

SAFETY DATA SHEET



Intercure® 4

According to Regulation (EC) 1907/2006 (REACH)
As amended by UK REACH Regulations SI 2019/758

Date: 03/2023

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SECTION 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product Identifier

| | |
|-----------------------------|---|
| Trade Name: | INTERCURE 4 |
| IUPAC name: | [4-[(4-aminocyclohexyl)methyl]carbamic acid |
| EC name: | 4,4'-methylenebis(cyclohexylamine) carbamate |
| EC no: | 236-239-4 |
| INDEX no: | not applicable |
| CAS no: | 13253-82-2 |
| REACH (UK) Registration no: | not applicable (substance manufactured / imported <1 t/y |
| REACH (EU) Registration no: | not applicable (substance manufactured / imported <1 t/y |
| Molecular formula: | C ₁₄ H ₂₆ N ₂ O ₂ |
| Molecular weight | 254.37 g/mol; |

1.2 Relevant identified uses of the substance or mixture and uses advised against

| | |
|-----------------------|--|
| Identified uses: | Vulcanising agent for synthetic rubbers. |
| Uses advised against: | No use specifically advised against |

1.3 Details of the supplier of the safety data sheet

Company name:

J. Allcock & Sons Ltd.
Textile Street
West Gorton
Manchester M12 5DL
Email: ja@allcocks.co.uk Tel +44 (0) telephone number 161 223 7181 Fax +44 (0) 161 223 7181

1.4 Emergency telephone number: +44 (0) 161 223 7181

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272 / 2008 (CLP) as amended by GB - CLP Regulation, UK SI 2019/720, and UK SI 2020/1567.

Acute toxicity (oral), Hazard Category 4; H302

Skin irritation, Hazard Category 2; H315

Serious eye damage / eye irritation, Hazard Category 2; H319

- Specific target organ toxicity – Single exposure, Hazard Category 3; Respiratory tract irritation, H335

2.2 Label elements

Labelling according to Regulation (EC) 1272/2008 (CLP)

Hazard pictograms



Signal word: Warning

| | | |
|-------------------|------|-----------------------------------|
| Hazard statements | H302 | Harmful if swallowed. |
| | H315 | Causes skin irritation. |
| | H319 | Causes serious eye irritation. |
| | H335 | May cause respiratory irritation. |

| | | |
|--------------------------|-------------|--|
| Precautionary statements | P261 | Avoid breathing dust. |
| | P264 | Wash hands thoroughly after handling. |
| | P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| | P312 | Call a POISON CENTER / doctor if you feel unwell. |
| | P337 + P313 | If eye irritation persists; Get medical advice / attention. |
| | P403 + P233 | Store in a well-ventilated place. Keep container tightly closed |

2.3 Other hazards

Physical and chemical hazards

See SECTION 5.2

Human health hazards

See SECTION 4.2

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Environmental hazards:

See SECTION 12.5 and SECTION 12.6

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

| | | |
|--------------------------------|---|--------------|
| EC name: | 4,4' – methylenebis(cyclohexylamine)carbamate | |
| EC number: | 236-239-4 | |
| INDEX no: | n/a | |
| CAS no: | 13253-82-2 | |
| REACH (UK) Registration no: | n/a | |
| REACH (EU) Registration no: | n/a | |
| GB-CLP Classification: | Acute Tox, 4; H302 Skin Irrit, 2;; H315 Eye Irrit, 2; H319 STOT SE 3; H335 | |
| Specific concentration limits: | n/a | |
| Acute toxicity estimation: | oral | = 1000 mg/kg |
| | dermal | n/a |
| | Inhalation | n/a |
| M factor: | acute | n/a, |
| | chronic | n/a |
| Concentration | ≥ 97% | |

4.1. Description of first aid measures

| | |
|------------------------|---|
| General indications; | Immediately call a doctor if you feel unwell or in case of doubt on health conditions, showing, if possible, this safety data sheet. First responders must always wear appropriate personal protective equipment (see SECTION 8.2). |
| Contact with the eyes: | Rinse cautiously with water for several minutes, holding the eyelids open. If eye irritation persists, get medical advice / attention. |
| Contact with the skin: | Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation / eruption occurs, get medical advice / attention. |
| Inhalation: | Remove person to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, give oxygen and immediately call a doctor. |
| Ingestion: | Rinse mouth with water. Do not induce vomiting unless recommended by a doctor. Never give anything by mouth if the person is not conscious. If you feel unwell, immediately call a doctor. |

