

1. Identification

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| Product identifier | BORAFLAME |
| Product code | N/A |
| Other means of identification | None. |
| Recommended use of the chemical and restrictions on use | Fireproof treated wood used in construction. Not recommended for any other use not detailed on product data sheet or label. |
| Manufacturer | Technologies Boralife inc. Office : 2811, rue Guillaume-Le Breton Quebec, QC Canada G1W 2A7 Treatment Plant: 600 Cormier Street Sorel-Tracy, QC Canada, J3R 5S2 Tel. +1 418-684-8484 |
| Emergency phone number | +1 418-684-8484 |

2. Hazard identification

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| Summary | Wood and wood products are not regulated under the Canadian Hazardous Products Act (HPA) and Hazardous Products Regulations (HPR) SOR/2015-17 (WHMIS 2015). However, wood dust released during the use or modifications of wood products may be hazardous. Wood or wood products are not regulated under the USA OSHA 29CFR Part 1910.1200 (HazCom 2012). However, wood or wood products which have been treated with a hazardous chemical covered by the HazCom 2012 standard, and wood which may be subsequently sawed or cut, generating dust, are not exempted. Wood dust may become hazardous and the potential hazards are described below. |
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WHMIS 2015/GHS/OSHA HCS 2012



Not Regulated under WHMIS 2015 Combustible Dust
Carcinogenicity (Category 1)

DANGER

H29x : May form combustible dust concentrations in air

H350: May cause cancer by inhalation of dust

P201: Obtain special instructions before use.

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

P210: Keep away from heat, sparks, open flames and other ignition sources. No smoking.

P261: Avoid breathing dust.

P271: Use only outdoors or in a well-ventilated area.

P279: Avoid dust generation and accumulation.

P280: Wear gloves and eye protection.

P308+313: IF exposed or concerned: Get medical attention.

P501: Dispose of contents in accordance with local, regional and national regulations.

3. Composition/information on ingredients

| Common name | CAS | Weight % content |
|----------------------------------|--------------|------------------|
| Softwood-based wood | CAS Softwood | 98 - 99 % |
| Disodium octaborate tetrahydrate | 12280-03-4 | 1 - 2 % |

4. First-aid measures

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| Inhalation | Move person to fresh air. |
| Skin contact | If a problem develops or persists, seek medical attention. |
| Eye contact | Flush with water for at least 15 minutes. Remove contact lenses if easy to do. Hold eyelids apart to rinse properly. If a problem develops or persists, seek medical attention. |
| Ingestion | Not relevant to this product. Never give anything by mouth if victim is unconscious or convulsing. |
| Other | No additional information. |
| Symptoms | Dusts can irritate eyes by mechanical friction. Dusts may irritate throat and respiratory system and cause coughing. |
| Notes to the physician | Treat symptomatically. |

5. Fire-fighting measures

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| Suitable extinguishing media | Curing agent |
| Specific hazards arising from the chemical | Sawn or cut wood will generate dust. Depending on various factors that influence the combustibility and explosiveness of the dust, the dispersal of fine dust particles into air in sufficient quantity and concentration to create a dust cloud with the confinement in a building, room or process equipment could be ignited; the dust cloud will burn rapidly and may explode. Therefore, use good ventilation and avoid accumulation of dust in presence of ignition sources. |
| Special protective equipment | Firefighters must wear self contained breathing apparatus with full face mask. |
| Special protective actions for fire-fighters | No additional information. |


6. Accidental release measures

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| Personal precautions, protective equipment and emergency procedures | Make sure to wear personal protective equipment mentioned in this Safety Data Sheet. |
| Environmental precautions | No immediate danger to the environment. |
| Methods and materials for containment and cleaning up | Ventilate the area well. Pick up mechanically and reuse as long as it is not contaminated. Vacuum or sweep up dust and place in an appropriate waste disposal container. |

7. Handling and storage

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| Precautions for safe handling | Use only in well ventilated area. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid contact with eyes. Avoid breathing dust. Do not eat, do not drink and do not smoke during use. Wear eye protection, gloves and other protective clothing that are adapted to the task being performed and the risks involved. |
| Conditions for safe storage, including any incompatibilities | Store in a cool, dry, well-ventilated area. Keep away from heat and open flame. Store away from incompatible materials (see section 10). |
| Storage temperature | N/A |

