

1. Identification

Product identifier	GREENSET-94 P
Other means of identification	
Brand Code	5618
Recommended use	For Industrial Use Only
Recommended restrictions	Users should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	HarbisonWalker International	
Address	1305 Cherrington Parkway, Suite 100 Moon Township Pennsylvania 15108 US	
Telephone	General Phone:	412-375-6600
Website	www.thinkHWI.com	
Emergency phone number	Not available.	

Supplier Not available.

2. Hazard identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Carcinogenicity	Category 1A
	Specific target organ toxicity, repeated exposure	Category 1
	Health hazards not otherwise classified	Category 1
Environmental hazards	Not classified.	

Label elements



Signal word	Danger
Hazard statement	Causes severe skin burns and eye damage. Causes serious eye damage. May cause cancer. Causes damage to organs through prolonged or repeated exposure. Presents a health hazard which is not otherwise classified.

Precautionary statement

Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.
Response	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. 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. Immediately call a POISON CENTER/doctor. Wash contaminated clothing before reuse.
Storage	Store in cool place.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
ALPHA-ALUMINA		1344-28-1	70 - 90
ALUMINUM, WATER SOLUBLE SALTS, N.O.S.		13530-50-2	2.5 - 10
PHOSPHORIC ACID		7664-38-2	2.5 - 10
Bentonite		1302-78-9	1 - 2.5
Boric Acid		10043-35-3	1 - 2.5
SILICA, CRYSTALLINE, QUARTZ		14808-60-7	< 0.5
Other components below reportable levels			10 - 25

Crystalline silica may be present at low concentrations; most of this is encapsulated in the coarse aggregate or as part of the clays or sands.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Rinse skin with water/shower. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
General information	If you feel unwell, seek medical advice (show the label where possible).

5. Fire-fighting measures

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	Not available.
Specific hazards arising from the chemical	Not applicable.
Special protective equipment and precautions for firefighters	Not available.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Material can be slippery when wet. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Sweep or scoop up and remove.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Do not get in eyes, on skin, or on clothing. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
ALPHA-ALUMINA (CAS 1344-28-1)	TWA	1 mg/m ³	Respirable fraction.
ALUMINUM, WATER SOLUBLE SALTS, N.O.S. (CAS 13530-50-2)	TWA	1 mg/m ³	Respirable fraction.
Boric Acid (CAS 10043-35-3)	STEL	6 mg/m ³	Inhalable fraction.
	TWA	2 mg/m ³	Inhalable fraction.
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m ³	
	TWA	1 mg/m ³	
SILICA, CRYSTALLINE, QUARTZ (CAS 14808-60-7)	TWA	0.025 mg/m ³	Respirable fraction.

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
ALPHA-ALUMINA (CAS 1344-28-1)	TWA	10 mg/m ³	
ALUMINUM, WATER SOLUBLE SALTS, N.O.S. (CAS 13530-50-2)	TWA	2 mg/m ³	
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m ³	
	TWA	1 mg/m ³	
SILICA, CRYSTALLINE, QUARTZ (CAS 14808-60-7)	TWA	0.025 mg/m ³	Respirable particles.

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
ALUMINUM, WATER SOLUBLE SALTS, N.O.S. (CAS 13530-50-2)	TWA	1 mg/m ³	Respirable.
Boric Acid (CAS 10043-35-3)	STEL	6 mg/m ³	Inhalable
	TWA	2 mg/m ³	Inhalable
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m ³	
	TWA	1 mg/m ³	
SILICA, CRYSTALLINE, QUARTZ (CAS 14808-60-7)	TWA	0.025 mg/m ³	Respirable fraction.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
ALPHA-ALUMINA (CAS 1344-28-1)	TWA	1 mg/m ³	Respirable fraction.
ALUMINUM, WATER SOLUBLE SALTS, N.O.S. (CAS 13530-50-2)	TWA	1 mg/m ³	Respirable fraction.
Boric Acid (CAS 10043-35-3)	STEL	6 mg/m ³	Inhalable fraction.
	TWA	2 mg/m ³	Inhalable fraction.
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m ³	
	TWA	1 mg/m ³	

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
SILICA, CRYSTALLINE, QUARTZ (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
ALUMINUM, WATER SOLUBLE SALTS, N.O.S. (CAS 13530-50-2)	TWA	1 mg/m3	Respirable fraction.
Boric Acid (CAS 10043-35-3)	STEL	6 mg/m3	Inhalable fraction.
	TWA	2 mg/m3	Inhalable fraction.
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m3	
	TWA	1 mg/m3	
SILICA, CRYSTALLINE, QUARTZ (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable fraction.