4.2 Most important symptoms and effects, both acute and delayed

| | |
|------------------------|---|
| Contact with the eyes: | May cause eye irritation, watering, redness and pain. |
| Contact with the skin: | May cause skin irritation. |
| Inhalation: | May cause coughing and irritation of mucous membranes of the respiratory tract. |
| Ingestion: | May cause harmful effects. |

4.3 Indication of any immediate medical attention and special treatment needed.

For indication of any immediate medical attention, see SECTION 4.1. Basic first aid and symptomatic treatment.

SECTION 5: FIREFIGHTING MEASURES.

5.1 Extinguishing media.

| | |
|------------|--|
| Suitable: | Use extinguishing appropriate to the source of the fire and the surrounding area (eg. Water spray, carbon dioxide, dry chemical powder or foam). |
| Unsuitable | Direct water jet. |

5.2 Special hazards arising from the substance or mixture.

The substance is not flammable. In case of fire, carbon oxides, nitrogen oxides and other toxic combustion products may be emitted. Fine dust may form explosive mixtures with air.

5.3 Advice for firefighters

Evacuate and isolate the area until complete fire extinction, by limiting access only to trained personnel. Firefighters must always wear appropriate protective equipment; positive pressure self-contained breathing apparatus (ref. EN 137); fireproof clothing (ref EN 469); fireproof gloves (ref. EN 659); firefighter's boots (ref. HO A29-A30). Ensure adequate ventilation. Avoid breathing gases/vapours. Avoid contact with the eyes and skin. Stay upwind. Remove containers if it can be done without risk. Alternatively, cool the recipients exposed to fire with water spray. Prevent the contaminated extinguishing media flowing into drains or waterways.

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SECTION 6 ACCIDENTAL RELEASE MEASURES.

6.1 Personal precautions, protective equipment, and procedures in case of fire.

For non-emergency personnel: In case of release of significant amounts of substance, evacuate the area and alert the emergency personnel. Avoid generation of dust. Avoid breathing dust. Avoid contact with eyes and skin. Wear appropriate protective equipment (See SECTION 8.2).

For emergency responders In case of release of significant amounts of substance, isolate the area and restrict the access only to trained personnel. Ensure adequate ventilation. Remove all sources of ignition if it can be done without risk. Avoid generation of dust. Avoid breathing of dust. Avoid contact with eyes and skin. Wear appropriate personal protective equipment (See SECTION 8.2)

6.2 Environmental precautions.

Prevent the substance from leaking into the environment and run off into drains, surface water and groundwater.

6.3 Methods and material for containment and cleaning up.

Contain the spillage. Collect with mechanical means and transfer in a container suitable for disposal. Dispose of in accordance with local and national legislation. Clean surface thoroughly to remove residual contamination.

6.4 Reference to other sections.

For information on personal protection see SECTION 8.2. For information on disposal see SECTION 13.1,

SECTION 7: HANDLING AND STORAGE.

7.1. Precautions for safe Handling.

Ensure adequate ventilation. Avoid generation of dust. If this can't be avoided, provide local exhaust ventilation suction. Avoid breathing dust. Avoid contact with eyes and skin. Wear appropriate personal protective equipment (see SECTION 8.2). Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Take precautionary measures against static discharge. Ground / bond container and receiving equipment. Use explosion-proof equipment. Keep away from incompatible materials (see SECTION 10.5). Do not eat, drink or smoke during use. Wash hands thoroughly after handling. Remove contaminated clothing and personal protective equipment before entering eating areas. Wash periodically clothes and personal protective equipment to remove contaminants.

7.2 Conditions for safe storage, including any incompatibilities.

Store only in original container, tightly closed. Store in a cool, dry and well-ventilated place. Avoid exposure to moisture and direct sunlight. Store away from heat, hot surfaces, sparks, open flames and other ignition sources. Take precautionary measures against static discharge, Store away from incompatible materials (see SECTION 10.5)

7.3 Specific end use(s)

See SECTION 1.2

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION.

