SAFETY DATA SHEET

Green-Bond ™ Seal

SECTION 1: IDENTIFICATION

Product identifier used on a label:	**Green-Bond ™ Seal**
Recommended use of the chemical and restrictions on use:	Pretreatment. Coating. Painting.
Chemical family:	Mineral acid
Chemical formula:	Not applicable.
Name, address and phone # of supplier:	Aqua Bond Inc. 440 Passmore Ave. Toronto, ON, M1V 5J8 (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 4

Skin Corrosion/Irritation - Category 1

Serious Eye Damage/Eye Irritation - Category 1

Label elements:



Signal word: DANGER

Hazard statements:
Harmful if swallowed
Causes severe skin burns and eye damage

Precautionary statements:

Prevention
Wear protective gloves/protective clothing/eye protection/face protection
Wash thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dusts or mists

Response
IF INHALED: Remove person to fresh air and keep comfortable for breathing
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
Immediately call a POISON CENTER or doctor
Storage
Store locked up
Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations

Other Hazards: Oxidising potential : Contact with combustible material may cause fire. Keep away from clothing, incompatible materials and combustible materials. This material increases the risk of fire and may aid combustion.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient name	Synonyms	CAS Number	Concentration (wt. %)
Nitric Acid	Azotic acid, Engraver's acid, Aqua fortis	7697-37-2	0 – 5 %
Hexafluorozirconic acid	Fluorozirconic acid; Zirconate(2-), hexafluoro-,dihydrogen, (OC-6-11)-	12021-95-3	0 – 5 %
Water		7732-18-5	Balance

SECTION 4: FIRST-AID MEASURES
Description of first aid measures:

Inhalation: Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.

Do 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. Get medical attention immediately.

Skin contact	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. **Apply generous quantities of fresh calcium gluconate gel to all areas.** Get immediate medical attention.
Eye contact	After eye contact: rinse out with plenty of water for 15 minutes. Get medical attention immediately.
Ingestion	Do Not Induce Vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

Most important symptoms and effects, both acute and delayed:
Causes serious eye damage. Harmful if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. May cause burns to mouth, throat and stomach. Causes severe burns.
Indication of any immediate medical attention and special treatment needed:
Treat symptomatically. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing media:	Use media appropriate for the surrounding fire.
Suitable:	Water spray, foam, carbon dioxide or dry chemical may be used in areas where the product is stored.
Unsuitable:	Not Available.
Flash point:	Not Available.
Autoignition Temperature:	Not Available.
Specific hazards arising from the substance:	Reactions with light metals will evolve hydrogen gas. Contact with this material will cause burns to the skin, eyes and mucous membranes. Keep away from heat, sparks, open flame and other ignition sources. Irritating and toxic fumes and gases may be released if involved in a fire.
Hazardous thermal decomposition products:	Decomposition products may include the following materials: Carbon Dioxide, Carbon Monoxide, Nitrogen Oxides, Halogenated Compounds, Metal Oxide/Oxides
Special protective equipment and precautions for fire-fighters:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Wear respiratory protection. In case of release, evacuate personnel to safe areas and isolate the hazard area. Keep unnecessary and unprotected personnel from entering.
Environmental precautions:	Should not be released into environment. Prevent from reaching drains, sewer, or waterway. Dike the spill with sand or earth. Sweep up and shovel into suitable containers for disposal. Prevent material from entering drains or sewers. Report releases as required by local and national authorities.
Methods and materials for containment and cleaning up:	Wear protective eyeware, gloves, and clothing. Refer to Section 8. Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. Always obey local regulations. If necessary use trained response staff or contractor.
Special spill response procedures:	In case of transportation accident, contact CHEMTREC at 1-800-424-9300.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling:	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Do not ingest. Do not breathe vapors or spray mist. Keep away from clothing and other combustible materials. Use only with adequate ventilation. Wear personal protective equipment.
Conditions for safe storage:	Keep in a tightly closed container. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Do not store near combustible materials.
Incompatible materials:	Keep away from reducing agents, oxidizing agents, strong alkalis, strong acids.
Hazardous decomposition products:	Fire may cause formation of Carbon Dioxide, Carbon Monoxide, Nitrogen Oxides, Halogenated Compounds, Metal Oxide/Oxides.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Ingredient	**Exposure limits**
Nitric Acid CAS 7697-37-2	2 ppm (5.2 mg/m^3) TLV, ACGIH 4 ppm (10 mg/m^3) STEL, ACGIH 2 ppm (5 mg/m^3) PEL, OSHA 2 ppm (5 mg/m^3) REL, NIOSH 4 ppm (10 mg/m^3) STEL, NIOSH 25 ppm IDLH, OSHA
Hexafluorozirconic Acid CAS 12021-95-3	TWA 5 mg/m^3 Canada. Alberta, Occupational Health and Safety Code (table 2: OEL) STEL 10 mg/m^3 Canada. Alberta, Occupational Health and Safety Code (table 2: OEL) TWAEV 5 mg/m^3 Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants STEV 10 mg/m^3 Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants TWA 5 mg/m^3 Canada. British Columbia OEL STEL 10 mg/m^3 Canada. British Columbia OEL TWA 5 mg/m^3 USA. ACGIH Threshold Limit Values (TLV) STEL 10 mg/m^3 USA. ACGIH Threshold Limit Values (TLV) IDLH: Immediately Dangerous to Life or Health REL: Recommended Exposure Limit PEL: Permissible Exposure Limit

