



SAFETY DATA SHEET

In accordance with Hazardous Products Regulations (HPR) (SOR/2015-17)

GREENFORCE(TM)
Revision Number 1

Revision date 10-Feb-2023
Supersedes Date: 10-Feb-2023

1. Identification of the Substance/Preparation and of the Company/Undertaking

Product identifier

Product Name GREENFORCE(TM)

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Adhesives and/or sealants

Uses advised against No information available

Details of the supplier of the safety data sheet

Responsible Party

Bostik Canada Limited
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Becancour
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G9H 2Y8
Canada
Phone: +1 (514) 593-0418
Fax: +1 (514) 593-0413
E-mail msds@bostik.com

Manufacturer Address

Bostik Inc.
11320 W. Watertown Plank Road
Wauwatosa, Wisconsin 53226 USA
Phone: +1 (800) 843-0844 (Domestic Toll Free)
Phone: +1 (414) 774-2250 (International)
Fax: +1 (414) 774-8075

Emergency telephone number

CHEMTREC (Chemical Transportation Emergency Center)
Chemtrec: 1-800-424-9300 (US) , 1-703-527-3887 (Outside U.S.)
Rocky Mountain Poison Center: 1-866-767-5089

2. Hazards Identification

Classification

Skin sensitization	Category 1
Reproductive toxicity	Category 1B

Label elements

Danger

Hazard statements

May cause an allergic skin reaction
May damage fertility or the unborn child

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Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves, protective clothing, eye protection and face protection
Avoid breathing dust, fume, gas, mist, vapors and spray
Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Skin

IF ON SKIN: Wash with plenty of water and soap
If skin irritation or rash occurs: Get medical advice and attention
Take off contaminated clothing and wash it before reuse

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents and container to an approved waste disposal plant

Other information

Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing.

Unknown acute toxicity 5 % of the mixture consists of ingredient(s) of unknown toxicity

3. Composition/information on Ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Limestone	1317-65-3	45 - 70	-	-
Carbonic acid, calcium salt (1:1)	471-34-1	3 - 7	-	-
Trimethoxyvinylsilane	2768-02-7	0.5 - 1.5	-	-
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	0.1 - 1	-	-
Quartz	14808-60-7	0.1 - 1	-	-
Tin, dibutylbis(2,4-pentanedionato-O,O')-, (OC-6-11)-	22673-19-4	0.1 - 1	-	-

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*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First Aid Measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. If medical advice is needed, have product container or label at hand.
Inhalation	Remove to fresh air. If symptoms persist, call a physician.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin contact	Immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. May cause sensitization by skin contact. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Call a physician immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Small amounts of toxic methanol are released by hydrolysis.

Most important symptoms and effects, both acute and delayed

Symptoms May cause allergic skin reaction. Erythema (skin redness). Hives. Itching.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically. Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing. May cause sensitization by skin contact.

5. Fire-Fighting Measures

Suitable extinguishing media	Water spray, carbon dioxide (CO ₂), dry chemical, alcohol-resistant foam.
Unsuitable extinguishing media	Full water jet. CAUTION: Use of water spray when fighting fire may be inefficient.
Specific hazards arising from the chemical	Thermal decomposition can lead to release of irritating gases and vapors. Product is or contains a sensitizer. May cause sensitization by skin contact.
Hazardous combustion products	Carbon oxides. Carbon monoxide. Carbon dioxide (CO ₂). Sulfur oxides. Silicon dioxide.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

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6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Do not touch or walk through spilled material. Ensure adequate ventilation. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling.

Other information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. Do not allow to enter into soil/subsoil. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Methods for cleaning up Use personal protective equipment as required. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

Reference to other sections See section 8 for more information. See section 13 for more information.

7. Handling and Storage

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep/store only in original container. Keep away from food, drink and animal feeding stuffs. Protect from moisture.

Recommended storage temperature Keep at temperatures between 50 and 95 °F / 10 and 35 °C.

Reference to other sections Section 10: STABILITY AND REACTIVITY

8. Exposure Controls/Personal Protection

Control parameters

Exposure Limits Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing. This product contains substances which in their raw state are powder form, however

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in this product they are in a non-respirable form. Inhalation of powder/dust particles is unlikely to occur from exposure to this product.

