Identification Section 1 Page E1 of E2

Innovating Science® by Aldon Corporation

"cutting edge science for the classroom"

221 Rochester Street Avon, NY 14414-9409 (585) 226-6177

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.

BORIC ACID, 10% IN METHANOL Product

Synonyms

Section 2 Hazards identification

Signal word: DANGER

Pictograms: GHS02 / GHS06 / GHS08

Target organs: Central nervous system, Liver, Kidneys, Heart, Circulatory system







GHS Classification:

Flammable liquid (Category 2) Acute toxicity, oral (Category 3) Acute toxicity, dermal (Category 3) Acute toxicity, inhalation (Category 3) STOT-SE (Category 1) Reproductive toxicity (Category 1B)

GHS Label information: Hazard statement:

H225: Highly flammable liquid and vapour.

H301: Toxic if swallowed

H311: Toxic in contact with skin.

H331: Toxic if inhaled.

H360: May damage fertility or the unborn child.

H370: Causes damage to organs.

Precautionary statement:

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/hot surfaces. - No smoking.

P241: Use explosion-proof electrical/ventilating/lighting equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge

P260: Do not breathe mist/vapours/spray.

P264: Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

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

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

P301+P330 +P310: IF SWALLOWED: Rinse mouth. Immediately call a POISON

CENTER or doctor/physician.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated

clothing. Rinse skin with water/shower.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P308+P312: IF exposed or concerned: Call a POISON CENTER or doctor if you feel

unwell

P370+P378: In case of fire: Use dry chemical, alcohol foam, carbon dioxide or water

P403+P233+P235: Store in a well-ventilated place. Keep container tightly closed. Keep cool

P405: Store locked up.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition	tion 3 Composition / information on ingredients						
Chemical Name	CAS#	%	EINECS				
Methanol	67-56-1	90%	200-659-6				
Boric acid	10043-35-3	10%	233-139-2				

Section 4 First aid measures

INGESTION: MAY BE FATAL OR CAUSE BLINDNESS IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: VAPOR HARMFUL. HARMFUL IF INHALED. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: HARMFUL IN CONTACT WITH SKIN. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Fires involving a small amount of combustibles may be smothered by dry chemical. Vapors formed from this product are heavier than air and may travel along the ground to a distant source of ignition and flash back instanty. Closed containers exposed to heat may explode. Burns with a clear, almost invisible flame. Contact with strong oxidizers may cause fire.

Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Page E2 of E2 Section 7 Handling and storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8	Exposure controls / personal protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
	Methanol	TWA: 262 mg/m ³ / STEL: 328 mg/m ³	TWA: 260 mg/m ³	TWA: 260 mg/m ³ / STEL: 325 mg/m ³			

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 9 Physical and chemical properties

Appearance: Clear, colorless liquid. Odor: Pungent odor. Odor threshold: Data not available

pH: Data not available

Melting / Freezing point: Data not available Boiling point: Data not available

Flash point: Data not available

Evaporation rate (Butyl acetate = 1): Data not available Flammability (solid/gas): Data not available

Explosion limits: Lower / Upper: Data not available Vapor pressure (mm Hg): Data not available

Vapor density (Air = 1): Data not available Relative density (Specific gravity): Data not available

Solubility(ies): Data not available

Partition coefficient: (n-octanol / water): Data not available

Auto-ignition temperature: Data not available Decomposition temperature: Data not available

Viscosity: Data not available. Molecular formula: Mixture Molecular weight: Mixture

Section 10 Stability and reactivity

Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.

Incompatible materials: Strong oxidizing agents, strong acids, zinc, aluminum and magnesium, reducers, alkalies, acetic anhydride, potassium and heat sources.

Hazardous decomposition products: Oxides of carbon and formaldehyde.

Section 11 Toxicological information

Acute toxicity: Inhalation-rat LC50: 64,000 mg/kg/4hours; Skin-rabbit LD50: 15,800 mg/kg (Methanol) Oral-rat LD50: 2,500 mg/kg (Boric Acid)

Skin corrosion/irritation: Data not available Serious eye damage/irritation: Data not available Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available Carcinogenity: Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. CA Prop 65:

WARNING!: This product can expose you to Methanol, which is known to the State of California to cause birth defects or other reproductive harm.

Reproductive toxicity: Data not available STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 1 with narcotic effects.

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: Inhalation of this material may cause irritation of the respiratory tract, nausea, shortness of breath and headache.

Ingestion: Ingestion may cause headache, dizziness, weakness, euphoria, drowsiness, shortness of breath, vomiting and incoordination. Can also cause blindness and death. Cannot be made nonpoisonous.

Skin: Contact with skin can cause moderate irritation, defatting, cracking and dermatitis. Skin absorption may contribute to overall exposure. Eyes: Contact with eyes can cause severe irritation, even corneal burns. High concentrations of vapors may cause irritation.

