SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Trade name or designation of the mixture: GREENGUN-50 P PLUS
Registration number: -
Synonyms: None.
Brand Code: 5503
Issue date: 22-August-2016
Version number: 01

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For Industrial Use Only
Uses advised against: 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: HarbisonWalker International Limited
Address: Dock Road South
Bromborough
Wirral
United Kingdom

Division: United Kingdom
Contact person: Corporate Product Safety
General Phone: 44.(0)151.641.5900
Email address: REACH@thinkhwi.com

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Directive 67/548/EEC or 1999/45/EC as amended
This preparation does not meet the criteria for classification according to Directive 1999/45/EC as amended.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards
Serious eye damage/eye irritation Category 2 H319 - Causes serious eye irritation.

Hazard summary

Physical hazards: Not classified for physical hazards.
Health hazards: Not classified for health hazards. However, occupational exposure to the mixture or substance(s) may cause adverse health effects.
Environmental hazards: Not classified for hazards to the environment.
Specific hazards: Prolonged exposure may cause chronic effects.
Main symptoms: Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

2.2. Label elements
Label according to Regulation (EC) No. 1272/2008 as amended
Contains: Aluminium Tris(Dihydrogen Phosphate), Boric acid, Orthophosphoric Acid

Hazard pictograms

Signal word: Warning
Hazard statements:
Causes serious eye irritation.

**Precautionary statements**

**Prevention**

- P264: Wash thoroughly after handling.
- P280: Wear eye/face protection.

**Response**

- P305 + P351 + P338: If IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313: If eye irritation persists: Get medical advice/attention.

**Storage**

Store away from incompatible materials.

**Disposal**

Dispose of waste and residues in accordance with local authority requirements.

**Supplemental label information**

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.

### 2.3. Other hazards

None known.

**SECTION 3: Composition/information on ingredients**

#### 3.2. Mixtures

**General information**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>%</th>
<th>CAS-No. / EC No.</th>
<th>REACH Registration No.</th>
<th>INDEX No.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (Non-Fibrous)</td>
<td>5 - &lt; 10</td>
<td>1344-28-1, 215-691-6</td>
<td>01-2119529248-35-0134</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Classification:</strong> DSD: -</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLP: -</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orthophosphoric Acid</td>
<td>3 - &lt; 5</td>
<td>7664-38-2, 231-633-2</td>
<td>-</td>
<td>015-011-00-6</td>
<td>#</td>
</tr>
<tr>
<td><strong>Classification:</strong> DSD: C;R34</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLP: Skin Irrit. 2;H315, Eye Irrit. 2;H319</td>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminium Tris(Dihydrogen Phosphate)</td>
<td>1 - &lt; 3</td>
<td>13530-50-2, 236-875-2</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Classification:</strong> DSD: -</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLP: Eye Dam. 1;H318</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boric acid</td>
<td>&lt; 1</td>
<td>10043-35-3, 233-139-2</td>
<td>-</td>
<td>005-007-00-2</td>
<td></td>
</tr>
<tr>
<td><strong>Classification:</strong> DSD: Repr. Cat. 2;R60-61</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLP: -</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other components below reportable levels 80 - < 90

**List of abbreviations and symbols that may be used above**

- DSD: Directive 67/548/EEC.
- M: M-factor
- vPvB: very persistent and very bioaccumulative substance.
- PBT: persistent, bioaccumulative and toxic substance.
- #: This substance has been assigned Community workplace exposure limit(s).

**Composition comments**

Bentonite contains naturally occurring crystalline silica (not listed in Annex I of Directive 67/548/EEC) in quantities less than 6%. The full text for all R- and H-phrases is displayed in section 16.

**SECTION 4: First aid measures**

**General information**

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
4.1. Description of 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.

**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. If eye irritation persists: Get medical advice/attention. Rinse mouth. Get medical attention if symptoms occur.

**Ingestion**
Rinse mouth. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

4.3. Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

**General fire hazards**
Not available.

5.1. Extinguishing media

**Suitable extinguishing media**
Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media**
Not available.

5.2. Special hazards arising from the substance or mixture

Not available.

5.3. Advice for firefighters

**Special protective equipment for firefighters**
Not available.

**Special fire fighting procedures**
Not available.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel**
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. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8.

**For emergency responders**
Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material 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. Cover with plastic sheet to prevent spreading. 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.