Chemical name	Alberta	British Columbia	Ontario TWA	Quebec
Limestone 1317-65-3	TWA: 10 mg/m ³	TWA: 10 mg/m ³ TWA: 3 mg/m ³ STEL: 20 mg/m ³		TWA: 10 mg/m ³
Carbonic acid, calcium salt (1:1) 471-34-1	TWA: 10 mg/m ³			TWA: 10 mg/m ³
Trimethoxyvinylsilane 2768-02-7			STEL: 10 ppm STEL: 60 mg/m ³	
Quartz 14808-60-7	TWA: 0.025 mg/m ³	TWA: 0.025 mg/m ³	TWA: 0.10 mg/m ³	TWA: 0.1 mg/m ³
Tin, dibutylbis(2,4-pentanedio nato-O,O')-, (OC-6-11)- 22673-19-4	TWA: 0.1 mg/m ³ STEL: 0.2 mg/m ³ Skin	TWA: 0.1 mg/m ³ STEL: 0.2 mg/m ³ Skin	TWA: 0.1 mg/m ³ STEL: 0.2 mg/m ³ Skin	TWA: 0.1 mg/m ³ STEL: 0.2 mg/m ³ Skin

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable chemical resistant gloves. The selection of suitable gloves does not only depend on the material, but also on further marks of quality and various manufacturers.

Skin and body protection Wear suitable protective clothing.

Respiratory protection Use appropriate respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General hygiene considerations Wear suitable gloves and eye/face protection. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing. Wash hands before breaks and immediately after handling the product. Take off contaminated clothing and wash it before reuse. Regular cleaning of equipment, work area and clothing is recommended.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state Liquid
Appearance Paste
Color Beige
Odor Fruity
Odor threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	

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pH (as aqueous solution)	No data available	
Melting point / freezing point	No data available	
Initial boiling point and boiling range	No data available	
Flash point	> 110 °C / 230 °F	ASTM D3278
Evaporation rate	No data available	
Flammability	Not applicable for liquids	
Flammability Limit in Air		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	
Relative vapor density	No data available	
Relative density	No data available	
Water solubility	No data available	
Solubility in Other Solvents	No data available	
Partition coefficient	No data available	
Autoignition temperature	No data available	
Decomposition temperature		
Kinematic viscosity	No data available	
Dynamic viscosity	No data available	
Explosive properties	No information available.	
Oxidizing properties	No information available.	
<u>Other information</u>		
Softening Point	No information available	
Molecular weight	No information available	
Density	1.710 g/cm ³	
Bulk density	No information available	
Solid content (%)	96.8	
VOC content		0 g/L

10. Stability and Reactivity

Reactivity	Product cures with moisture.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Protect from moisture. Exposure to air or moisture over prolonged periods. Do not freeze. Keep away from open flames, hot surfaces and sources of ignition.
Incompatible materials	Water.
Hazardous decomposition products	Carbon oxides. Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing.

11. Toxicological Information

Information on likely routes of exposure

Product Information

Inhalation Based on available data, the classification criteria are not met.

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Eye contact Based on available data, the classification criteria are not met.

Skin contact May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion Based on available data, the classification criteria are not met.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document mg/kg

ATEmix (dermal) 63,457.50 mg/kg

mg/l
ATEmix (inhalation-vapor) 875.10 mg/l

Unknown acute toxicity

5 % of the mixture consists of ingredient(s) of unknown toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Limestone 1317-65-3	>5000 mg/kg (Rattus)	-	-
Carbonic acid, calcium salt (1:1) 471-34-1	LD50 > 2000 mg/kg (Rattus) OECD 420	LD50 >2000 mg/kg (Rattus) OECD 402	LC50 (4h) >3mg/ml (Rattus)
Trimethoxyvinylsilane 2768-02-7	LD50 = 7120 -7236 mg/kg (Rattus) OECD 401	= 3540 mg/kg (Oryctolagus cuniculus)	LC50 (4hr) 16.8 mg/l (Rattus) OECD TG 403
N-(3-(trimethoxysilyl)propyl)ethy lenediamine 1760-24-3	=2295 mg/kg (Rattus)	>2000 mg/Kg (Rattus)	LC50 4H (Aerosol)1.5 - 2.44 mg/L air
Quartz 14808-60-7	=6450 mg/kg (Rattus)	-	-
Tin, dibutylbis(2,4-pentanedionato-O ,O')-, (OC-6-11)- 22673-19-4	LD50 = 1864 mg/kg (Rattus) OECD 401	LD50 > 2000 mg/kg (Rattus) OECD 402	LC50 4hr: 16.8 mg/l (Rattus) (OECD TG 403)

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

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No information available.

Carcinogenicity Based on available data, the classification criteria are not met.

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

Chemical name	ACGIH	IARC	NTP	OSHA
Quartz 14808-60-7	A2	Group 1	Known	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known 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.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Target organ effects	Eyes, Respiratory system, Skin.
Subchronic toxicity	No information available.
Neurological effects	No information available.
Other adverse effects	No information available.
Aspiration hazard	No information available.

