MATERIAL SAFETY DATA SHEET

Chemical Product

Product Name: HEXAMINE
CAS#: 100-97-0
Synonym:
Chemical Name: Not available.
Chemical Formula:
Molecular Weight:

Composition and Information on Ingredients

Name	S.K.U	% by Weight
HEXAMINE	GCS-8367	100

Hazards Identification

Classification of the substance or mixture
Classification according to Regulation
(EC) No 1272/2008 Flammable solids
(Category 2), H228
Skin sensitisation (Category 1), H317
For the full text of the H-Statements mentioned in this Section,
see Section 16. 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

First Aid Measures

Description of first aid measures:

If inhaled:
If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact:
Wash off with soap and plenty of water.

In case of eye contact:
Flush eyes with water as a precaution.

If swallowed:
Never give anything by mouth to an unconscious person. Rinse mouth with water

Most important symptoms and effects, both acute and delayed:
To the best of our knowledge, the chemical, physical, and toxicological properties have not been Thoroughly investigated.

Indication of any immediate medical attention and special treatment needed:
No data available

Fire and Explosion Data

Extinguishing media:
Suitable extinguishing media:
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture
Carbon oxides, Nitrogen oxides (NOx), Hydrogen cyanide (hydrocyanic acid)

Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

Further information
Use water spray to cool unopened containers

Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

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

Methods and materials for containment and cleaning up
Sweep up and shovel. 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). Keep in suitable, closed containers for disposal. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).

Reference to other sections
For disposal see section 13.

Handling and Storage

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed.Keep away from sources of ignition
- No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Hygroscopic Storage class (TRGS 510): Flammable solid hazardous materials

Specific end use(s)

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

Exposure Controls/Personal Protection

Control parameters

Components with workplace control parameters

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 EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's 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 EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

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

Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M) Splash contact

Material: Nitrile rubber

Minimum layer

thickness: 0,11
mm Break
through time:
480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)
data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
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.

Body Protection
Complete suit protecting against chemicals, Flame retardant antistatic protective 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 full-face particle respirator type N100 (US) or type P3 (EN 143) 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

Physical and Chemical Properties

Information on basic physical and chemical properties

a) Appearanc
e Form:
crystalline
Colour:
colourless
b) Odour ammoniacal
c) Odour Threshold No data available
d) pH No data available
e) Melting point/freezing point 280 °C
f) Initial boiling point and boiling range: No data available
g) Flash point 250 °C - closed cup
h) Evaporation rate No data available
i) Flammability (solid, gas) The substance or mixture is a flammable solid with the category 2.
j) Upper/lower flammability or explosive limits: No data available

k) Vapour pressure < 0,01 hPa at 20 °C
l) Vapour density No data available
m) Relative density 1,331 g/cm3
n) Water solubility soluble
o) Partition coefficient: noctanol/ water log Pow: -2,179 at 20 °C
p) Auto-ignition temperature : No data available
q) Decomposition temperature: No data available
r) Viscosity No data available
s) Explosive properties No data available
t) Oxidizing properties No data available

Other safety information
Surface tension 70,4 mN/m at 20 °C
a)

Stability and Reactivity Data

Reactivity
no data available

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
no data available

Conditions to avoid
Exposure to moisture Heat, flames and sparks.

Incompatible materials
Strong acids, Acids, Strong oxidizing agents

Hazardous decomposition products
Other decomposition products - No data available In the event of fire: see section 5

Toxicological Information

Information on toxicological effects Acute toxicity
LD50 Oral - Rat - > 20.000 mg/kg
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: No eye irritation (OECD Test Guideline 405)

Respiratory or skin sensitisation
Maximization Test (GPMT) - Guinea pig
Result: May cause sensitization by skin contact. (OECD Test Guideline 406)
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

No data available
Specific target organ toxicity - single exposure
No data available
Specific target organ toxicity - repeated exposure
No data available
Rat - male - Oral - NOAEL : >= 80 mg/kg Rat - female - Oral - NOAEL : >= 100 mg/kg RTECS: MN4725000
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Liver - Irregularities - Based on Human Evidence

Toxicological Data on Ingredients:: Not available.

Ecological Information

Toxicity
Toxicity to fish static test LC50 - Cyprinodon variegatus (sheepshead minnow) - 49.000 mg/l - 96 h
(OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates
static test EC50 - Daphnia magna (Water flea) - 36.000 mg/l - 48 h

Persistence and degradability
Biodegradability aerobic - Exposure time 28 d

Result: 35 % - According to the results of tests of biodegradability this product is not readily biodegradable.
(OECD Test Guideline 301D)

Bio accumulative potential
No data available

Mobility in soil
No data available

Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects
No data available

Disposal Considerations

Waste treatment methods:

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.
Contamina
ted
packaging
Dispose of
as unused
product.

Transformation Information

UN number
ADR/RID: 1328 IMDG: 1328 IATA: 1328

UN proper shipping name
ADR/RID:
HEXAMETHYLENETETRAMINE
IMDG:
HEXAMETHYLENETETRAMINE
IATA: Hexamethylenetetramine
Special Provisions: “Keep away from heat” label required.

Transport hazard
class(es)
ADR/RID: 4.1
IMDG: 4.1 IATA:
4.1

Packaging group
ADR/RID: III IMDG: III IATA: III

Environmental hazards
ADR/RID: no IMDG Marine pollutant: no IATA: no

Special precautions for user No data available

Other Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

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

Additional Information

References: Not available.

Other Special Considerations: Not available.

Disclaimer:

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The information contained herein in good faith but makes no representations as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

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