SAFETY DATA SHEET



1. Identification

Product identifier GREENLITE EXPRESS-30 ADTECH

Other means of identification

Brand Code 5526

Recommended use For Industrial Use Only

Recommended restrictionsUsers 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 CHEMTREC 24 HOUR 1-800-424-9300

EMERGENCY #

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Carcinogenicity Category 1A

Specific target organ toxicity, repeated Category 1

exposure

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement May cause cancer. Causes damage to organs through prolonged or repeated exposure.

Precautionary statement

Prevention 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 exposed or concerned: Get medical advice/attention.

Storage Not available.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise

classified (HNOC)

None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|-------------------------------|--------------------------|------------|---------|
| Aluminium Oxide (Non-Fibrous) | | 1344-28-1 | 20 - 40 |
| Kyanite | | 1302-76-7 | 10 - 20 |
| Mullite | | 1302-93-8 | 10 - 20 |

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| Chemical name | Common name and synonyms | CAS number | % |
|--|---|------------|----------|
| Amorphous Silica | SILICA, AMORPHOUS, FUMED SILICA (CRYSTALLINE FREE) | 7631-86-9 | 2.5 - 10 |
| Cement, Alumina, Chemicals | | 65997-16-2 | 2.5 - 10 |
| Cristobalite | | 14464-46-1 | 2.5 - 10 |
| Fumes, Silica | | 69012-64-2 | 2.5 - 10 |
| Quartz (SiO2) | | 14808-60-7 | 2.5 - 10 |
| Kaolin | | 1332-58-7 | 1 - 2.5 |
| Titanium Dioxide | | 13463-67-7 | 1 - 2.5 |
| Other components below reportable levels | | | 10 - 20 |

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 Wash off with soap and water. Get medical attention if irritation develops and persists.

Prolonged exposure may cause chronic effects.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important

symptoms/effects, acute and

delayed

Indication of immediate medical attention and special

treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation.

Symptoms may be delayed.

5. Fire-fighting measures

Suitable extinguishing media

Unsuitable extinguishing

media

Specific hazards arising from

the chemical

Special protective equipment and precautions for firefighters

Use fire-extinguishing media appropriate for surrounding materials.

Not available.

Not applicable.

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. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Stop the flow of material, if this is without risk. Following product recovery, flush area with water. 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

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. Avoid prolonged exposure. 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 original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

| Components | r Contaminants (29 CFR 1910. Type | , Value | Form |
|---|--------------------------------------|-------------------------|-------------------------|
| Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1) | PEL | 5 mg/m3 | Respirable fraction. |
| Cristobalite (CAS | PEL | 15 mg/m3 0.05 mg/m3 | Total dust. |
| 14464-46-1) Kaolin (CAS 1332-58-7) | PEL | 5 mg/m3 15 mg/m3 | Respirable fraction. |
| Quartz (SiO2) (CAS 14808-60-7) | PEL | 0.05 mg/m3 | Total dust. |
| Titanium Dioxide (CAS 13463-67-7) | PEL | 15 mg/m3 | Total dust. |
| US. OSHA Table Z-3 (29 CFR 1910 Components | 0.1000) Type | Value | Form |
| Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1) | TWA | 5 mg/m3 | Respirable fraction. |
| 1344-20-1) | | 15 mg/m3 | Total dust. |
| | | 50 mppcf | Total dust. |
| | | 15 mppcf | Respirable fraction. |
| Amorphous Silica (CAS 7631-86-9) | TWA | 0.8 mg/m3 | p |
| | | 20 mppcf | |
| Cristobalite (CAS 14464-46-1) | TWA | 0.05 mg/m3 1.2 mppcf | Respirable. Respirable. |
| Fumes, Silica (CAS 69012-64-2) | TWA | 0.8 mg/m3 | ποσμιανίο. |
| , | | 20 mppcf | |
| Kaolin (CAS 1332-58-7) | TWA | 5 mg/m3 | Respirable fraction. |
| | | 15 mg/m3 | Total dust. |
| | | 50 mppcf | Total dust. |
| | | 15 mppcf | Respirable fraction. |
| Quartz (SiO2) (CAS 14808-60-7) | TWA | 0.1 mg/m3 | Respirable. |
| | | 2.4 mppcf | Respirable. |
| Fitanium Dioxide (CAS 13463-67-7) | TWA | 5 mg/m3 | Respirable fraction. |
| | | 15 mg/m3 | Total dust. |
| | | 50 mppcf | Total dust. |
| US. ACGIH Threshold Limit Value | ne. | 15 mppcf | Respirable fraction. |
| Components | Туре | Value | Form |
| Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1) | TWA | 1 mg/m3 | Respirable fraction. |
| Cristobalite (CAS 14464-46-1) | TWA | 0.025 mg/m3 | Respirable fraction. |
| Kaolin (CAS 1332-58-7) | TWA | 2 mg/m3 | Respirable fraction. |
| Kyanite (CAS 1302-76-7) | TWA | 1 mg/m3 | Respirable fraction. |
| Mullite (CAS 1302-93-8) | TWA | 1 mg/m3 | Respirable fraction. |
| Quartz (SiO2) (CAS 14808-60-7) | TWA | 0.025 mg/m3 | Respirable fraction. |
| Titanium Dioxide (CAS 13463-67-7) | TWA | 10 mg/m3 | |
| US. NIOSH: Pocket Guide to Che | | Value | Form |
| Components | Туре | value | 1 01111 |

