BORON #10®

SAFETY DATA SHEET

EFFECTIVE DATE: July 14, 2025

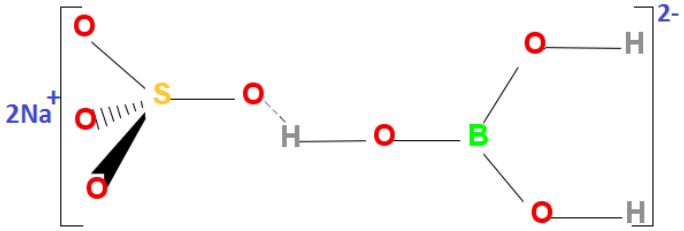
SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Boron #10®
Chemical Name/Synonym: Sodium Polyborate

MANUFACTURER: InCide® Technologies, Inc.
ADDRESS: 50 N 41st Ave
Phoenix, AZ 85009

EMERGENCY PHONE: (602) 233-0756
CHEMTREC PHONE: (800) 424-9300

RECOMMENDED USE: Flame retardant



SECTION 1 NOTES: **BORON #10® is a registered trademark of InCide® Technologies, Inc.**

SECTION 2: HAZARDS IDENTIFICATION

HAZARD OVERVIEW: Sodium polyborate is a white, odorless, powdered substance that is not flammable, combustible, or explosive. It presents no unusual hazard if involved in a fire. Sodium polyborate presents little or no hazard to humans and has low acute oral and even lower dermal toxicity. Care should be taken to minimize the amount of sodium polyborate released to the environment to avoid ecological effects.

HAZARD CLASSIFICATION: Eye Irritation Hazard Category 2B

HAZARD PICTOGRAM: None

SIGNAL WORD: Warning

HAZARD STATEMENTS:
H320: Causes eye irritation

PRECAUTIONARY STATEMENTS:
P264+P265: Wash hands thoroughly after handling. Do not touch eyes.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P337+P317: If eye irritation persists: Get medical help.

OTHER HAZARDS WHICH DO NOT RESULT IN CLASSIFICATION: None.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT	CAS NO.	% WT	SARA 313 REPORTABLE
Sodium polyborate	183290-63-3	100%	No

SECTION 4: FIRST AID MEASURES

EYES: Use eye wash fountain or fresh water to cleanse eye. If irritation persists for more than 30 minutes, seek medical attention.

SKIN: No treatment necessary with exposure to intact skin.

INGESTION: Products containing borate salts are not intended for ingestion. Small amounts (e.g., a teaspoonful) swallowed accidentally are not likely to cause effects. If larger amounts are swallowed, give two glasses of water to drink and seek medical attention.

INHALATION: No specific treatment is necessary since sodium polyborate is not likely to be hazardous by inhalation. Prolonged exposure to dust levels in excess of regulatory limits should always be avoided. If symptoms such as nose or throat irritation are observed, remove to fresh air.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: Symptoms of accidental over-exposure to high doses of inorganic borate salts have been associated with ingestion or absorption through large areas of severely damaged skin. These may include nausea, vomiting, and diarrhea, with delayed effects of skin redness and peeling. Supportive care only is required for adult ingestion of less than a few grams of the product. For ingestion of larger amounts, maintain fluid and electrolyte balance and maintain adequate kidney function. Gastric lavage is only recommended for heavily exposed, symptomatic patients in whom emesis has not emptied the stomach. Hemodialysis should be reserved for patients with massive acute absorption, especially for patients with compromised renal function. Boron analyses of urine or blood are only useful for verifying exposure and are not useful for evaluating severity of poisoning or as a guide in treatment.

SECTION 5: FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: Use extinguishing media that are appropriate to local circumstances and the surrounding environment.

SPECIAL FIRE FIGHTING PROCEDURES: None.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Reaction with strong reducing agents such as metal hydrides or alkali metals will generate hydrogen gas which could create an explosive hazard.

SECTION 5 NOTES:

SECTION 6: ACCIDENTAL RELEASE MEASURES

General: Sodium polyborate is a water-soluble white powder that may cause damage to trees or vegetation by root absorption. (Refer to Ecological Information for specific information). Avoid spillage into water and cover drains.

