AQUABOND Chemistry for Tomorrow SAFETY DATA SHEET

SBX™ HT

SECTION 1: IDENTIFICATION

Product identifier used on a label:	**SBX™ HT**
Product code:	5241
Recommended use of the chemical and restrictions on use:	Blackening Solution for Iron and Steel for decorative and functional applications.
Chemical family:	Acid Mixture of inorganic chemicals.
Name, address and phone # of supplier:	Aqua Bond Inc., PO Box 63635, Toronto, ON, M1V 5K2 (416) 754-7211
24 Hr. Emergency phone #	**CANUTEC (613) 996-6666**

SECTION 2: HAZARDS IDENTIFICATION

Classification of the chemical: This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification:
- Acute Toxicity - Oral - Category 3
- Acute Toxicity - Dermal - Category 4
- Skin Corrosion/Irritation - Category 1
- Serious Eye Damage/Eye Irritation - Category 1
- Carcinogenicity - Category 1B
- Reproductive Toxicity - Category 1B
- Oxidizing solids - Category 3

Label elements:



Signal word: DANGER

Hazard statements:
- H272 May intensify fire; oxidizer.
- H301 Toxic if swallowed
- H314 Causes severe skin burns and eye damage.
- H350 May cause cancer.
- H360 May damage fertility or the unborn child.

Precautionary statements:
- P201 Obtain special instructions before use
- P202 Do not handle until all safety precautions have been read and understood
- P210 Keep away from heat
- P220 Keep away from clothing and other combustible material
- P221 Take any precaution to avoid mixing with combustibles
- P260 Do not breathe dust/fume/gas/mist/vapours/spray
- P264 Wash face, hands and any exposed skin thoroughly after handling
- P270 Do not eat, drink or smoke when using this product
- P272 Contaminated work clothing should not be allowed out of the workplace

P280 Wear protective gloves/protective clothing/eye protection/face protection
P308+P310 IF exposed or if you feel unwell: Immediately call a POISON CENTER or doctor
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+P313 If eye irritation persists: Get medical advice/attention.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
P304-P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing
P342+P311+P331 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. Do NOT induce vomiting.
P370 In case of fire: use fire-extinguishing media appropriate for surrounding materials to extinguish.
P391 Collect spillage.
P405 Store locked up.
P501 Dispose of contents/container to an approved waste disposal plant.

Other hazards: Toxic to aquatic life. Harmful to aquatic life.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/ mixture: Mixture

Ingredient name	CAS Number	Concentration (%)
Sodium hydroxide	1310-73-2	50 - 100
Sodium nitrate	7631-99-4	10 - 20
Sodium nitrate	7632-00-0	0 - 10
Ethylene thiourea	96-45-7	0.1 - 1
Sodium tetraborate decahydrate	1303-96-4	0.1 - 1

Concentrations are shown as ranges due to batch variation.

SECTION 4: FIRST-AID MEASURES

Description of first aid measures:

Ingestion: Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get medical attention immediately if symptoms occur.

Inhalation: Move victim to fresh air. Contact emergency medical services (911) if any difficulty in breathing occurs or if victim loses consciousness. Does not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

Skin contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if

	irritation develops and persists.
Eye contact	Remove and discard contact lenses if worn and flush eyes with copious amounts of water for at least 20 minutes. Seek immediate medical attention when done rinsing eyes.

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8). Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Most important symptoms and effects, both acute and delayed:

Burning sensation. Redness. May cause blindness. Coughing and/ or wheezing..

Indication of any immediate medical attention and special treatment needed:

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable	Do not scatter spilled material with high pressure water streams.
Special hazards arising from the substance:	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.
Hazardous thermal decomposition products:	Not available.
Explosion data :	Sensitivity to mechanical impact: None. Sensitivity to static discharge: None.
Special protective equipment / precautions for fire-fighters:	Firefighters should wear full-face, self-contained breathing apparatus and impervious protective clothing. Firefighters should avoid inhaling any combustion products.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Wear appropriate protective equipment and clothing during clean-up. Evacuate surrounding area. Keep unnecessary and unprotected personnel from entering.
Environmental precautions:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods and materials for containment and cleaning up:	Wear appropriate protective equipment and clothing during clean-up. Stop source of leak if possible. Absorb with inert absorbent such as dry clay, sand, or diatomaceous earth, commercial sorbents, or recover using pumps. Scoop up used absorbent into drums or other appropriate container. Block any potential routes to water systems.

Special spill response procedures:	In case of transportation accident, contact CANUTEC (613) 996-6666.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling:	Wear personal protective equipment to avoid direct contact with this chemical. Avoid breathing mist or spray. Avoid eye and skin contact. Only use where there is adequate ventilation. Avoid heating that will increase the amount of vapours. Do not expose to heat and flame. Prevent accidental contact with incompatible chemicals. Keep containers tightly closed when not in use or empty. Wash hands thoroughly after handling this product and before eating, using the washroom or leaving work area.
Conditions for safe storage:	Store in accordance with local regulations. Store in a segregated and approved area. Store in original acid-resistant container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials, food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be resealed and kept upright. Do not store in unlabeled containers.
Special Precautions:	Empty containers may retain hazardous product residues. Store away from combustible material.
Incompatible materials:	Acids. Bases. Oxidizing agent.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Exposure limits ppm (mg/m^3)

