

Safety Data Sheet

According to Regulation (EC) No 1907/2006

Hexaboron dizinc undecaoxide

Version 2.2

Printing date: 14-02-2019

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SDS Record Number: CSSS-TCO-010-100010

Section 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Identification on the label/Trade name: Hexaboron dizinc undecaoxide
Additional identification: Not available
Identification of the product: CAS#138265-88-0; EC#235-804-2
Index Number: Not available
REACH registration No.: 01-2119691658-19-xxxx

1.2 Relevant identified uses of the substance and uses advised against:

1.2.1 Identified uses:

Used as flame retardant.

1.2.2 Uses advised against:

Not available.

1.3 Details of the supplier of the safety data sheet:

Supplier(Only representative): Chemical Inspection & Regulation Service Limited
Supplier(Manufacturer): SHANDONG BIO INDUSTRY CO., LTD.
Address: Singleton House, Laurence Street, Drogheda, Co. Louth, Ireland ECONOMIC DEVELOPMENT ZONE, JIAOQIAO TOWN, ZOUPIING, SHANDONG, CHINA
Contact person(E-mail): sds@cirs.ie/sdaorui2009@hotmail.com
Telephone: +353 41 980 6916/+86 543 4863003
Fax: +353 41 980 6999/+86 543 4863005

1.4 Emergency telephone Number:

+353 41 980 6916

Available outside office hours? YES NO

Section 2 Hazards Identification

2.1 Classification of the substance/mixture:

2.1.1 Classification:

The substance is classified as following according to REGULATION (EC) No 1272/2008:

REGULATION (EC) No 1272/2008	
Hazard classes/Hazard categories	Hazard statement
Repr. 2	H361d
Aquatic Acute 1	H400
Aquatic Chronic 2	H411

For full text of H- phrases: see section 2.2.

2.2 label elements:

Hazard Pictograms:**Signal Word(S):**

Warning

Hazard Statement:

H361: Suspected of damaging fertility or the unborn child.

H400: Very toxic to aquatic life.

H411: Toxic to aquatic life with long lasting effects.

Precautionary statement:

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P273: Avoid release to the environment.

P308 + P313: IF exposed or concerned: Get medical advice/attention.

P391: Collect spillage.

P405: Store locked up.

P501: Dispose of contents/container in according with local regulation.

2.3 Other hazards:

Not available.

Section 3 Composition/information on ingredients**Substance/Mixture:**

Substance

Ingredient(s):

Chemical Name	Registration No.	CAS No.	EC No.	Concentration
Hexaboron dizinc undecaoxide	01-2119691658-19-xxxx	138265-88-0	235-804-2	100%

Section 4 First aid measures**4.1 Description of first aid measures:**

In all cases of doubt, or when symptoms persist, seek medical attention.

4.1.1 In case of inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

4.1.2 In case of skin contact:

Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

4.1.3 In case of eyes contact:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

4.1.4 In case of ingestion:

Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

4.2 Most important symptoms and effects, both acute and delayed:

Suspected of damaging fertility or the unborn child.

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

If skin irritation or rash occurs, get medical advice/attention.

Section 5 Fire-Fighting measures

5.1 Extinguishing media:

Suitable extinguishing media: Water spray, dry chemical, carbon dioxide or foam.

Unsuitable extinguishing media: Not available.

5.2 Special hazards arising from the substance or mixture

This material is non-combustible. As with all dry powders it is advisable to ground mechanical equipment in contact with dry material to dissipate the potential buildup of static electricity.

5.3 Advice for firefighters:

As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.

Section 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 For non-emergency personnel: Wear approved respiratory protection, chemically compatible gloves and protective clothing. Wipe up spillage or collect spillage using a high efficiency vacuum cleaner. Avoid breathing dust. Place spillage in appropriately-labelled container for disposal. Wash spill site.

6.1.2 For emergency responders: Wear an appropriate NIOSH/MSHA approved respirator if dust is generated.

6.2 Environmental Precautions:

Do not allow to enter sewerage system.

6.3 Methods for Containment and Cleaning up:

Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Do not let this chemical enter the environment.

6.4 Reference to other sections:

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

Section 7 Handling and storage

7.1 Precautions for safe handling:

7.1.1 Protective measures: Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid inhalation.

7.1.2 Advice on general occupational hygiene: Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities:

Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

7.3 Specific end use(s):

Not applicable.

Section 8 Exposure Controls/Personal Protection

8.1 Control parameters:

8.1.1 Occupational exposure limits: Not available.

8.1.2 Additional exposure limits under the conditions of use: Not available.

8.1.3 DNEL/DMEL and PNEC-Values: Not available.

8.2 Exposure controls:

8.2.1 Appropriate engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

8.2.2 Individual protection measures, such as personal protective equipment:

Eye/face protection: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection.

Hand protection: Wear appropriate protective gloves to prevent hand exposure.

Body protection: Wear appropriate protective clothings to prevent skin exposure.

