TENNANTS DISTRIBUTION LIMITED
HAZELBOTTOM ROAD, CHEETHAM, MANCHESTER M8 0GR TEL 44(0)161 205 4454 FAX 44(0)161 203 4298



# PRODUCT SPECIFICATION

| | |
|---|---|
| Product Name | Hexamine |
| Alternative Name | Hexamethylene tetramine |
| Product Grades | Crystalline, Crystalline Free-flowing, Coarse Crystalline |
| Specification Reference | 1300005/1 (00/02/0051201) |

## SALES SPECIFICATION

| **Property** | **Value** |
|---|---|
| Crystalline | |
| Content of hexamethylene tetramine | >=99.0 |
| Water Content | <=0.5 |
| Ash Content | <=0.05 |
| Particles >200 micron | >=50 |
| Crystalline Free-Flowing | |
| Content of hexamethylene tetramine | >=97.0 |
| Water Content | <=0.5 |
| Ash Content | 0.5-1.5 |
| Coarse Crystalline | |
| Content of hexamethylene tetramine | >=99.0 |
| Water Content | <=0.5 |
| Ash Content | <=0.05 |
| Particles >250 micron | >=70 |

**Further information**

**Storage**

Although Hexamethylene tetramine is moisture sensitive, it is not hygroscopic. It should be stored in the driest possible atmosphere at relatively humidity below 60%. This is most important for bags which have been opened. They should be sealed airtight and stored without pressure. Pallets should not be double-stacked.

**Characteristics**

HMT shows weak basic action (pH of a 10% solution: 7 – 9). Hexamine crystals can agglomerate even with extremely low moisture content. The finer these crystals are, the stronger is this tendency. The agglomeration is favoured by pressure and heat as well as by high relative atmospheric humidity.
All free flowing grades contain silica as an anti-caking agent.

**Handling**

Dusty hexamethylenetetramine, when mixed with air, tends to generate dust explosions. Take measures against electrostatically charging.

**NOTES**

**Exclusion of Liability**



**Health and Safety**

A Material Safety Data Sheet has been issued describing the health, safety and environmental properties of this product, identifying the potential hazards and giving advice on the handling precautions and emergency procedures. This must be consulted fully before handling, storage and use.

# SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

**Product Identifier**

| | |
|---|---|
| Product Name | Hexamethylene tetramine |
| Trade Name | Hexamethylene tetramine course crystalline |
| REACH Registration Number | 01-2119474895-20-XXXX |
| CAS Number | 100-97-0 |
| Index Number | 612-101-00-2 |
| EC Number | 202-905-8 |

**Relevant identified uses of the substance or mixture and uses advised against**
Identified uses: Industrial use, chemical
Recommended restrictions on use: Not applicable

**Details of the supplier of the safety data sheet**
Tennants Distribution Limited
Hazelbottom Road
Cheetham
Manchester
M8 0GR
Tel: 44(0)161 205 4454
Fax: 44(0) 161 203 4298
Email: msds@tennantsdistribution.com

**Emergency telephone number**
Tel: 44(0) 844 3350001 (24 hours)

## 2. HAZARDS IDENTIFICATION

**2.1 Classification of the substance or mixture**
**Classification (EC) No 1272/2008 as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)**
Flammable solids, Category 2 H228: Flammable solid.
Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.
**2.2 Label elements**
**Label in accordance with (EC) No 1272/2008 as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)**

**Signal Word:** Warning
**Hazard Statements**
H228 Flammable solid.
H317 May cause an allergic skin reaction.
**Precautionary Statements**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
**Response**
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
Acquisition, possession or use by the general public is restricted.
**Hazardous components which must be listed on the label:** Hexamethylenetetramine
**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

**3.2 Mixtures**
**Substance name:** Hexamethylenetetramine. **Concentration:** >=90 - <=100 % w/w

**EC No.** 202-905-8
**CAS No.** 100-97-0
**Index No.** 612-101-00-2

## 4. FIRST AID MEASURES

**4.1 Description of first aid measures**

**General information**
In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.

**Protection of first aiders**
First Aid responders should pay attention to self-protection and use the recommended personal protective equipment when the potential for exposure exists.