Engineering controls:

Ensure adequate ventilation, especially in confined areas. Use mechanical exhaust or laboratory fumehood to avoid exposure. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Individual protection measures:

Eye Protection: Use chemical safety goggles and / or a full face shield where splashing is possible. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Maintain eye wash fountain and quick-drench facilities in work area.

Skin Protection: Wear appropriate protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Handle with gloves. Gloves must be inspected prior to

use. The use of rubber gloves, long sleeved shirt and trousers are required.

Respiratory protection: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. 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. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly.

Hygiene Measures: Keep away from food, drink and animal feeding stuffs. When using, do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. For environmental protection remove and wash all contaminated protective equipment before re-use.

Protective Equipment
Eye wash fountain and emergency showers are recommended.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear liquid
Odour:	No data available.
Odour threshold:	No data available
pH:	1 - 2
Melting point/Freezing point:	No data available
Initial boiling point/boiling range:	No data available
Flash point:	No data available
Evaporation rate:	No data available
Flammability (solid; gas) :	No data available
Lower flammable/explosive limit:	No data available
Upper flammable/explosive limit:	No data available
Vapour pressure:	No data available
Vapour density:	No data available
Specific Gravity:	1.0 - 1.1
Solubility:	Soluble in water
Partition coefficient (n-octanol/water) :	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.

Viscosity:	No data available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Oxidizer: Contact with combustible/organic material may cause fire.
Chemical stability:	Oxidizer: Contact with combustible/organic material may cause fire.
Possibility of hazardous reactions:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid:	Incompatible products. Excess heat, exposure to air and moisture over prolonged time periods. Combustible materials, Strong baseséalkali,
Incompatible materials:	Reducing agents.
Hazardous decomposition products:	Fire may cause formation of nitrogen oxides. Thermal decomposition can lead to release of irritating gases and vapors

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicity data

Acute toxicity

Nitric Acid

Acute Inhalation Toxicity:	Toxic if inhaled. LC50 (Rat): > 2.65 mg/l Exposure time: 4 h Test atmosphere: vapor Method: OECD Test Guideline 403 Assessment: Corrosive to the respiratory tract.
Skin corrosion/irritation:	Causes severe burns. Corrosive after 3 minutes or less of exposure Remarks : Based on harmonised classification in EU regulation 1272/2008, Annex VI
Serious eye damage/eye irritation:	Causes serious eye damage.
Information on the likely routes of exposure:	Skin, eye, inhalation, ingestion
Potential health effects (acute):	Toxic if inhaled. Causes severe burns. Causes serious eye damage Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Product is a corrosive material.
Target organ effects:	No data available.
Carcinogenicity:	IARC: No ingredient 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 on OSHA's list of regulated carcinogens.

	NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. ACGIH: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
Potential chronic health effects:	No data available.
Teratogenicity:	No data available.
Developmental effects:	No data available.
Fertility effects:	No data available.
Irritation/corrosion:	No data available.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Nitric Acid

Toxicity to fish	No data available.
Toxicity to daphnia and other aquatic invertebrates	No data available.
Toxicity to microorganisms:	No data available.
Bioaccumulation:	No data available.
Biodegradation:	No data available.
Abiotic Degradation:	No data available.
Mobility in soil, water:	No data available.
Other adverse effects:	No data available.
Persistence and degradability:	

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal methods:	The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor. 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. Do not flush to sewers. **Contaminated packaging:** Empty containers should be taken to an approved waste handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

Land transport (DOT)

UN number	UN 3264
Proper shipping name	Corrosive Liquid, Acidic, inorganic, N.O.S., (Contains:Fluorozirconic Acid)

Class	8
Packing group	II
Required Label(s):	Corrosive

TDG Information

UN number	UN 3264
Proper shipping name	Corrosive Liquid, Acidic, inorganic, N.O.S., (Contains:Fluorozirconic Acid)
Class	8
Packing group	II
Required Label(s):	Corrosive

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.

SECTION 15: REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

Canada Regulations
This material is a controlled product under Canadian WHMIS regulations.

US Federal Regulations
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories
Immediate (Acute) Health Hazards

SECTION 16: OTHER INFORMATION
Revision date: March 16, 2020
UN = United Nations
Disclaimer
While the information and recommendations set forth are believed to be accurate as of data hereof, Aqua Bond Inc., makes no warranty with respect thereto and disclaims all liability from reliance thereon.