Respiratory protection: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Thermal hazards: Wear suitable protective clothing to prevent heat.

8.2.3 Environmental exposure controls: Avoid discharge into the environment.
According to local regulations, Federal and official regulations.

Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance:	Solid
Colour:	White
Odour:	Odorless
Odour threshold:	Not available
pH:	6-7
Melting point/range (°C):	980°C
Boiling point/range (°C):	Not available
Flash point (°C):	Not available
Evaporation rate:	Not available
Flammability limit - lower (%):	Not available
Flammability (solid, gas):	Non-flammable
Ignition temperature (°C):	Not available
Upper/lower flammability/explosive limits:	Not available
Vapour pressure (20°C):	Not available
Vapour density:	Not available
Relative Density:	Not available
Bulk density (kg/m³):	480 kg/m ³ - 640 kg/m ³
Water solubility (g/l):	Slightly soluble in water.
n-Octanol/Water (log Po/w):	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity, dynamic (mPa.s):	Not relevant, substance is solid
Explosive properties:	Not available
Oxidising properties:	Not available
Molecular Formula:	2ZnO·3B ₂ O ₃ ·3.5H ₂ O

Molecular Weight: 383.41 g/mol

9.2. Other information:

Fat solubility(solvent– oil to be specified) Not available

etc:

Surface tension: Not available

Dissociation constant in water(pKa): Not available

Oxidation-reduction Potential: Not available

Specific gravity (g/cm³): 2.67

Section 10 Stability and reactivity

- 10.1 Reactivity:** The substance is stable under normal storage and handling conditions.
- 10.2 Chemical stability:** Stable at room temperature in closed containers under normal storage and handling conditions.
- 10.3 Possibility of hazardous reactions:** No dangerous reactions known.
- 10.4 Conditions to avoid:** Incompatible materials, dust generation, excess heat, strong oxidants.
- 10.5 Incompatible materials:** Strong oxidizing agents, acids, bases.
- 10.6 Hazardous decomposition products:** Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, zinc oxides.

Section 11 Toxicological information

11.1 Information on toxicological effects:

Acute toxicity:

LD50(Oral, Rat): > 5000 mg/kg

LD50(Dermal, Rabbit): Not available

LC50(Inhalation, Rat): > 4.95 mg/L air

Skin corrosion/Irritation: Not classified

Serious eye damage/irritation: Not classified

Respiratory or skin sensitization: Not classified

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive toxicity: Suspected of damaging fertility or the unborn child.

STOT- single exposure: Not classified

STOT-repeated exposure: Not classified

Aspiration hazard: Not classified

Section 12 Ecological information

12.1 Toxicity(M=1):

Acute toxicity	Time	Species	Method	Evaluation	Remarks
LC50 >2.4mg/L	96h	Fish	OECD 203	N/A	N/A
EC50 76 mg B/L	48h	Daphnia	OECD 202	N/A	N/A
EC50 74 mg B/L	72h	Algae	OECD 201	N/A	N/A

12.2 Persistence and degradability: Not available.

12.3 Bioaccumulative potential: Not available.

12.4 Mobility in soil: The product is slightly insoluble in water.

12.5 Results of PBT&vPvB assessment: Not available.

12.6 Other adverse effects: Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Section 13 Disposal considerations

13.1 Waste treatment methods: The material should be disposed of by incineration in a chemical incinerator in compliance with national and regional requirements.

Section 14 Transport information

	Land transport(ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number	3077	3077	3077
UN Proper shipping name	Environmentally hazardous, substance, solid,n.o.s.(Hexaboron dizinc undecaoxide)	Environmentally hazardous, substance, solid,n.o.s.(Hexaboron dizinc undecaoxide)	Environmentally hazardous, substance, solid,n.o.s.(Hexaboron dizinc undecaoxide)
Transport hazard Class	9	9	9
Packaging group	III	III	III
Environmental hazards	Yes	Yes	Yes
Special precautions for user	See section 2.2	See section 2.2	See section 2.2
Transport in bulk according to Annex II of MARPOL and the IBC Code	IBC08	IBC08	IBC08

Section 15 Regulation information

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

Relevant information regarding authorization: Not applicable.

Relevant information regarding restriction: Not applicable.

Other EU regulations: Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.

Other National regulations: Not applicable

15.2 Chemical Safety Assessment has been carried out? YES NO

Section 16 Other information

16.1 Indication of changes:

Version 1.0 Amended by EU No 2015/830

Version 1.1 Increase the data in sec.12

Version 2.0 The CAS number and classification has been modified on May 5, 2016.

Version 2.1 The CAS number and registration number has been added on Jun 6, 2017.

Version 2.2 The CAS number has been modified on Aug 2, 2018

Version 2.3 The sec.15.2 has been updated on Feb 14, 2019.

16.2 Training instructions:

Not applicable.

16.3 Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

16.4 Notice to reader:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

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