**Inhalation**
If inhaled, remove to fresh air. Get medical attention if symptoms occur.

**Skin contact**
In case of contact, immediately flush skin with soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Eye contact**
If in eyes, rinse well with water. Get medical attention if irritation develops and persists.

**Ingestion**
If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

**4.2 Most important symptoms and effects, both acute and delayed**
**Risks**
May cause an allergic skin reaction.

**4.3 Indication of immediate medical attention and special treatment needed**
**Treatment:** Treat symptomatically and supportively.

## 5. FIRE FIGHTING MEASURES

**Extinguishing Media**
**Suitable extinguishing media:** Water spray, Alcohol-resistant foam, Carbon dioxide ($CO_2$), Dry chemical
**Unsuitable extinguishing media:** High volume water jet.

**Special hazards arising from the substance or mixture**
**Specific hazards during fire-fighting:** Do not use a solid water stream as it may scatter and spread fire. Exposure to combustion products may be a hazard to health.
**Hazardous combustion products:** Nitrogen oxides (NOx), carbon oxides, formaldehyde, hydrogen cyanide (hydrocyanic acid), ammonia.

**Advice for fire-fighters**
**Special protective equipment for fire-fighters:** In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
**Specific extinguishing methods:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**
Remove all sources of ignition. Use personal protective equipment. Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8)

**Environmental precautions**
Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

**Methods and material for containment and cleaning up**
Non-sparking tools should be used. Sweep up or vacuum up spillage and collect in suitable container for disposal. Suppress (knock down) gases/vapours/mists with a water spray jet.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the clean-up of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

**6.4 Reference to other sections**
See sections: 7, 8, 11, 12 and 13.

## 7. HANDLING AND STORAGE

**7.1 Precautions for safe handling**

**Technical measures**

See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

**Local/total ventilation**

Use only with adequate ventilation. Explosion-proof electrical, ventilating and lighting equipment.

**Advice on safe handling**

Do not get on skin or clothing. Avoid breathing dust. Do not swallow. Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment. Do not breathe decomposition products.

**Hygiene measures**

If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before re-use.

**Dust class:** St1

**7.2 Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and vessels**

Keep in properly labelled containers. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition.

**Do not store with the following product types:**

Strong oxidizing agents
Flammable liquids
Aerosol cans and lighters
Explosives
Gases
Very acutely toxic substances and mixtures

**7.3 Specific end use(s)**

No data available

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 Components with workplace control parameters**

Contains no substances with occupational exposure limit values

**Occupational exposure limits of the decomposition products**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|---|---|---|---|---|
| Formaldehyde | 50-00-0 | TWA | 2 ppm<br>2.5 mg/m$^3$ | GB EH40 |
| | Further information: Capable of causing cancer and/or heritable genetic damage. | | | |
| | | STEL | 2 ppm<br>2.5 mg/m$^3$ | GB EH40 |
| | Further information: Capable of causing cancer and/or heritable genetic damage. | | | |
| | | TWA | 0.3 ppm<br>0.37 mg/m$^3$ | 2004/37/EC |
| | Further information: Dermal sensitisation, carcinogens or mutagens | | | |
| | | STEL | 0.6 ppm<br>0.74 mg/m$^3$ | 2004/37/EC |
| | Further information: Dermal sensitisation, carcinogens or mutagens | | | |
| Ammonia | 7664-41-7 | TWA | 20 ppm<br>14 mg/m$^3$ | 2000/39/EC |
| Further information | Indicative | | | |
| | | STEL | 50 ppm<br>36 mg/m$^3$ | 2000/39/EC |
| Further information | Indicative | | | |
| | | TWA | 25 ppm<br>18 mg/m$^3$ | GB EH40 |
| | | STEL | 35 ppm<br>25 mg/m$^3$ | GB EH40 |

**Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:**

| Substance name | End Use | Exposure routes | Potential health effects | Value |
|---|---|---|---|---|
| Hexamethylenetetramine | Workers | Inhalation | Long-term systemic effects | 5.6 mg/m$^3$ |
| | Workers | Skin contact | Long-term systemic effects | 6.4 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 1.2 mg/m$^3$ |
| | Consumers | Skin contact | Long-term systemic effects | 3.2 mg/kg bw/day |
| | Consumers | Ingestion | Long-term systemic effects | 0.8 mg/kg bw/day |

**Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:**

| Substance name | Environmental Compartment | Value |
|---|---|---|
| Hexamethylenetetramine | Fresh water | 3 mg/l |
| | Marine water | 0.3 mg/l |
| | Sewage treatment plant | 100 mg/l |
| | Fresh water sediment | 10.2 mg/kg |
| | Marine sediment | 1.02 mg/kg |
| | Soil | 0.28 mg/kg |

**8.2 Exposure controls**

**Appropriate engineering controls**

Processing may form hazardous compounds (see section 10). Ensure adequate ventilation, especially in confined areas. Minimise workplace exposure concentrations. Use only in an area equipped with explosion proof exhaust ventilation.