Land Spill: Vacuum, shovel, or sweep up sodium polyborate and place in containers for disposal in accordance with applicable local regulations. Avoid contamination of water bodies during clean up and disposal. No personal protective equipment is needed to clean up land spills.

Water Spill: Sodium polyborate may cause localized contamination of surrounding waters depending on the quantity dissolved in these waters. At high concentrations some damage to local vegetation, fish, and other aquatic life may occur. Advise local water authority that none of the affected water should be used for irrigation or for the abstraction of potable water until natural dilution returns the boron value to its normal environmental background level or meets local water quality standards.

SECTION 6 NOTES: Sodium polyborate is a non-hazardous waste when spilled or disposed of, as defined in the Resource Conservation and Recovery Act (RCRA) regulations (40 CFR 261). (Refer to Regulatory Information for additional references and information regarding EPA and California regulations.)

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Good housekeeping procedures should be followed to minimize dust generation and accumulation. Avoid spills. Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

HANDLING AND STORAGE: No special handling precautions are required, but dry, indoor storage is recommended. To maintain package integrity and to minimize caking of the product, bags should be handled on a "first-in first-out" basis.

Storage temperature: Ambient
Storage pressure: Atmospheric

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

OSHA PEL-TWA: 15 mg/m^3 total dust and 5 mg/m^3 respirable dust (as a PNOR)

NIOSH REL-TWA: **1** mg/m^3 inhalable sodium tetraborate

ACGIH TLV-TWA: 2 mg/m^3 inhalable particulate matter

ACGIH TLV-STEL: 6 mg/m^3 inhalable particulate matter

CalOSHA PEL-TWA: 5 mg/m^3 inhalable sodium tetraborate

ENGINEERING CONTROLS AND VENTILATION: Use local exhaust ventilation to keep airborne concentrations of Boron #10® dust below permissible exposure levels.

RESPIRATORY PROTECTION: Where airborne concentrations are expected to exceed exposure limits, NIOSH/MSHA certified respirators must be used.

EYE PROTECTION: Eye goggles are not required for normal industrial exposures, but eye protection according to ANSI Z.87.1 or other national standards may be warranted if environment is excessively dusty.

SKIN PROTECTION: Gloves are not required for normal industrial exposures, but may be warranted if environment is excessively dusty.

SECTION 8 NOTES: Sodium polyborate is listed/regulated by OSHA as PNOR: Particulate Not Otherwise Regulated. PEL: Permissible Exposure Limit, TLV: Threshold Limit Value, TWA: Time Weighted Average.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: White powder

ODOR: Odorless

ODOR THRESHOLD: Not applicable

pH AS SUPPLIED: 7.0 (2.0% solution) @ 25° C

MELTING POINT/ FREEZING POINT: 376.5°C

BOILING POINT AND BOILING RANGE: Not applicable

FLASH POINT: Not applicable: inorganic substance

EVAPORATION RATE: not applicable: non-volatile

FLAMMABILITY: Non-flammable; used as a flame retardant

UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: Not applicable; non-flammable

VAPOR PRESSURE (mmHg): Negligible@ 20° C

VAPOR DENSITY: Not applicable

RELATIVE DENSITY: Not applicable

PARTICLE CHARACTERISTICS: Granular solid and powder

DENSITY: 57-65 lb/ft^3 (poured)

SOLUBILITY IN WATER: 7.46% at 77° F/25° C

PARTITION COEFFICIENT; n-octanol/water: Not applicable: inorganic substance

AUTO-IGNITION TEMPERATURE: Not applicable: not self-heating

DECOMPOSITION TEMPERATURE: Not applicable melting point 376.5°C

VISCOSITY: Not applicable: solid substance

EXPLOSIVE PROPERTIES: Not explosive: does not contain chemical groups associated with explosive properties

OXIDIZING PROPERTIES: Not oxidizing: does not contain chemical groups associated with oxidizing properties

SPECIFIC GRAVITY (H2O = 1): 1.4 @ 25° C

MOLECULAR WEIGHT: 389.376

SECTION 9 NOTES:

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY: None known.

STABILITY: Sodium polyborate is a stable product and does not change under normal storage conditions.