8. Exposure controls/personal protection

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|--|---|--------------------|----------------------|-------------------|
| Immediately Dangerous to Life or Health | No IDLH value is reported. | | | |
| Disodium octaborate tetrahydrate | STEL | Inhalable Fraction | 6 mg/m ³ | ACGIH |
| | TWA (8h) | Inhalable Fraction | 2 mg/m ³ | ACGIH |
| Wood dust | STEL | Total Dust | 10 mg/m ³ | ON |
| | TWA (8h) | Inhalable Fraction | 1 mg/m ³ | ACGIH , BC, NIOSH |
| | | Total Dust | 5 mg/m ³ | ON , RSST |
| Appropriate engineering controls | Provide sufficient mechanical (general and/or local exhaust) to keep the airborne concentrations of dust below their respective occupational exposure limits. | | | |
| Individual protection measures | | | | |
| Eye | In the workplace, wear safety glasses with side shields. However, goggles are recommended if the product is used in such a way as to generate high dust levels. | | | |
| Hands | Not required in normal use. However, cloth, canvas or leather gloves are recommended to minimize potential mechanical irritation from handling product. | | | |
| Skin | Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Wear normal work clothing covering arms and legs as required by employer code. | | | |
| Respiratory | Respiratory protection is not required for normal use. Where the conditions in the workplace require a respirator, it is necessary to follow a respiratory protection program. Moreover, respiratory protection equipment (RPE) must be selected, fitted, maintained and inspected in accordance with regulations and standard 29 CFR 1910.134 (OSHA), ANSI Z88.2 or CSA Z 94.11 (Canada) and approved by NIOSH/MSHA. For dust nuisance exposures use type N95 particle respirator. | | | |
| Feet | Wear safety boots. | | | |
|  Leather Glove Safety glasses | | | | |

9. Physical and chemical properties

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| Physical state | Solid | Flammability | Combustible dust. |
| Colour | Pale brown | Flammability limits | 40 to 120 g/m ³ % |
| Odour | Slight odor | Flash point | N/Av. |

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| Odour threshold | N/Av. | Auto-ignition temperature | N/Av. |
| pH | N/Av. | Sensibility to electrostatic charges | N/Av. |
| Melting point | N/Av. | Sensibility to sparks and/or friction | No |
| Freezing point | N/Av. | Vapour density | N/Av. (Air = 1) |
| Boiling point | N/Av. | Relative density | N/Av. (Water = 1) |
| Solubility | Soluble in water. | Partition coefficient n-octanol/water | N/Av. |
| Evaporation rate | N/Av. | Decomposition temperature | N/Av. |
| Vapour pressure | N/Av. | Viscosity | N/Av. |
| Percent Volatile | N/Av. | Molecular mass | N/Av. |
| N/Av.: Not Available N/Av.: Not Applicable Und.: Undetermined N/E: Not Established | | | |

10. Stability and reactivity

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| Reactivity | Dust may form a flammable or explosive mixture in air. |
| Chemical stability | Stable under normal conditions of use. |
| Possibility of hazardous reactions (including polymerizations) | A dangerous reaction will not occur. |
| Conditions to avoid | Keep away from heat and open flame. Avoid accumulation of dust in presence of ignition sources. |
| Incompatible materials | Strong oxidizing agents (e.g. chlorine, fluorine, nitric acid, perchloric acid, peroxides, nitrates, chlorates, chromates, permanganates and perchlorates), strong acids (e.g. hydrochloric acid, sulfuric acid, phosphoric acid). |
| Hazardous decomposition products | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

11. Toxicological information

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|---------------------------------------|-------------------------|----------------------------------|------------------------------|------|
| Numerical measures of toxicity | Mixture | Ingestion >2000 mg/kg Rat | LD50 | |
| | | Inhalation >5 mg/l/4h Rat | LC50 | |
| Likely routes of exposure | Skin, eyes, inhalation. | Skin >2000 mg/kg Rabbit | LD50 | |
| | | Disodium octaborate tetrahydrate | Ingestion >2550 mg/kg Rat | LD50 |
| | | | Inhalation >2 mg/l/4h Rabbit | LC50 |
| | | | Skin >2000 mg/kg Rat | LD50 |

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| Delayed, immediate and chronic effects | Eye contact | Dusts can irritate eyes by mechanical friction. |
| | Skin contact | The mechanical friction can cause skin irritation. |
| | Inhalation | Dusts may irritate throat and respiratory system and cause coughing. |
| | Ingestion | Not a likely route of exposure. May cause gastrointestinal blockage. |
| | Respiratory or skin sensitization | Wood dust, depending on the species, may cause allergic contact dermatitis and respiratory sensitization with prolonged, repetitive contact or exposure to elevated dust levels. |
| | IARC/NTP Classification | Common name IARC NTP Wood dust 1 K <small>IARC : 1- Carcinogenic; 2A- Probably carcinogenic; 2B- Possibly carcinogenic. NTP : K- Known to be carcinogens; R- Reasonably anticipated to be carcinogens.</small> |
| | Carcinogenicity | Wood dust is carcinogenic to human. It may cause cancer of the nasal cavity and paranasal sinuses and nasopharynx in human. However, this carcinogenic property is clearly associated with exposure to hard wood dust (IARC, 1995). It should be noted that the risk of this chronic health hazard for the product in this form should be very low during normal use. |
| Mutagenicity | Ingredients in this product present at levels greater than or equal to 0.1% are not known to cause mutagenic effects. | |
| Reproductive toxicity | Animal ingestion studies in several species, at high doses, indicate that borates cause reproductive and developmental effects. The doses that cause these effects are far higher than any levels to which the human population is exposed. A human study of occupational exposure to borate dust showed no adverse effect on reproduction. | |
| Specific target organ toxicity - single exposure | No target organ is listed. | |
| Specific target organ toxicity - repeated exposure | No target organ is listed. | |
| Interactive effects | No information available for this product. | |
| Other information | No additional information. | |