**Eye/face protection**

Safety goggles. Equipment should conform to BS EN 166.

**Hand protection**

Material: Nitrile rubber: Break through time: > 480 min. Glove thickness: 0.12 mm. Directive: DIN EN 374. Protective index: Class 6

Material: Butyl-rubber: Break through time: > 480 min. Glove thickness: 0.7 mm. Directive: DIN EN 374. Protective index: Class 6.

Fluorinated rubber: Break through time: > 480 min. Glove thickness: 0.7 mm. Directive: DIN EN 374. Protective index: Class 6.

**Remarks**

Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous sub-stance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

**Skin and body protection**

Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Wear the following personal protective equipment if assessment demonstrates that there is a risk of explosive atmospheres or flash fires: Flame retardant antistatic protective clothing. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc.).

**Respiratory protection**

If adequate local exhaust ventilation is not available or expo-sure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter should conform to BS EN 14387

**Filter type**

Combined particulates, ammonia/amines and inorganic gas/vapour type.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**9.1 Information on basic physical and chemical properties**

| | |
|---|---|
| Appearance | Crystalline |
| Colour | Colourless |
| Odour | Amine like |
| Odour threshold | No data available |
| pH Value | 7 – 9 (concentration: 100 g/l 10%) |
| Melting point/freezing point | No data available<br>Decomposes without melting |
| Initial boiling point and boiling range | No data available |
| Flash point | 250°C Method: Open cup<br>130°C Method: Closed cup |
| Evaporation rate | Not applicable |
| Flammability (solid, gas) | The substance or mixture is a flammable solid with the category 2 |
| Upper explosion limit | Not applicable |
| Lower explosion limit | 20,000 mg/$m^3$ |
| Vapour pressure | 0.13 Pa (20°C) |
| Relative vapour density | Not applicable |
| Density | 1.33 g/$cm^3$ (20°C) |
| Bulk density | 700 – 800 kg/$m^3$ |
| Solubility – Water Solubility | 813 g/l (12°C) |
| Partition coefficient: n-octanol/water | Not applicable |
| Auto ignition temperature | 410°C Method: DIN 51794 |
| Decomposition temperature | 260°C. The substance or mixture is not classified self-reactive |
| Viscosity, dynamic | Not applicable |
| Explosive properties | Not explosive |
| Oxidising properties | The substance or mixture is not classified as oxidising |
| **Other information** | |
| Surface tension | 70.4 mN/m 20°C |
| Sublimation point | >280°C |
| Dust explosion point | St1 |
| Metal corrosion rate | Not corrosive to metals |
| Particle size | No data |
| Self-ignition | 220 – 230°C<br>Method: Regulation (EC) No. 440/2008, Annex, A.16 |

## 10. STABILITY AND REACTIVITY

**10.1 Reactivity**
Not classified as a reactivity hazard.

**10.2 Chemical stability**
Stable under normal conditions.

**10.3 Possibility of hazardous reactions**
**Hazardous reactions**
Can react with strong oxidizing agents. Flammable solid. Hazardous decomposition products will be formed at elevated temperatures.

**10.4 Conditions to avoid**
Heat, flames and sparks.

**10.5 Incompatible materials**
Oxidizing agents

**10.6 Hazardous decomposition products**
**Thermal decomposition**
Formaldehyde. Ammonia

## 11. TOXICOLOGICAL INFORMATION

**11.1 Information on toxicological effects**
Information on likely routes of exposure: Inhalation skin contact, ingestion, eye contact
**Acute toxicity**

Not classified based on available information.

**Components: Hexamethylenetetramine**

Acute oral toxicity: LD50 (Rat): > 20,000 mg/kg

Acute dermal toxicity: LD50 (Rat) > 2,000 mg/kg.