POSSIBILITY OF HAZARDOUS REACTIONS: Sodium polyborate is a weak acid that may cause corrosion of base metals. Reaction with strong reducing agents such as metal hydrides or alkali metals will generate hydrogen gas which could create an explosive hazard. Avoid contact with strong reducing agents by storing according to good industrial practice.

INCOMPATIBLE MATERIALS: Strong reducing agents.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: None with recommended conditions of use, storage, or heating.

SECTION 11: TOXICOLOGICAL INFORMATION

ROUTES OF EXPOSURE: Inhalation is the most significant route of exposure in occupational and other settings. Dermal exposure is not usually a concern as sodium polyborate is not absorbed through intact skin.

SYMPTOMS RELATED TO THE PHYSICAL, AND CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS: Products containing sodium polyborate are not intended for ingestion. Small amounts (e.g., a teaspoonful) swallowed accidentally are not likely to cause effects; swallowing larger amounts may cause gastrointestinal symptoms. Sodium polyborate does not cause irritation to intact skin in normal industrial use. Occasional mild irritation of nose and throat may occur from inhalation of sodium polyborate dusts at levels greater than 10 mg/m^3. Prolonged exposure to dust levels in excess of regulatory limits should always be avoided.

DELAYED AND IMMEDIATE EFFECTS AS WELL AS CHRONIC EFFECTS FROM SHORT AND LONG-TERM EXPOSURE: Human epidemiological studies show no increase in pulmonary disease in occupational populations with chronic exposures to boric acid and sodium borate dust. Human epidemiological studies indicate no effect on fertility in occupational populations with chronic exposures to borate dust and indicate no effect to a general population with high exposures to borates in the environment.

ACUTE HEALTH HAZARDS: Mild, temporary irritation of eyes, respiratory tract, and abraded skin.

Oral LD_{50} (rat): 3,479 mg/kg of body weight
Dermal LD_{50} (rabbit) : >2000 mg/kg of body weight
Inhalation LC_{50} (rat) : >5.8 mg/L
Dermal irritation/corrosivity: 0 (Zero), sodium polyborate is non-corrosive.
Eye irritation: Draize test in rabbits produced mild eye irritation effects. Many years of occupational exposure history reflects no indication of human eye injury from exposure to sodium polyborate.

CHRONIC HEALTH HAZARDS: No chronic effects from sodium polyborate have been reported in the literature. Human epidemiological studies show no increase in pulmonary disease in occupational populations with chronic exposures to inorganic borates and sodium borate dust.

CARCINOGENICITY: Sodium polyborate is not listed as a known or suspected carcinogen by OSHA, ACGIH, NTP, or IARC.

SECTION 12: ECOLOGICAL INFORMATION

PHYTOTOXICITY: Although boron is an essential micronutrient for healthy growth of boron-sensitive plants, it can be harmful to plants in higher quantities. Plants and trees can easily be exposed by root absorption to toxic levels of boron in the form of water-soluble borate leached into nearby soil or waters. Care should be taken to minimize the amount of borate product released to the environment.

FISH TOXICITY: Boron naturally occurs in sea water at an average concentration of 5 mg boron/liter. In laboratory studies the acute toxicity (96-hr LC_{50}) for under-yearling Coho salmon (*O. kisutch*) in sea water was determined to be 40 mg boron/L. Boron concentrations in fresh surface waters are generally less than 1 mg boron/L. Laboratory studies on the toxicity of freshwater fish were determined using early life (embryo-larval) stages in natural water. The results were:

Rainbow trout (*S. gairdneri*): 24-d LC50 = 150 mg boron/L
36-day NOEC/LOEC = 0.75 / 1 mg boron/L
Goldfish (*C. auratus*): 7-day NOEC/LOEC = 26.5 mg boron/L
3-day LC50 = 178 mg boron/L

INVERTEBRATE TOXICITY: The acute toxicity (48-hour LC50) to Daphnids (*D. magna* Straus) in natural water is reported to be 133 mg boron/L. Estimated chronic toxicity (21-day NOEC/LOEC) values of 6/13 mg boron/L have also been reported.

PERSISTENCE AND DEGRADABILITY: Biodegradation is not an applicable endpoint since the product is an inorganic substance.

