



1. Identification

1. Identification			
Product identifier	GREFPATCH 85; GREFPATCH 85 (SPECIA	L WET); GREFPATCH 85 (WET)	
Other means of identification			
Brand Code	5731, 7530, 6455		
Recommended use	For Industrial or Professional Use Only		
Recommended restrictions	Avoid dry cutting, blasting, or dust generation		
Manufacturer/Importer/Supplier	/Distributor information		
Manufacturer			
Company name Address	HarbisonWalker International 1305 Cherrington Parkway, Suite 100 Moon Township Pennsylvania		
	15108 US		
Telephone	General Phone: 412-375-6600		
Website	www.thinkHWI.com		
Emergency phone number	CHEMTREC 24 HOUR 1-800-424-93 EMERGENCY #	300	
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 serious eye damage. May cause cancer. or repeated exposure. Presents a health hazard	
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 away from incompatible materials.		
Disposal	Dispose of contents/container in accordance	with local/regional/national/international regulations.	
Other hazards	None known.		
Material name: GREEPATCH 85: GR	EEPATCH 85 (SPECIAL WET): GREEPATCH 85 (WE		

Users should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Overexposure to the respirable dust of crystalline silica (quartz or cristobalite, less than or equal to 5 microns in size) may lead to silicosis in humans, which is a progressive and irreversible lung disease. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
ALPHA-ALUMINA		1344-28-1	60 - 80
Bentonite		1302-78-9	2.5 - 10
Kyanite		1302-76-7	2.5 - 10
PHOSPHORIC ACID		7664-38-2	2.5 - 10
SILICA, AMORPHOUS, FUMED	Fumed Silica Silica, crystalline free	7631-86-9	2.5 - 10
SILICA, CRYSTALLINE, QUARTZ		14808-60-7	2.5 - 10
Aluminium Hydroxide		21645-51-2	1 - 2.5
Titanium Dioxide		13463-67-7	1 - 2.5
SILICA, CRYSTALLINE, CRISTOBALITE		14464-46-1	0.1 - 2.5

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	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. 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 exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
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 proceduresKeep 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	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
	Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
	Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.
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	Туре	Value	Form
ALPHA-ALUMINA (CAS 1344-28-1)	TWA	1 mg/m3	Respirable fraction.
Aluminium Hydroxide (CAS 21645-51-2)	TWA	1 mg/m3	Respirable fraction.
Kyanite (CAS 1302-76-7)	TWA	1 mg/m3	Respirable fraction.
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m3	
	TWA	1 mg/m3	
SILICA, CRYSTALLINE, CRISTOBALITE (CAS 14464-46-1)	TWA	0.025 mg/m3	Respirable fraction.
SILICA, CRYSTALLINE, QUARTZ (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
Titanium Dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

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

Components	Туре	Value	Form
ALPHA-ALUMINA (CAS 1344-28-1)	TWA	10 mg/m3	
Aluminium Hydroxide (CAS 21645-51-2)	TWA	3 mg/m3	Respirable particles.
		10 mg/m3	Total particulate.
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m3	
	TWA	1 mg/m3	
SILICA, CRYSTALLINE, CRISTOBALITE (CAS 14464-46-1)	TWA	0.025 mg/m3	Respirable.
		0.025 mg/m3	Respirable particles.
SILICA, CRYSTALLINE, QUARTZ (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable particles.
Titanium Dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

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

Components	Туре	Value	Form
ALPHA-ALUMINA (CAS 1344-28-1)	TWA	1 mg/m3	Respirable.
Kyanite (CAS 1302-76-7)	TWA	1 mg/m3	Respirable.
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m3	
	TWA	1 mg/m3	
SILICA, AMORPHOUS, FUMED (CAS 7631-86-9)	TWA	4 mg/m3	Total
		1.5 mg/m3	Respirable.
SILICA, CRYSTALLINE, CRISTOBALITE (CAS 14464-46-1)	TWA	0.025 mg/m3	Respirable fraction.
SILICA, CRYSTALLINE, QUARTZ (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
Titanium Dioxide (CAS 13463-67-7)	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Total dust.