Method: OECD Test Guideline 402. Assessment: The substance or mixture has no acute dermal toxicity

**Skin corrosion/irritation**

Not classified based on available information.

Components: Hexamethylenetetramine

Species: Rabbit. Method: OECD Test Guideline 404. Result: No skin irritation

**Serious eye damage/eye irritation**

Not classified based on available information.

Components: Hexamethylenetetramine

Species: Rabbit. Method: OECD Test Guideline 405. Result: No eye irritation

**Respiratory or skin sensitisation**

Skin sensitisation: May cause an allergic skin reaction.

Respiratory sensitisation: Not classified based on available information.

Components: Hexamethylenetetramine

Test Type: Maximisation Test. Exposure routes: Skin contact. Species: Guinea pig. Method: OECD Test Guideline 406. Result: positive

Assessment: Probability or evidence of low to moderate skin sensitisation rate in humans

**Germ cell mutagenicity**

Not classified based on available information.

Components: Hexamethylenetetramine

**Genotoxicity in vitro**

Test Type: Bacterial reverse mutation assay (AMES) Result: negative. Test Type: Chromosome aberration test in vitro Result: positive

**Genotoxicity in vivo**

Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis). Species: Mouse Application Route: Ingestion. Result: negative

**Carcinogenicity**

Not classified based on available information.

Components: Hexamethylenetetramine

Species: Rat. Application Route: Ingestion. Exposure time: 104 weeks. Result: negative

**Reproductive toxicity**

Not classified based on available information.

Components: Hexamethylenetetramine

Effects on fertility:

Test Type: Three-generation reproduction toxicity study. Species: Rat. Application Route: Ingestion. Result: negative

Effects on foetal development:

Test Type: Reproduction/Developmental toxicity screening test. Species: Rat. Application Route: Ingestion

Result: negative

**STOT - single exposure**

Not classified based on available information.

**STOT - repeated exposure**

Not classified based on available information.

**Repeated dose toxicity**

Components: Hexamethylenetetramine

Species: Rat. NOAEL: >= 1,500 mg/kg. Application Route: Ingestion. Exposure time: 104 Weeks.

**Aspiration toxicity**

Not classified based on available information.

## 12. ECOLOGICAL INFORMATION

**12.1 Toxicity**

**Components: Hexamethylenetetramine**

**Toxicity to fish**

LC50 (Lepomis macrochirus (Bluegill sunfish)): 41,000 mg/l. Exposure time: 96 h

**Toxicity to daphnia and other aquatic invertebrates**

EC50 (Daphnia magna (Water flea)): 36,000 mg/l. Exposure time: 48 h

**Toxicity to algae**

ErC50 (Selenastrum capricornutum (green algae)): 3,000 mg/l. Exposure time: 14 d

NOEC (Selenastrum capricornutum (green algae)): 1,500 mg/l. Exposure time: 14 d

**Toxicity to bacteria**

NOEC (Nitrosomonas sp.): > 100 mg/l. Exposure time: 2 h

**12.2 Persistence and Degradability**

Components: Hexamethylenetetramine

**Biodegradability**

Result: Not readily biodegradable. Biodegradation: 35 %. Exposure time: 28 d. Method: OECD Test Guideline 301D

**12.3 Bioaccumulative potential**

Components: Hexamethylenetetramine

Partition coefficient: n-octanol/water: log Pow: -2.18

**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**

Endocrine disrupting potential: This substance/mixture does not contain components considered to have endocrine disrupting properties for environment according to UK REACH Article 57(f) at levels of 0.1% or higher.

## 13. DISPOSAL CONSIDERATIONS

**13.1 Waste treatment methods**

**Product**

Dispose of in accordance with local regulations. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities. Do not dispose of waste into sewer.