MOBILITY IN SOIL: The product is soluble in water and is leachable through normal soil. Adsorption to soils or sediments is insignificant

SECTION 12 NOTES: No information is available on the ecological effects of sodium polyborate. The information in this section is based on other borates and is normalized to boron content. Boron is the element in sodium polyborate which is used to characterize borate product ecological effects.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Small quantities of sodium polyborate can usually be disposed of at municipal landfill sites. No special disposal treatment is required, but refer to state and local regulations for applicable site-specific requirements. Tonnage quantities of product are not recommended to be sent to landfills. Such product should, if possible, be re-used for an appropriate application. Avoid spillage into water and cover drains.

RCRA HAZARD CLASS: Sodium polyborate is not listed under any section of the Federal Resource Conservation and Recovery Act (RCRA).

California Hazardous Waste Designation: California identifies substances with acute oral, acute dermal, or acute inhalation LD_{50}s less than 2,500, 4,300, or 10,000 mg/kg, respectively as “hazardous wastes." Additionally, the aquatic LC_{50} is less than 500 mg/L, the chemical is considered a “hazardous waste.” Sodium polyborate is therefore a "hazardous waste" if spilled in California, and should be handled in accordance with applicable state regulations. Refer to Regulatory Information for additional information.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION: Sodium polyborate is not a US Department of Transportation (DOT) Hazardous Material.

RCRA HAZARD CLASS: Sodium polyborate is not listed under any section of the Federal Resource Conservation and Recovery Act (RCRA).

SECTION 15: REGULATORY INFORMATION

TSCA No.: Sodium polyborate does not appear on the EPA TSCA inventory list.

SUPERFUND: CERCLA/SARA: Sodium polyborate is not listed under CERCLA (the Comprehensive Environmental Response Compensation and Liability Act) or its 1986 amendments, SARA, (the Superfund Amendments and Reauthorization Act), including substances listed under Section 313 of SARA, Toxic Chemicals, 42 USC 11023, 40 CFR 372.65; Section 302 of SARA, Extremely Hazardous Substances, 42 USC 11002, 40 CFR 355; or the CERCLA Hazardous Substances list, 42 USC 9604, 40 CFR 302.

SAFE DRINKING WATER ACT: Sodium polyborate is not regulated under the SDWA, 42 USC 300g-1, 40 CFR 141 et seq. Consult state and local regulations for possible water quality advisories regarding boron.

CLEAN WATER ACT (CWA) (FEDERAL WATER POLLUTION CONTROL ACT): 33 USC 1251 et seq.

a.) Sodium polyborate is not itself a discharge covered by any water quality criteria of Section 304 of the CWA, 33USC 1314
b.) It is not on the Section 307 List of Priority Pollutants, 33 USC 1317, 40 CFR 129
c.) It is not on the Section 311 List of Hazardous Substances, 33 USC 1321, 40 CFR 116.

OSHA/CAL OSHA: This SDS document meets the requirements of both OSHA (29 CFR 1910.1200) and Cal OSHA (Title 8 CCR 5194(g)) hazard communication standards. Refer to Exposure Control/Personal Protection for regulatory exposure limits.

IARC: The International Agency for Research on Cancer (of the World Health Organization) does not list or categorize sodium polyborate as a carcinogen.

NTP ANNUAL REPORT ON CARCINOGENS: Sodium polyborate is not listed.

OSHA CARCINOGEN: Sodium polyborate is not listed.

CALIFORNIA PROPOSITION 65: Sodium polyborate tetrahydrate is not listed on any Proposition 65 lists of carcinogens or reproductive toxicants.

SECTION 16: OTHER INFORMATION

OTHER INFORMATION: This SDS was finalized on July 14, 2025 and is compliant with OSHA HCS/HazCom 2024 Final Rule. This replaces the previous version dated July 17, 2024.

DISCLAIMER: Information presented herein has been compiled from sources considered dependable and is accurate and reliable to the best of our knowledge and belief, but it is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or any product in violation of any law or regulation. It is the user's responsibility to determine the suitability of any material for a specific purpose and adopt necessary safety precautions. We make no warranty as to results to be obtained in using any material and, since conditions or use are not under our control, we must necessarily disclaim all liability with respect to use of any material supplied by us.