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

Components	Туре	Value	Form
ALPHA-ALUMINA (CAS 1344-28-1)	TWA	1 mg/m3	Respirable fraction.
Aluminium Hydroxide (CAS 21645-51-2)	TWA	1 mg/m3	Respirable fraction.
Kyanite (CAS 1302-76-7)	TWA	1 mg/m3	Respirable fraction.
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m3	
	TWA	1 mg/m3	
SILICA, CRYSTALLINE, CRISTOBALITE (CAS 14464-46-1)	TWA	0.025 mg/m3	Respirable fraction.
SILICA, CRYSTALLINE, QUARTZ (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
Titanium Dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

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

Components	Туре	Value	Form
ALPHA-ALUMINA (CAS 1344-28-1)	TWA	1 mg/m3	Respirable fraction.
Kyanite (CAS 1302-76-7)	TWA	1 mg/m3	Respirable fraction.
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m3	
	TWA	1 mg/m3	
SILICA, CRYSTALLINE, CRISTOBALITE (CAS 14464-46-1)	TWA	0.05 mg/m3	Respirable fraction.
SILICA, CRYSTALLINE, QUARTZ (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable fraction.
Titanium Dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

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

Components	Туре	Value	Form
ALPHA-ALUMINA (CAS 1344-28-1)	TWA	10 mg/m3	Total dust.

Canada. Quebec OELs. (I	Ministry of Labor - Regulation respecting	occupational health and safety)
Components	Type	Valuo Fo

Components	Туре	Value	Form
Aluminium Hydroxide (CAS 21645-51-2)	TWA	10 mg/m3	Total dust.
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m3	
	TWA	1 mg/m3	
SILICA, AMORPHOUS, FUMED (CAS 7631-86-9)	TWA	6 mg/m3	Respirable dust.
SILICA, CRYSTALLINE, CRISTOBALITE (CAS 14464-46-1)	TWA	0.05 mg/m3	Respirable dust.
SILICA, CRYSTALLINE, QUARTZ (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable dust.
Titanium Dioxide (CAS 13463-67-7)	TWA	10 mg/m3	Total dust.
Biological limit values	No biological exposure limits noted for	or the ingredient(s).	
Exposure guidelines	Occupational exposure to nuisance of should be monitored and controlled and respirable crystalline silica shoul Occupational Exposure Limits are no	Occupational exposure to nuisa d be monitored and controlled.	nce dust (total and respirable)
Appropriate engineering controls	Good general ventilation (typically 10 should be matched to conditions. If a or other engineering controls to main exposure limits have not been establ wash facilities and emergency showe	pplicable, use process enclosu tain airborne levels below recor shed, maintain airborne levels	res, local exhaust ventilation, nmended exposure limits. If to an acceptable level. Eye
Individual protection measures,	, such as personal protective equipm	ent	
Eye/face protection	Wear safety glasses with side shields	s (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 respine exceeding the exposure limits.	ator if there is a risk of exposur	e to dust/fume at levels
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.
рН	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

Opper/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.

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	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. 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.
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

PHOSPHORIC ACID (CAS 7664-38-2)	Irritant
SILICA, CRYSTALLINE, CRISTOBALITE (CAS	Irritant
14464-46-1)	
Titanium Dioxide (CAS 13463-67-7)	Irritant
Respiratory sensitization Not a respiratory sensitize	er.