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

**7.1. Precautions for safe handling**
Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Do not breathe dust. Avoid contact with eyes. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**7.2. Conditions for safe storage, including any incompatibilities**
Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

**7.3. Specific end use(s)**
Not available.
SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>UK. EH40 Workplace Exposure Limits (WELs)</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)</td>
<td>TWA</td>
<td>4 mg/m³ Respirable dust.</td>
</tr>
<tr>
<td>Aluminium Tris(Dihydrogen Phosphate) (CAS 13530-50-2)</td>
<td>TWA</td>
<td>10 mg/m³ Inhalable dust.</td>
</tr>
<tr>
<td>Cristobalite (CAS 14464-46-1)</td>
<td>TWA</td>
<td>2 mg/m³ Fiber.</td>
</tr>
<tr>
<td>Orthophosphoric Acid (CAS 7664-38-2)</td>
<td>STEL</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orthophosphoric Acid (CAS 7664-38-2)</td>
<td>STEL</td>
<td>2 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>1 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

Biological limit values

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

Recommended monitoring procedures

Follow standard monitoring procedures.

Derived no-effect level (DNEL)

Not available.

Predicted no effect concentrations (PNECs)

Not available.

Exposure guidelines

Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

8.2. Exposure controls

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. Provide eyewash station.

Individual protection measures, such as personal protective equipment

General information

Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

- Hand protection
  Wear appropriate chemical resistant gloves.
- Other
  Wear suitable protective clothing.

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.

Hygiene measures

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.

Environmental exposure controls

Environmental manager must be informed of all major releases.
SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance
  Physical state: Solid.
  Form: Solid.
  Colour: Not available.
  Odour: Not available.
  Odour 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.
  Vapour pressure: Not available.
  Vapour density: Not available.
  Relative density: Not available.
  Solubility(ies)
    Solubility (water): Not available.
    Solubility (other): Not available.
  Partition coefficient (n-octanol/water): Not available.
  Auto-ignition temperature: Not available.
  Decomposition temperature: Not available.
  Viscosity: Not available.
  Explosive properties: Not available.
  Oxidizing properties: Not available.

9.2. Other information
No relevant additional information available.

SECTION 10: Stability and reactivity

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

10.2. Chemical stability
Material is stable under normal conditions.

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

10.4. Conditions to avoid
Contact with incompatible materials.

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

10.6. Hazardous decomposition products
No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information
Occupational exposure to the substance or mixture may cause adverse effects.

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: Causes serious eye irritation.
  Ingestion: May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.
Symptoms
Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boric acid (CAS 10043-35-3)</td>
<td>Inhaleation</td>
<td>Rat</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation
Due to partial or complete lack of data the classification is not possible.
Serious eye damage/eye irritation
Causes serious eye irritation.
Respiratory sensitisation
Due to partial or complete lack of data the classification is not possible.
Skin sensitisation
Due to partial or complete lack of data the classification is not possible.
Germ cell mutagenicity
Due to partial or complete lack of data the classification is not possible.
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. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled. Risk of cancer cannot be excluded with prolonged exposure.

Reproductive toxicity
Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - single exposure
Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - repeated exposure
Due to partial or complete lack of data the classification is not possible.
Aspiration hazard
Due to partial or complete lack of data the classification is not possible.
Mixture versus substance information
No information available.
Other information
Not available.

SECTION 12: Ecological information

12.1. Toxicity
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.
12.2. Persistence and degradability
No data is available on the degradability of this product.
12.3. Bioaccumulative potential
No data available.
Partition coefficient n-octanol/water (log Kow)
Not available.
Bioconcentration factor (BCF)
Not available.
12.4. Mobility in soil
No data available.
12.5. Results of PBT and vPvB assessment
Not available.
12.6. 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.
SECTION 13: Disposal considerations

13.1. Waste treatment methods
- Residual waste: Not available.
- Contaminated packaging: Not available.
- EU waste code: Not available.

SECTION 14: Transport information

ADR: Not regulated as dangerous goods.
RID: Not regulated as dangerous goods.
ADN: Not regulated as dangerous goods.
IATA: Not regulated as dangerous goods.
IMDG: Not regulated as dangerous goods.

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

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V: Not listed.
- Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA:
  Boric acid (CAS 10043-35-3)

Authorisations
- Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended:
  Boric acid (CAS 10043-35-3)

Restrictions on use
- Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use:
  Not regulated.
- Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work:
  Not listed.
- Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding:
  Boric acid (CAS 10043-35-3)

Other EU regulations
- Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances:
  Not listed.
Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work
Boric acid (CAS 10043-35-3)
Orthophosphoric Acid (CAS 7664-38-2)

Directive 94/33/EC on the protection of young people at work
Boric acid (CAS 10043-35-3)
Orthophosphoric Acid (CAS 7664-38-2)

Other regulations
The product is classified and labelled in accordance with EC directives or respective national laws.
This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

National regulations
Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment
No Chemical Safety Assessment has been carried out.

SECTION 16: Other information
List of abbreviations
Not available.
References
Not available.
Information on evaluation method leading to the classification of mixture
Not available.

Full text of any statements or R-phrases and H-statements under Sections 2 to 15
R34 Causes burns.
R60 May impair fertility.
R61 May cause harm to the unborn child.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.

Revision information
None.
Training information
Not available.
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.