| US. NIOSH: Pocket Guide to Che Components | Type | Value | Form |
|---|------|------------|------------------|
| Fumes, Silica (CAS | TWA | 6 mg/m3 | |
| 69012-64-2) Kaolin (CAS 1332-58-7) | TWA | 5 mg/m3 | Respirable. |
| | | 10 mg/m3 | Total |
| Quartz (SiO2) (CAS 14808-60-7) | TWA | 0.05 mg/m3 | Respirable dust. |

No biological exposure limits noted for the ingredient(s). **Biological limit values**

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.

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.

Individual protection measures, such as personal protective equipment

Eye/face protection If contact is likely, safety glasses with side shields are recommended.

Skin protection

Wear appropriate chemical resistant gloves. Hand protection Other 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.

Wear appropriate thermal protective clothing, when necessary. Thermal hazards









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

Solid. Physical state **Form** Solid.

Color Not available. Odor Not available. Odor threshold Not available. Not available. pН Melting point/freezing point Not available. Initial boiling point and boiling Not available.

range

Not available. Flash point **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 Not available.

(n-octanol/water)

Auto-ignition temperatureNot available.Decomposition temperatureNot available.ViscosityNot 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. Powerful oxidizers. Fluorine. 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 Prolonged inhalation may be harmful.

Skin contact

No adverse effects due to skin contact are expected.

Eye contact

Direct contact with eyes may cause temporary irritation.

Ingestion Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics

Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity Not known.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye Direct contact with eyes may cause temporary irritation.

irritation

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

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

Germ cell mutagenicityNo data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

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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.

IARC Monographs. Overall Evaluation of Carcinogenicity

Amorphous Silica (CAS 7631-86-9) 3 Not classifiable as to carcinogenicity to humans.

Cristobalite (CAS 14464-46-1) 1 Carcinogenic to humans.

Fumes, Silica (CAS 69012-64-2)

3 Not classifiable as to carcinogenicity to humans.

Quartz (SiO2) (CAS 14808-60-7) 1 Carcinogenic to humans.

Titanium Dioxide (CAS 13463-67-7) 2B Possibly carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

Cristobalite (CAS 14464-46-1) Known To Be Human Carcinogen.

Reasonably Anticipated to be a Human Carcinogen.

Quartz (SiO2) (CAS 14808-60-7) Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

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

Developmental effects

Quartz (SiO2) 0

Developmental effects - EU category

Quartz (SiO2)
Embryotoxicity

Quartz (SiO2) C

Quartz (SiO2) 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 inhalation may be

harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

EcotoxicityThe 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 this product.

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 instructionsThis 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

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

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to

Not applicable.

Annex II of MARPOL 73/78 and

the IBC Code

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All chemical substances in this product are listed on the TSCA chemical substance inventory where required.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Nο

Hazard categories Immediate Hazard - No

Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

chemical

SARA 313 (TRI reporting)

| Chemical name | CAS number | % by wt. | |
|-------------------------------|------------|----------|--|
| Aluminium Oxide (Non-Fibrous) | 1344-28-1 | 20 - 40 | |

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

(SDWA)

Not regulated.

US state regulations WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Quartz (SiO2) (CAS 14808-60-7) Listed: October 1, 1988 Titanium Dioxide (CAS 13463-67-7) Listed: September 2, 2011

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Cristobalite (CAS 14464-46-1) Quartz (SiO2) (CAS 14808-60-7) Titanium Dioxide (CAS 13463-67-7)

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International Inventories

Philippines

Country(s) or region

| | michigan, manie | · · · · · · · · · · · · · · · · · · · |
|-------------|--|---------------------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | No |
| 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) | No |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | No |
| Korea | Existing Chemicals List (ECL) | No |
| New Zealand | New Zealand Inventory | Yes |
| | | |

(PICCS)

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

Philippine Inventory of Chemicals and Chemical Substances

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

Inventory name

Issue date 06-03-2015

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.

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On inventory (yes/no)*

No

No

^{*}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).