8.1 Control parameters.

Recommended exposure limit value: TLV – TWA = 3mg/m³ – inhalable particles. Source: ACGIH

Monitoring procedures: Provide periodic sampling of the workplace in accordance with the indications of health surveillance. Refer to current monitoring standards and national guidance documents on methods for the determination of hazardous substances.

8.2 Exposure controls

Wear personal protective equipment (PPE) in accordance with standards set by applicable legislation. Consult the PPE's supplier in all cases before making a final decision on the equipment to be used.

| | |
|---------------------------------|---|
| Skin protection | Wear a type 5/6 coverall (ref: EN13982 – 1) |
| Hand protection | Wear work gloves impervious to chemical agents made of butyl rubber (protective index 6 – thickness ≥ 0.5 mm – permeation time > 120 minutes or equivalent (ref. EN 374) Replace gloves immediately in case of contamination or breakage. |
| Eye protection | Wear safety glasses with side shields (ref. EN 166) |
| Respiratory protection | Not required under recommended conditions of use. In case of insufficient ventilation or risk of generation of dust, wear a mask with a P2 type filter (ref. EN 143) |
| Technical and hygienic measures | Provide local exhaust ventilation suction or other devices to maintain the levels of particles in the air below the recommended exposure limits. Equip with emergency showers and eyewash device the areas in which handling, and storage of the substance take place. Do not eat, drink, or smoke during use. Wash hands thoroughly after handling. Remove contaminated clothing and personal protective equipment before entering eating areas. Wash periodically clothes and personal protective equipment to remove contaminants. |

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Environmental measures: Operate in accordance with the provisions of the relevant concerning the water protection and waste management. Prevent the substance from leaking into the environment and run off into the drains, surface water and ground water.

Thermal hazards: Not expected under recommended conditions of use and storage.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES.

9.1 Information on basic physical and chemical properties.

| | |
|--|---|
| a) Physical state: | powder |
| b) Colour: | white |
| c) Odour: | slight aminic |
| d) Melting point / freezing point | 147.47 °C [predicted by EpiSuite - MPBPWIN] |
| e) Boiling point, or initial boiling point and boiling range | 391.69 °(predicted with EpiSuite – MPBPWIN) |
| f) Flammability | not flammable solid |
| g) Lower / upper explosion limits | not relevant (solid) |
| h) Flash point: | > 149 °C [open cup] |
| i) Auto-ignition temperature | not self-igniting |
| j) Decomposition temperature | > 150 °C |
| k) pH: | 10.4 [1% aqueous solution – 25 °C) |
| l) Kinematic viscosity | not relevant (solid) |
| m) Solubility: | slightly soluble in water soluble in acidic solutions |
| n) Partition coefficient: n-octanol /water (log value): | LogPow = 2.49 [predicted with EpiSuite – KOWWIN v1.68] |
| o) Vapour pressure: | 7.54E ⁻⁰⁰⁷ Pa (25°C) [predicted with EpiSuite – Modified Grain Method] |
| p) Density and / or relative density: | 1.23 ± 0.02 [25°C] |
| q) Relative vapour density: | not relevant (solid) |
| r) Particle characteristics: | < 7 µm → 85% Vol min < 15 µm → 95% Vol min < 30 µm → 100% Vol |

9.2 Other information

Not available

SECTION 10. STABILITY AND REACTIVITY.

10.1 Reactivity

The substance may react with acids.

10.2. Chemical stability.

The substance is stable at standard conditions of temperature and pressure.

10.3 Possibility of hazardous reactions.

Fine dust may form explosive mixtures with air.

10.4 Conditions to avoid.

See SECTION 7.1 and SECTION 7.2.

10.5 Incompatible materials.

Acids and oxidising agents.

10.6 Hazardous decomposition products.

Following thermal decomposition, carbon oxides, nitrogen oxides and other toxic decomposition products may be emitted.

SECTION 11. TOXICOLOGICAL INFORMATION.

11.1 Information on hazard classes.

a) Acute toxicity

LD50 oral (mouse) = 1000 mg/kg [literature data]
Harmful if swallowed.

b) Skin corrosion / irritation

Causes skin irritation.

