

Change Record:

Issue Number	Effective Date	Review Date	Change Number	Reason for Change
Issue 1	24/09/03	24/09/05	N/A	New Document
Issue 2	06/12/05	06/12/07	1	2 Yearly Review

Originated By: Production

**Approved By: Originating Dept.:
Production**

Date:

Approval Dept.:

Date:

Quality Assurance:

Date:

1 - Product and Company Information

1 Product and Company Information	
1.1 Product Catalogue Code	Biobond BB20
1.2 Company Information	BBInternational Ltd. Golden Gate Ty Glas Avenue Llanishen Cardiff CF14 5DX Telephone: +44 (0)29 2074 7232 Facsimile: +44 (0)29 2074 7242
1.3 Emergency Contact	Telephone +44 (0)29 2074 7232 Email: thelab@bbigold.com

2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
3-AMINOPROPYLTRIETHOXSILANE		919-30-2	213-048-4 612-108-00-0

Formula C₉H₂₃NO₃Si
Molecular Weight 221.37 AMU
Synonyms A 1100 * AGM-9 *
(gamma-Aminopropyl)triethoxysilane *
(3-Aminopropyl)triethoxysilane * Propylamine,
3-(triethoxysilyl)- * Silane,
gamma-aminopropyltriethoxy- * Silane,
(3-aminopropyl)triethoxy- * Silicone A-1100 *
Triethoxy(3-aminopropyl)silane *
3-(Triethoxysilyl)propylamine

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Harmful if swallowed. Causes burns.

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician. Do not induce vomiting.

5 - Fire Fighting Measures

CONDITIONS OF FLAMMABILITY

Under fire conditions, material may decompose to form flammable and/or explosive mixtures in air.

EXTINGUISHING MEDIA

Suitable: Carbon dioxide, dry chemical powder, or appropriate foam.

Unsuitable: Do not use water.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Cover with dry lime or soda ash, pick up, keep in a closed container, and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed.

Store at 2-8°C

SPECIAL REQUIREMENTS: Moisture sensitive. Store under inert gas.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Use only in a chemical fume hood.

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

Special Protective Measures: Faceshield (8-inch minimum).

9 - Physical and Chemical Properties

Appearance Physical State: Liquid
Color: Colorless
Form: Clear liquid

Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	213 - 216 °C	
MP/MP Range	N/A	
Flash Point	98 °C	Method: closed cup
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	Lower: 0.8 % Upper: 4.5 %	
Vapor Pressure	< 10 mmHg	100 °C
SG/Density	0.949 g/cm ³	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	7.7 g/l	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Conditions of Instability: May decompose on exposure to moist air or water.

Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, and nitrogen oxides, Silicon oxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: TX2100000

ACUTE TOXICITY

LD50
Oral
Rat
1780 mg/kg

LD50
Oral
Mouse
4000 mg/kg
Remarks: Behavioral:Excitement. Lungs, Thorax, or
Respiration:Emphysema. Blood:Changes in leukocyte (WBC) count.

LD50
Intraperitoneal
Mouse
260 MG/KG

LD50
Skin
Rabbit
4 ML/KG

LD50
Oral
Mammal
4000 mg/kg

IRRITATION DATA

Skin
Rabbit
0.1 mg

24H

Remarks: Open irritation test

Skin

Rabbit

5 mg

24H

Remarks: Severe irritation effect

Eyes

Rabbit

100 mg

Remarks: Mild irritation effect

Eyes

Rabbit

0.75 mg

24H

Remarks: Severe irritation effect

SIGNS AND SYMPTOMS OF EXPOSURE

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema.

Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

ROUTE OF EXPOSURE

Skin Contact: Causes burns.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes burns.

Inhalation: Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion: Harmful if swallowed.

TARGET ORGAN INFORMATION

Nerves. Liver. Kidneys.

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 2735
Class: 8
PG: II
Proper Shipping Name: Amines, liquid, corrosive, n.o.s.

IMDG

UN#: 2735
Class: 8
PG: II
Proper Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S.
Marine Pollutant: No
Severe Marine Pollutant: No
Technical Name: Required

IATA

UN#: 2735
Class: 8
PG: II
Proper Shipping Name: Amines, liquid, corrosive, n.o.s.
Inhalation Packing Group I: No
Technical Name: Required

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 612-108-00-0

INDICATION OF DANGER: C

Corrosive.

R-PHRASES: 22 34

Harmful if swallowed. Causes burns.

S-PHRASES: 26 36/37/39 45

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 1

SWITZERLAND

SWISS POISON CLASS: 4

16 - Other Information

16 Other Information	
MSDS Creation Date:	01.12.05
Revision Due:	
Notes:	Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall BBInternational be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if BBInternational has been advised of the possibility of such damages.

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