12. Ecological information

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| Ecological toxicity | Fish various LC50 >100 mg/L ; 96h |
| Persistence | Contain an ingredient that may be persistent in the environment. |
| Degradability | The product is not biodegradable (<70% in 28 days). |
| Bioaccumulative potential | No bioaccumulation. |
| Mobility in soil | Low potential for mobility in soil. |
| Other adverse effects | This chemical does not deplete the ozone layer. |

13. Disposal considerations

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| Container | If possible, recycle (reprocess) the product. Observe all federal, state/provincial and municipal regulations. If necessary consult the Department of Environment or the relevant authorities. |
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14. Transport information

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| UN Number | UN N/A |
| UN Proper Shipping Name | Not regulated by TDG (Canada) and 49 CFR DOT (USA). |
| Environmental hazards | This material does not contain marine pollutant. |
| Special precautions for user | No information available for this product. |
| TDG - Transportation of Dangerous Goods (Canada) | |
| Transport hazard class(es) | Not regulated |
| Packing group | Not regulated |
| Emergency response guidebook 2016 | |
| IMO/IMDG - International Maritime Transport | |
| Classification | Not regulated |
| IATA - International Air Transport Association | |
| Classification | Not regulated |
| These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. In addition, if a domestic exemption exists, it is the responsibility of the shipper to define the application of it. | |

15. Regulatory information

CANADA

| Common name | CAS | CEPA | DSL | NDSL | NPRI |
|----------------------------------|--------------|------|-----|------|------|
| Softwood-based wood | CAS Softwood | | | | |
| Disodium octaborate tetrahydrate | 12280-03-4 | | | | |

- CEPA: List of Toxic Substances Managed Under Canadian Environmental Protection Act
- DSL: Domestic Substances List Inventory
- NDSL: Non-Domestic Substances List Inventory
- NPRI: National Pollutant Release Inventory Substances

UNITED STATE OF AMERICA

| Common name | CAS | TSCA | CER CLA | EPCRA 313 | EPCRA 302/304 | CAA 112(b) HON | CAA 112(b) HAP | CAA 112(r) | CWA 311 | CWA Prio. |
|----------------------------------|-----------------|------|------------|--------------|------------------|----------------------|----------------------|---------------|------------|--------------|
| Softwood-based wood | CAS Softwood | | | | | | | | | |
| Disodium octaborate tetrahydrate | 12280-03-4 | | | | | | | | | |


- TSCA: Toxic Substance Control Act
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act list of hazardous substances
- EPCRA 313: Emergency Planning and Community Right-to-Know Act, Section 313 Toxic Chemicals
- EPCRA 302/304: Emergency Planning and Community Right-to-Know Act, Section 302/304 Extremely Hazardous Substances
- CAA 112(b) HON: Clean Air Act - Hazardous Organic National Emission Standard for Hazardous Air Pollutant
- CAA 112(b) HAP: Clean Air Act - Hazardous Air Pollutants lists pollutants
- CAA 112(r): Clean Air Act - Regulated Chemicals for Accidental Release Prevention
- CWA 311: Clean Water Act - List of Hazardous Substances
- CWA Priority: Clean Water Act - Priority Pollutant list

California Proposition 65

No ingredients listed.

Other regulations

Disodium octaborate tetrahydrate (CAS no 12280-03-4) is not included in the Canadian Domestic Substances List (DSL) or in the USA TSCA Inventory because it is a hydrate. However, it is listed in these inventories in its anhydrous form of Disodium octaborate (CAS no 12008-41-2).
- California Proposition 65:
State of California EPA (OEHHA): Drilling, sawing, sanding or machining wood products can expose you to wood dust, which is listed as a cancer causing agent according to the state of California.

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| HMIS | NFPA |
| <input type="radio"/> Health |  |
| <input type="radio"/> Flammability | |
| <input type="radio"/> Reactivity | |
| <input type="radio"/> Protective Equipment | |

16. Other information

Date (YYYY-MM-DD)

Technologies Boralife inc. 2019-05-29

Version

01

Other information

REFERENCES:
- Haz-Map, Information on Hazardous Chemicals and Occupational Diseases, <http://hazmap.nlm.nih.gov/index.php>
- TOXNET Databases, Toxicology Data Network, NIH U.S. National Library of Medicine, <http://toxnet.nlm.nih.gov/>
- Service du répertoire toxicologique de la Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST), <http://www.reptox.csst.qc.ca>

ACGIH: American Conference of Governmental Industrial Hygienists
AIHA: American Industrial Hygiene Association
HMIS: Hazardous Materials Identification System
NFPA: National Fire Protection Association
OSHA: Occupational Safety and Health Administration (USA)
NIOSH: National Institute for Occupational Safety and Health
NTP: National Toxicology Program
RSST: Règlement sur la santé et la sécurité du travail (Québec)
GHS: Globally Harmonized System
IARC: International Agency for Research on Cancer
IDLH: Immediately Dangerous to Life or Health
STEL: Short Term Exposure Limit (15 min)
TWA: Time Weighted Averages
WHMIS: Workplace Hazardous Materials Information System

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