomonas putida - > 10.000 mg/l - 17 h
12.2 Persistence and degradability
Biodegradability aerobic - Exposure time 28 d
Result: 73 % - Readily biodegradable.
(OECD Test Guideline 301E)
Remarks: 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
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 Endocrine disrupting properties
Product:
Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects
No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product
See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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
Further information
Not classified as dangerous in the meaning of transport regulations.

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.
Other regulations
Take note of Dir 94/33/EC on the protection of young people at work.
15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

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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!