Skin sensitization	This product is not expected to	a cause skin sonsitization
Germ cell mutagenicity		product or any components present at greater than 0.1% are
	mutagenic or genotoxic.	
Carcinogenicity	inhaled from occupational sou overall evaluation, IARC noted circumstances studied. Carcin crystalline silica or on external polymorphs." (IARC Monogra humans, Silica, silicates dust a 2003, SCOEL (the EU Scientif main effect in humans of the in sufficient information to conclu silicosis (and, apparently, not in the ceramic industry). Ther risk" (SCOEL SUM Doc 94-f protection against silicosis car occupational exposure limits.	al Agency for Research on Cancer) concluded that crystalline silica rces can cause lung cancer in humans. However in making the d that "carcinogenicity was not detected in all industrial logenicity may be dependent on inherent characteristics of the l factors affecting its biological activity or distribution of its phs on the evaluation of the carcinogenic risks of chemicals to and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June fic Committee on Occupational Exposure Limits) concluded that the nhalation of respirable crystalline silica dust is silicosis. "There is ude that the relative risk of lung cancer is increased in persons with in employees without silicosis exposed to silica dust in quarries and efore, preventing the onset of silicosis will also reduce the cancer final, June 2003) According to the current state of the art, worker n be consistently assured by respecting the existing regulatory May cause cancer. Occupational exposure to respirable dust and buld be monitored and controlled.
ACGIH Carcinogens		
ALPHA-ALUMINA (CAS	1344-28-1)	A4 Not classifiable as a human carcinogen.
Aluminium Hydroxide (CA	,	A4 Not classifiable as a human carcinogen.
Kyanite (CAS 1302-76-7)		A4 Not classifiable as a human carcinogen.
SILICA, CRYSTALLINE, 14464-46-1)	CRISTOBALITE (CAS	A2 Suspected human carcinogen.
,	QUARTZ (CAS 14808-60-7)	A2 Suspected human carcinogen.
Titanium Dioxide (CAS 1		A4 Not classifiable as a human carcinogen.
Canada - Alberta OELs: Car	• • •	
SILICA, CRYSTALLINE, 14464-46-1)		Suspected human carcinogen.
Canada - Manitoba OELs: c	QUARTZ (CAS 14808-60-7)	Suspected human carcinogen.
ALPHA-ALUMINA (CAS		Not classificate as a human carainagan
ALFHA-ALOMINA (CAS Aluminium Hydroxide (CA		Not classifiable as a human carcinogen. Not classifiable as a human carcinogen.
Kyanite (CAS 1302-76-7)		Not classifiable as a human carcinogen.
SILICA, CRYSTALLINE, 14464-46-1)	CRISTOBALITE (CAS	Suspected human carcinogen.
	QUARTZ (CAS 14808-60-7)	Suspected human carcinogen.
Titanium Dioxide (CAS 13		Not classifiable as a human carcinogen.
Canada - Quebec OELs: Ca		Detected excernance effect in enimely
SILICA, CRYSTALLINE, 14464-46-1) SILICA, CRYSTALLINE	QUARTZ (CAS 14808-60-7)	Detected carcinogenic effect in animals. Suspected carcinogenic effect in humans.
	Evaluation of Carcinogenicity	
• •	FUMED (CAS 7631-86-9)	3 Not classifiable as to carcinogenicity to humans.
SILICA, CRYSTALLINE, 14464-46-1)	· · · · · · · · · · · · · · · · · · ·	1 Carcinogenic to humans.
Titanium Dioxide (CAS 1		1 Carcinogenic to humans. 2B Possibly carcinogenic to humans.
••	ogram (NTP) Report on Carcin	-
SILICA, CRYSTALLINE, 14464-46-1)	CRISTOBALITE (CAS	Known To Be Human Carcinogen.
SILICA, CRYSTALLINE,	QUARTZ (CAS 14808-60-7)	Reasonably Anticipated to be a Human Carcinogen. Known To Be Human Carcinogen.
Reproductive toxicity	This product is not expected to	o cause reproductive or developmental effects.
Developmental effects SILICA, CRYSTALLINE,		0
Developmental effects - SILICA, CRYSTALLINE,		0
Embryotoxicity SILICA, CRYSTALLINE, Boproductivity	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.

ΙΑΤΑ

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according toNot applicable.Annex II of MARPOL 73/78 andthe IBC Code

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) Canada Domestic Substances List (DSL) Canada Non-Domestic Substances List (NDSL) China Inventory of Existing Chemical Substances in China (IECSC) Europe European Inventory of Existing Commercial Chemical Substances (EINECS) European List of Notified Chemical Substances (ELINCS) Europe Japan Inventory of Existing and New Chemical Substances (ENCS) Existing Chemicals List (ECL) Korea

Yes Yes No No Yes New Zealand New Zealand Inventory Yes Philippines Philippine Inventory of Chemicals and Chemical Substances No (PICCS) Taiwan Taiwan Chemical Substance Inventory (TCSI) Yes

Toxic Substances Control Act (TSCA) Inventory United States & Puerto Rico

*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	06-04-2019
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

Yes

Yes

No

No