Ingredient	CAS No.	ACGIH TLV	NIOSH	OSHA PEL
Sodium hydroxide	1310-73-2	Ceiling: 2 mg/m^3	TWA: 2 mg/m^3	IDLH: 10 mg/m^3 Ceiling: 2 mg/m^3

Biological occupational exposure limits:

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Engineering controls:	Use with adequate ventilation to keep worker exposure to airborne contaminants below any recommended or statutory limits. Ensure appropriate decontamination equipment is available (sink, safety shower, and eye-wash).
Individual protection measures:	Eyes/face: Chemical splash goggles and face shield. Skin: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Wear protective, chemical-resistant gloves such as neoprene when using or handling this product. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Respiratory: Wear appropriate respirator when ventilation is inadequate. Be sure to use a NIOSH approved respirator or equivalent. A chemical resistant apron and/or protective

clothing are recommended when handling this product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Solid, white to light tan powder.
Odour:	Characteristic
Odour threshold:	Not available.
pH:	Not applicable.
Melting/freezing point:	Not applicable.
Boiling point:	Not applicable
Flash point:	Not applicable.
Flammability:	Not available.
Upper and lower flammability limits:	Not available.
Relative density:	Not available
Solubility:	Soluble in water.
Partition coefficient n-octanol/water:	Not available.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Not applicable.
VOC (%):	0

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Not information available.
Chemical stability:	Stable at normal temperatures.
Possibility of hazardous reactions (Polymerization):	Will not occur under normal processing.
Conditions to avoid:	Excessive heat, shock, and friction. Exposure to air or moisture over prolonged periods.
Incompatible materials:	Acids. Bases. Oxidizing agent.
Hazardous decomposition products:	No information available.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on likely routes of exposure: See section 4.

Symptoms related to the physical, chemical and toxicological characteristics: See section 4.

Acute toxicity: No information available

Component Analysis: LD50/LC50

Chemical name	CAS No.	Oral LD50	Dermal LD50	Inhalation LC50
Sodium hydroxide	1310-73-2	325 mg/kg (Rat)	1350 mg/kg (Rabbit)	-
Sodium nitrate	7631-99-4	85 mg/kg (Rat)	-	5.5 mg/L (Rat) 4h
Sodium nitrite	7632-00-0	1267 mg/kg (Rat)	-	-
Ethylene thiourea	96-45-7	545 mg/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure:

Skin corrosion/irritation:	Classification based on data available for ingredients. Causes burns.
Serious eye damage/eye irritation:	Classification based on data available for ingredients. Risk of serious

damage to eyes. Causes burns.

Respiratory or skin sensitization: No information available.

Germ cell mutagenicity: No information available.

Carcinogenicity: Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Ethylene thiourea 96-45-7	-	Group 3	Reasonably Anticipated	x

Legend:

IARC (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans
NTP (National Toxicology Program)
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity: Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child.

STOT - single exposure: No information available.

STOT - repeated exposure: No information available.

Target organ effects : Respiratory system, Eyes, Skin.

Aspiration hazard: No information available.

Other adverse effects : No information available.

Interactive effects: No information available.

SECTION 12 ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

Chemical name	CAS No.	Fish	Crustacea
Sodium hydroxide	1310-73-2	LC50: =45.4mg/L (96h, Oncorhynchus mykiss)	-
Sodium nitrate	7631-99-4	C50: 994.4 - 1107mg/L (96h, Oncorhynchus mykiss) LC50: =2000mg/L (96h, Lepomis macrochirus)	-
Sodium nitrite	7632-00-0	LC50: 0.092 - 0.13mg/L (96h, Oncorhynchus mykiss) LC50: 0.4 - 0.6mg/L (96h, Oncorhynchus mykiss) LC50: 0.65 - 1mg/L (96h, Oncorhynchus mykiss) LC50: =0.19mg/L (96h, Oncorhynchus mykiss) LC50: =2.3mg/L (96h, Pimephales	-

		promelas) LC50: =20mg/L (96h, Pimephales promelas)	
Ethylene thiourea	96-45-7	LC50: 5600 - 10000mg/L (96h, Poecilia reticulata)	LC50: 21.6 - 32.2mg/L (48h, Daphnia magna)

Persistence and degradability: No information available.
Bioaccumulation: There is no data for this product.
Component information

Chemical name	CAS No.	Partition coefficient
Sodium nitrite	7632-00-0	-3.7
Sodium nitrate	7631-99-4	-3.8

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORT INFORMATION

	TDG
UN Number:	UN 3262
UN proper shipping name:	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (SODIUM HYDROXIDE)
Transport hazard class:	8
Packing group:	II
Environmental hazard:	Yes
Special precautions for user:	**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: REGULATORY INFORMATION

Canada inventory (DSL): All components are listed.

SECTION 16: OTHER INFORMATION

Revision date: April 22, 2024
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations
TWA: Time Weighted Average over 8 hours of work.
TLV: Threshold Limit Value over 8 hours of work.
REL: Recommended Exposure Limit
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit during x minutes.
IDLH: Immediately Dangerous to Life or Health
WEEL: Workplace Environmental Exposure Levels
CEIL: Ceiling

Disclaimer

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