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Material Safety Data Sheet

SECTION 1:CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: PIPES

Company: Suzhou YACOO Science Co., Ltd.

Address: No.128, Fang Zhou Road, Suzhou Industral Park, China

Tel: 0512-87182055 Fax: 0512-87182056

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.2Label elements

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.30ther 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.

SECTION 3: Composition/information on ingredients

3.1Substances

Synonyms: Piperazine-1,4-bis(2-ethanesulfonic acid)

1,4-Piperazinediethanesulfonic acid

Piperazine-N,N' -bis(2-ethanesulfonic acid)

Formula: C8H18N2O6S2

Molecular weight: 302,37 g/mol

CAS-No.: 5625-37-6 EC-No.: 227-057-6

No components need to be disclosed according to the applicable regulations.

SECTION 4: First aid measures

4.1Description of first-aid measures 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. Remove contact lenses.

If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2Most 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

SECTION 5: Firefighting measures

5.1Extinguishing 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.

5.2Special hazards arising from the substance or mixture

Carbon oxides Nitrogen oxides (NOx) Sulfur oxides Combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

5.4Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1Personal precautions, protective equipment and emergency procedures Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2Environmental precautions

Do not let product enter drains.

6.3Methods 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 dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1Precautions for safe handling

For precautions see section 2.2.

7.2Conditions for safe storage, including any incompatibilities

No data available

7.3Specific end use(s)





Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1Control parameters

Ingredients with workplace control parameters

8.2Exposure 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

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min

Material tested: KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: KCL 741 Dermatril® L

Respiratory protection

required when dusts 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 P1

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.

SECTION 9: Physical and chemical properties

9.1Information on basic physical and chemical properties

a)AppearanceForm: powder Color: white

b)OdorNo data available

c)Odor Threshold No data available

d)pH No data available





- e)Melting point/freezing point Melting point/range: > 300 ° C
- f)Initial boiling point and boiling range No data available
- g)Flash point Not applicable
- h)Evaporation rate No data available
- i)Flammability (solid, gas) The product is not flammable. Flammability (solids)
- j)Upper/lower flammability or explosive limits No data available
- k)Vapor pressure No data available
- 1) Vapor density No data available
- m)Relative density ca.1,55 at 19,8 ° C OECD Test Guideline 109
- n)Water solubility ca.0,58 g/l at 20 ° C OECD Test Guideline 105
- o)Partition coefficient: n-octanol/water
- log Pow: ca.-2,7 at 20 $^{\circ}$ C Bioaccumulation is not expected.
- p)Autoignition temperature > 400 ° C
- Relative self-ignition temperature for solids
- q)Decomposition temperature No data available
- r)Viscosity

Viscosity, kinematic: No data available

Viscosity, dynamic: No data available

- s)Explosive properties No data available
- t)Oxidizing properties No data available
- 9.20ther safety information

Surface tension ca.61,7 mN/m at 0,52g/l at 20 ° C

- OECD Test Guideline 115

SECTION 10: Stability and reactivity

10.1Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3Possibility of hazardous reactions

No data available

10.4Conditions to avoid

no information available

10.5Incompatible materials

Strong oxidizing agents

10.6Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1Information on toxicological effects Acute toxicity

LD50 Oral - Rat - female - > 2.000 mg/kg

(OECD Test Guideline 423)

Skin corrosion/irritation

Skin - reconstructed human epidermis (RhE) Result: No skin irritation - 15 min

(OECD Test Guideline 439)





Serious eye damage/eye irritation

Eyes - Chicken eye

Result: No eye irritation - 10 s (OECD Test Guideline 438)

Eyes - Human

Result: No eye irritation - 6 h (OECD Test Guideline 492) 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

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

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

11.2Additional Information

Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

12.1Toxicity

No data available

Toxicity to daphnia and other aquatic

static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)

invertebrates





Toxicity to algaestatic test ErC50 - Pseudokirchneriella subcapitata (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201)

12.2Persistence and degradability

Biodegradabilityaerobic - Exposure time 28 d

Result: 0 % - Not readily biodegradable. (OECD Test Guideline 301D)

12.3Bioaccumulative potential

No data available

12.4Mobility in soil

No data available

12.5Results 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.

12.60ther adverse effects

No data available

SECTION 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.

SECTION 14: Transport information

14.1UN number

ADR/RID: -IMDG: -IATA: -

14.2UN proper shipping name ADR/RID: Not dangerous goods IMDG:Not dangerous goods IATA:

Not dangerous goods

14.3Transport hazard class(es)

ADR/RID: -IMDG: -IATA: -

14.4Packaging group

ADR/RID: -IMDG: -IATA: - 14.5Environmental hazards

ADR/RID: noIMDG Marine pollutant: noIATA: no

14.6Special precautions for user

Further information

Not classified as dangerous in the meaning of transport regulations.

SECTION 15: Regulatory information

15.1Safety, 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.

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)

: Not applicable





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

: Not applicable

15.2Chemical Safety Assessment For this product a chemical safety assessment was not carried out

SECTION 16:OTHER INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.