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value	Form
ALPHA-ALUMINA (CAS 1344-28-1)	TWA	10 mg/m3	Total dust.
ALUMINUM, WATER SOLUBLE SALTS, N.O.S. (CAS 13530-50-2)	TWA	2 mg/m3	
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m3	
	TWA	1 mg/m3	
SILICA, CRYSTALLINE, QUARTZ (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable dust.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled. Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled. Occupational Exposure Limits are not relevant to the current physical form of the product.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection

Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.



General hygiene considerations

Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state	Solid.
Form	Paste.
Color	Not available.

Odor Not available.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid Contact with incompatible materials.

Incompatible materials Acids. Chlorine.
Incompatibility is based strictly upon potential theoretical reactions between chemicals and may not be specific to industrial application exposure.

Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation May cause irritation to the respiratory system.

Skin contact Causes severe skin burns.

Eye contact Causes serious eye damage.

Ingestion Causes digestive tract burns.

Symptoms related to the physical, chemical and toxicological characteristics Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity Not known.

Components	Species	Test Results
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Boric Acid (CAS 10043-35-3)

Acute

Inhalation

LC50	Rat	> 0.002 mg/l, 4 Hours
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Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitization

Canada - Alberta OELs: Irritant

ALUMINUM, WATER SOLUBLE SALTS, N.O.S. (CAS 13530-50-2) Irritant

PHOSPHORIC ACID (CAS 7664-38-2) Irritant

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. May cause cancer. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

ACGIH Carcinogens

ALPHA-ALUMINA (CAS 1344-28-1) A4 Not classifiable as a human carcinogen.

ALUMINUM, WATER SOLUBLE SALTS, N.O.S. (CAS 13530-50-2) A4 Not classifiable as a human carcinogen.

Boric Acid (CAS 10043-35-3) A4 Not classifiable as a human carcinogen.

SILICA, CRYSTALLINE, QUARTZ (CAS 14808-60-7) A2 Suspected human carcinogen.

Canada - Alberta OELs: Carcinogen category

SILICA, CRYSTALLINE, QUARTZ (CAS 14808-60-7) Suspected human carcinogen.

Canada - Manitoba OELs: carcinogenicity

ALPHA-ALUMINA (CAS 1344-28-1) Not classifiable as a human carcinogen.

ALUMINUM, WATER SOLUBLE SALTS, N.O.S. (CAS 13530-50-2) Not classifiable as a human carcinogen.

Boric Acid (CAS 10043-35-3) Not classifiable as a human carcinogen.

SILICA, CRYSTALLINE, QUARTZ (CAS 14808-60-7) Suspected human carcinogen.

Canada - Quebec OELs: Carcinogen category

SILICA, CRYSTALLINE, QUARTZ (CAS 14808-60-7) Suspected carcinogenic effect in humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

SILICA, CRYSTALLINE, QUARTZ (CAS 14808-60-7) 1 Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

SILICA, CRYSTALLINE, QUARTZ (CAS 14808-60-7) Known To Be Human Carcinogen.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Developmental effects	
SILICA, CRYSTALLINE, QUARTZ	0
Developmental effects - EU category	
SILICA, CRYSTALLINE, QUARTZ	0
Embryotoxicity	
SILICA, CRYSTALLINE, QUARTZ	0
Reproductivity	
SILICA, CRYSTALLINE, QUARTZ	0

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard Not an aspiration hazard.

Chronic effects Causes damage to organs through prolonged or repeated exposure. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

Hazardous waste code Since this product is used in several industries, no Waste Code can be provided by the supplier. The Waste Code should be determined in arrangement with your waste disposal partner or the responsible authority.

Waste from residues / unused products Not available.

Contaminated packaging Not available.

14. Transport information

TDG
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

Canadian regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date 08-20-2019

Version # 01

Disclaimer This information is based on our present knowledge on creation date. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Revision information Product and Company Identification: Product Codes
Composition / Information on Ingredients: Ingredients
Toxicological Information: Toxicological Data
Regulatory Information: Hazard Symbol - Labeling
HazReg Data: Europe - EU
GHS: Classification
REACH: Registration Substance