12. Ecological Information

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Limestone 1317-65-3	CE50 (72h) >200mg/L Algae (Desmodesmus subspicatus)	CL50 (96h)>10000mg/L (Oncorhynchus mykiss)	-	CE50 (48h) >1000 mg/L Daphnia Magna
Carbonic acid, calcium salt (1:1) 471-34-1	IC50 72H Algae >1000 mg/l	CL50 96H >1000 mg/l	-	EC50 48H Daphnia >1000 mg/l
Trimethoxyvinylsilane 2768-02-7	EC 50 (72h) > 957 mg/l (Desmodesmus subspicatus) EU Method C.3	LC50 (96h) = 191 mg/l (Oncorhynchus mykiss)	-	EC50(48hr) 168.7mg/l (Daphnia magna)
N-(3-(trimethoxysilyl)propyl)ethylenediamine	-	LC50 (96H) =597 mg/L (Danio rerio)Semi-static	-	EC50 (48h) =81mg/L Daphnia magna Static

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1760-24-3				
Tin, dibutylbis(2,4-pentanedio nato-O,O')-, (OC-6-11)- 22673-19-4	>2.0 mg/l	>2.0 mg/l	-	EC50 0.0036 mg/l 48Hr (Daphnia magna)

Persistence and degradability No information available.

Component Information			
Trimethoxyvinylsilane (2768-02-7)			
Method	Exposure time	Value	Results
OECD Test No. 301F: Ready Biodegradability: Manometric Respirometry Test (TG 301 F)	28 days	BOD	51 % Not readily biodegradable

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
Limestone 1317-65-3	0.9
Trimethoxyvinylsilane 2768-02-7	1.1
N-(3-(trimethoxysilyl)propyl)ethylenediamine 1760-24-3	-0.3

Mobility in soil No information available

Other adverse effects No information available.

13. Disposal Considerations

Disposal methods

Waste from residues/unused products Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

Contaminated packaging Handle contaminated packages in the same way as the product itself.

14. Transport Information

Note: The information shown here, may not always agree with the bill of lading shipping description for the material. The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments made in non-bulk packages (see regulatory definition) 49 CFR 171.4(c) "Exceptions. Except when all or part of the transportation is by vessel, the requirements of this subchapter specific to marine pollutants do not apply to non-bulk packagings transported by motor vehicle, rail car or aircraft."

TDG

UN number or ID number UN3082
Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III

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Special Provisions 16, 99
Description UN3082, Environmentally hazardous substance, liquid, n.o.s.(Tin, dibutylbis(2,4-pentanedionato-O,O')-, (OC-6-11)-), 9, III

IATA

UN number or ID number UN3082
Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
ERG Code 9L
Special Provisions A97, A158, A197
Description UN3082, Environmentally hazardous substance, liquid, n.o.s.(Tin, dibutylbis(2,4-pentanedionato-O,O')-, (OC-6-11)-), 9, III

IMDG

UN number or ID number UN3082
Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
EmS-No F-A, S-F
Special Provisions 274, 335, 969
Description UN3082, Environmentally hazardous substance, liquid, n.o.s.(Tin, dibutylbis(2,4-pentanedionato-O,O')-, (OC-6-11)-), 9, III, Marine Pollutant

15. Regulatory Information

NPRI - National Pollutant Release Inventory

No component is listed on the NPRI above the threshold

European Union

SVHC: Substances of Very High Concern for Authorization:

This product contains one or more candidate substance(s) of very high concern (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Chemical name	CAS No	SVHC candidates
Tin, dibutylbis(2,4-pentanedionato-O,O')-, (OC-6-11)-	22673-19-4	X

Restrictions of Use of Hazardous Substances (RoHS) Directive 2011/65/EU

This product does not contain Lead, Cadmium, Mercury, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-Ethylhexyl) phthalate (DEHP), Benzyl butyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP) above the regulated limit mentioned in this regulation. This document is based on the information given to us by our own suppliers at the date of this document.

International Inventories

TSCA	Listed
DSL	Listed

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL - Canadian Domestic Substances List

Listed - The components of this product are either listed or exempt from listing on inventory.

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Not Listed - One or more components of this product are not listed on inventory.

16. Other information, including date of preparation of the last revision

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Revision date	10-Feb-2023
Revision Note	No information available.
Prepared By	Product Safety & Regulatory Affairs

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The Company adheres to a strict policy that applies to the use of any of its products in medical device applications. This policy can be found at <https://www.arkema.com/global/en/social-responsibility/innovation-and-sustainable-solutions/responsible-product-management/medical-device-policy/> which is incorporated herein by reference and made a part hereof. Except as expressly authorized, the Company (i) has designated specific medical grade compositions for products used in medical device applications and Company products not so designated are not authorized for use in medical device applications and (ii) strictly prohibits the use of any of its products in medical device applications that are implanted in the body or in contact with bodily fluids or tissues for greater than 30 days. The Company does not design, manufacture and/or directly sell any medical devices. The Company does not co-design, or offer assistance to any purchaser of its products, in their design, manufacture and/or sale of products for medical devices. It is the sole responsibility of the manufacturer of medical devices to determine the suitability of all raw material, products and components, including any medical grade products, in order to ensure that the medical device is safe for end-use and complies with all applicable legal and regulatory requirements and to conduct all necessary tests and inspections.

End of Safety Data Sheet