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c) Serious eye damage / irritation

Causes serious eye irritation

d) Respiratory or skin sensitisation.

Not classified due to lack of data.

e) Germ cell mutagenicity.

Not classified due to lack of data.

f) Carcinogenicity

Not classified due to lack of data.

g) Reproductive toxicity.

Not classified due to lack of data.

h) STOT – single exposure.

May cause respiratory irritation

i) STOT – repeated exposure. Not classified due to lack of data.

j) Aspiration hazard

Not relevant (solid).

11.2 Information on other hazards.

There are no known adverse health effects caused by the endocrine disrupting properties or other hazards than those mentioned above.

SECTION 12: ECOLOGICAL INFORMATION.

12.1. Toxicity.

Not classified due to lack of data.

12.2 Persistence and degradability.

No experimental data available.

12.3 Bioaccumulative potential.

LogPow = 2.49 [predicted with EpiSuite – KOWWIN v1.68]

Low potential for bioaccumulation.

12.4 Mobility in soil.

No experimental data available.

12.5 Results of PBT and vPvB assessment.

The substance does not meet the criteria for PBT or vPvB classification according to Annex XIII of Regulation (EC) 1907/2006 (REACH).

12.6 Endocrine disrupting properties.

There are no known adverse effects on the environment caused by endocrine disrupting properties.

12.7 Other adverse effects.

There are no known other adverse effects on the environment than those mentioned above.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods.

Substance: The substance must be managed as a hazardous waste. Dispose of in accordance with applicable legislation. Do not discharge in to drains.

Packaging: Empty containers may contain hazardous residues and must be cleaned up according to appropriate methods and then re-used or disposed of in accordance with applicable legislation.

SECTION 14: TRANSPORT INFORMATION.

The substance is not subject to the provisions of existing legislation governing the transport of dangerous goods by road (ADR), rail (RID), sea (IMDG Code) and air (IATA).

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14.1 UN number or ID number.

Not applicable

14.2 UN proper shipping name

Not applicable.

14.3 Transport hazard class(es)

Not applicable.

14.4 Packing group.

Not applicable.

14.5 Environmental hazards

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Maritime transport in bulk according to IMO instruments.

Not applicable.

SECTION 15. REGULATORY INFORMATION.

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

Substances of very high concern included in the candidate list for Authorisation (REACH, article 59):

None.

Substances subjected to Authorization (REACH, Annex XIV):

None.

Restrictions (REACH, Annex XV11):

None.

15.2 Chemical safety assessment.

A chemical safety assessment has been performed for the substance. (registration within the tonnage band 1 – 10 tpa).

SECTION 16. OTHER INFORMATION

Revision:

The main changes introduced to the previous version of this safety data sheet regard SECTIONS 2, 3, 9, 11 and 12.

Key references and data sources.

N,N' – hexamethylenebis(cinnamylideneamine) – REACH registration dossier

Advice on any training appropriate for workers:

The staff responsible for handling the substance should be informed about its hazards and potential risks related to its use and be instructed on the precautions to be taken to avoid or limit exposure.

Acronyms:

| | |
|------------|---|
| ACGIH: | American conference of governmental industrial hygienists |
| ADR: | european agreement concerning the international carriage of dangerous goods by road |
| CAS: | chemical abstract service |
| CLP: | classification labelling and packaging |
| EC50: | median effective concentration |
| EWC: | european waste catalogue |
| IATA: | international air transport association |
| IMDG Code: | international maritime dangerous goods code |
| LD50: | median lethal dose |
| PBT: | persistent, bioaccumulative and toxic |
| REACH: | registration, evaluation and authorisation of chemicals |
| RID: | regulations concerning the international carriage of goods by rail |
| TLV: | threshold limit value |
| TWA: | time weighted average |
| vPvB: | very persistent and very Bioaccumulative |

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NOTES:

The information provided in this safety data sheet is correct to the best of our knowledge at the date of its publication. The indications given are designed only as a guidance for safe handling, use, processing, storage, transportation, and disposal and is not to be considered a warranty or quality specification. The user must verify the suitability and completeness of the information, in accordance to its particular use of the substance.