**Contaminated packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal. Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

## 14. TRANSPORT INFORMATION

| | |
|---|---|
| **14.1 UN Number** | 1328 |
| **14.2 UN Proper Shipping Name** | HEXAMETHYLENETETRAMINE |
| **14.3 Transport Hazard Class** | 4.1 |
| **14.4 Packing Group** | |
| **ADR/RID/ADN/IMDG/IATA** | III |
| **ADR/RID** | |
| Hazard label | 4.1 |
| Classification code | F1 |
| Hazard identification number | 40 |
| Tunnel code | (E) |
| **IMDG** | |
| EmS | F-A, S-G |
| **IATA (Cargo)** | |
| Packing instruction (cargo aircraft) | 449 |
| Packing instruction (LQ) | Y443 |
| Labels | Flammable Solid |
| **IATA (passenger)** | |
| Packing instructions (passenger aircraft) | 446 |
| Packing instruction (LQ) | Y443 |
| Labels | Flammable Solid |
| **14.5 Environmental Hazards** | |
| **ADR/RID/ADN** | |
| Environmentally hazardous | No |
| **IMDG** | |
| Marine Pollutant | No |

**14.6 Special Precautions For Users**

The transport classification(s) provided herein are for informational purposes only and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**:

**Remarks:** Not applicable for product as supplied

## 15. REGULATORY INFORMATION

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

**National regulatory information**

Control of Explosive Precursors and Poisons Regulations 2023: This product is classified as a regulated explosive precursor.

**Relevant EU provisions transposed through retained EU law**

UK REACH List of restrictions (Annex 17): Conditions of restriction for the following entries should be considered: Number on list 40. Substance(s) or mixture(s) are listed here according to their appearance in the regulation, irrespective of their use/purpose or the conditions of the restriction. Please refer to the conditions in corresponding Regulation to determine whether an entry is applicable to the placing on the market or not.

UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation: Not applicable

The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain): Not applicable

Regulation (EU) No 2024/590 on substances that deplete the ozone layer: Not applicable

UK REACH List of substances subject to authorisation (Annex XIV): Not applicable

GB Export and import of hazardous chemicals - Prior Informed Consent (PIC) Regulation: Not applicable

Acquisition, possession or use of this product by the general public is restricted by the Poisons Act 1972 (as amended). All suspicious transactions, and significant disappearances and thefts must be reported. Hexamethylenetetramine (Schedule 1A Part 1).

**Other regulations**

Exposure Scenario is available as separate attachment.

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to protection of young people at work contained in Regulation 19) and of Directive 94/33/EC on the protection of young people at work.

**The components of this product are reported in the following inventories**

REACH: All ingredients (pre-) registered or exempt.

TSCA: All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

AIIC: All ingredients listed or exempt.

CA. DSL: All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

ENCS All components are listed on ENCS/ISHL or exempted from inventory listing.

ISHL: On the inventory, or in compliance with the inventory.

KECI: All ingredients listed, exempt or notified.

PICCS: All ingredients listed or exempt.

IECSC: All ingredients listed or exempt.

NZIoC: All ingredients listed or exempt.

TECI: On the inventory, or in compliance with the inventory.

**15.2 Chemical Safety Assessment**

A Chemical Safety Assessment has been carried out for this substance

## 16. OTHER INFORMATION

**Full text of H-Statements**

H228: Flammable solid.

H317: May cause an allergic skin reaction.

**Full text of other abbreviations**

2000/39/EC: Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

GB EH40: UK. EH40 WEL - Workplace Exposure Limits

2000/39/EC / TWA: Limit Value - eight hours

2000/39/EC / STEL: Short term exposure limit

GB EH40 / TWA: Long-term exposure limit (8-hour TWA reference period)

GB EH40 / STEL: Short-term exposure limit (15-minute reference period)
ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
IMDG = International Maritime Code for Dangerous Goods
IATA/ICAO = International Air Transport Association / International Civil Aviation Organization
MARPOL = International Convention for the Prevention of Pollution from Ships
DOT = Department of Transportation
TDG = Transport of Dangerous Goods
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
REACH = Registration, Evaluation, Authorization and Restriction of Chemicals
CAS = Chemical Abstract Service
EN = European norm
ISO = International Organization for Standardization
DIN = Deutsche Industrie Norm
PBT = Persistent Bioaccumulative and Toxic
vPvB = Very Persistent and very Bio-accumulative
LD = Lethal dose
LC = Lethal concentration
EC = Effect concentration
IC = Median immobilisation concentration or median inhibitory concentration

**Source of key data used to compile the data sheet**
Supplier information

**Modifications from last revision**
The safety data sheet has been updated throughout. The specification remains unchanged.
**Date:** 21/01/2026