Signs and symptoms of exposure: Animal feeding studies in rat, mouse and dog, at high doses, have demonstrated effects on fertility and testes. Studies with the chemically related boric acid in the rat, mouse and rabbit, at high doses, demonstrate developmental effects on the fetus, including fetal weight loss and minor skeletal variations. The doses administered were many times in excess of those to which humans would normally be exposed. Human epidemiological studies show no increase in pulmonary disease in occupational populations with cronic exposures to boric acid dust and sodium borate dust. A recent epidemiological study under the conditions of normal occupational

eposure to borate dusts indicated no effect on fertility. (Boric Acid)

Additional information: RTECS #: PC1400000 [Methanol], ED4550000 [Boric Acid]

Ecological information

Toxicity to fish: Lepomis macrochirus (fish, fresh water), LC50 = 15,400 mg/l/96 hours (Methanol), Carassius auratus (goldfish) LC50: 0.63 g/L/3 day (Boric Acid)

Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Water flea) LC50: 1085-1402 mg/L/48 hours (Boric Acid)

Toxicity to algae: Scenedesmus subspicatus (algae) EC50: 158 mg/L/96 hours (Boric Acid)

Persistence and degradability: Readily biodegradable Bioaccumulative potential: Not expected to bioaccumulate

Mobility in soil: No data available PBT and vPvB assessment: No data available Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport information

UN/NA number: UN1230 Shipping name: Methanol, (solution)

Hazard class: Domestic: 3 International: 3, (6.1) Packing group: II Reportable Quantity: Yes Marine pollutant: No

Exceptions: Limited quantity equal to or less than 1 L 2020 ERG Guide # 131

Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Methanol	Listed	5,000 lbs. (2270 kg)	U154	Listed	Not listed	MARNING - Reproductive Harm - www.P65Warnings.ca.gov.
Boric acid	Listed	Not listed	Not listed	Listed	Not listed	

Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook

Revision Date: September 18, 2020 Supercedes: January 31, 2019 Form 06/2015

Identification Section 1 Page E1 of E2

Innovating Science® by Aldon Corporation

"cutting edge science for the classroom"

221 Rochester Street Avon, NY 14414-9409 (585) 226-6177

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.

SAND, (FINE) **Product**

Synonyms Silicon Dioxide / Quartz / Crystalline Silica

Section 2 Hazards identification

Signal word: WARNING Pictograms: GHS08 Target organs: Lungs



GHS Classification: *STOT-RE (Category 2)

GHS Label information: Hazard statement:

*H373: May cause damage to organs (lungs) through prolonged or repeated exposure (inhalation).

* Respirable dust particles containing silicon dioxide may be generated by crushing. There are no known hazards associated with this material when used as recommended.

Precautionary statement:

P260: Do not breathe dust.

P314: Get medical advice/attention if you feel unwell.

P501: Dispose of contents/container to a licensed chemical disposal agency in

accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on ingredients					
Chemical Name		CAS#	%	EINECS		
Sand		14808-60-7	>99%	238-878-4		

Section 4 First aid measures

INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: RESPIRABLE CRYSTALLINE SILICA MAY BE HARMFUL IF INHALED. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE CORNEAL ABRASIONS . Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Sand will not burn or support fire. Use any media suitable for extinguishing supporting fire

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: None known.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling and storage Page E2 of E2

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area.

Section 8	Exposure controls / personal protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
	Silica, crystalline, α-quartz	TWA: 0.025 mg/m ³ respirable (A2)	TWA: 10 mg/m ³ respirable dust	TWA: 0.05 mg/m ³ respirable dust			

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical and chemical properties

Appearance: Solid. White, yellow or tan granules.

Odor: No odor.

Odor threshold: Data not available.

pH: Data not available

Melting / Freezing point: 1610°C (3110°F)

Boiling point: 2230°C (4046°F) Flash point: Not flammable Evaporation rate (= 1): Not applicable
Flammability (solid/gas): Data not available.
Explosion limits: Lower / Upper: Not flammable
Vapor pressure (mm Hg): Data not available
Vapor density (Air = 1): Data not available

Relative density (Specific gravity): 2.65 Solubility(ies): Insoluble in water.

Partition coefficient: Not applicable
Auto-ignition temperature: Not applicable
Decomposition temperature: Data not available.
Viscosity: Data not available.

Molecular formula: SiO₂
Molecular weight: 60.09

Section 10 Stability and reactivity

Chemical stability: Stable Hazardous polymerization: Will not occur.

Conditions to avoid: Avoid contact with incompatible materials.

Incompatible materials: Contact with powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide and oxygen difluoride may cause fire.

Hazardous decomposition products: Will dissolve in hydrofluoric acid and produce silicon tetrafluoride, a corrosive gas.

Section 11 Toxicological information

Acute toxicity: Oral-rat LD50: 500 mg/kg Skin corrosion/irritation: Data not available Serious eye damage/irritation: Data not available Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenity: Data not available

NTP: Known to be a human carcinogen (respirable). [Quartz] IARC classified: Group 1: Carcinogenic to humans. [Quartz]

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Ca Prop 65: MWARNING! This product can expose you to a chemical, crystalline silica, which is known to the State of California to cause cancer.

Reproductive toxicity: Data not available STOT-single exposure: Data not available

STOT-repeated exposure: Inhalation - May cause damage to organs through prolonged or repeated exposure. [Quartz]

Aspiration hazard: Data not available

Potential health effects:

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion: May be harmful if swallowed. Skin: May cause transient irritation. Eyes: May cause transient irritation.

Signs and symptoms of exposure: Prolonged inhalation of crystalline silica may result in silicosis, a disabling pulmonary fibrosis characterized by fibrotic changes and miliary nodules in the lungs, a dry cough, shortness of breath, emphysema, decreased chest expansion, and increased susceptibility to tuberculosis.

Additional information: RTECS #: VV7330000

Section 12 Ecological information

Toxicity to fish: No data available

Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: No data available

Persistence and degradability: No data available

Mobility in soil: No data available

PBT and vPvB assessment: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport information

UN/NA number: Not applicable
Hazard class: Not applicable
Packing group: Not applicable
Exceptions: Not applicable
Vot applicable
Packing group: Not applicable
Reportable Quantity: No
Marine pollutant: No
2020 ERG Guide # Not applicable

Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Sand	Listed	Not listed	Not listed	Listed	Not listed	⚠ WARNING -Cancer - www.P65Warnings.ca.gov.

Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Form 06/2015 Revision Date: October 16, 2020 Supercedes: January 28, 2020