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

1.1. Product identifier

| Trade name or designation of the mixture | TUFLINE 90 DM |
| Registration number | - |
| Synonyms | None. |
| Brand Code | 2730 |
| Issue date | 24-May-2019 |
| Version number | 01 |

1.2. Relevant identified uses of the substance or mixture and uses advised against

| Identified uses | For Industrial or Professional Use Only |
| Uses advised against | Avoid dry cutting, blasting, or dust generation. |

1.3. Details of the supplier of the safety data sheet

**Supplier**

| Company name | HarbisonWalker International |
| Address | 1305 Cherrington Parkway, Suite 100 |
| | Moon Township, PA 15108, USA |
| | United States |

| Division | |
| Telephone | General Phone: 412-375-6600 |
| | CHEMTREC EMERGENCY 1-800-424-9300 |
| | US/CAN ONLY |
| e-mail | sds@thinkHWI.com |
| Contact person | HWI USA |
| 1.4. Emergency telephone number | Not available. |

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 item is defined as an article per OSHA and REACH and is therefore exempt from labeling. A Safety Data Sheet is available.

This item is not Classified as hazardous per CLP Regulations. However, individual customer processes (such as grinding, sawing, or blasting) may result in the formation of dust that may present health hazards. Limit skin contact. Wash hands after handling. Wear protective gloves/protective clothing/eye protection.

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

This item is defined as an article per OSHA and REACH and is therefore exempt from labeling. A Safety Data Sheet is available.

This item is not Classified as hazardous per CLP Regulations. However, individual customer processes (such as grinding, sawing, or blasting) may result in the formation of dust that may present health hazards. Limit skin contact. Wash hands after handling. Wear protective gloves/protective clothing/eye protection.

2.2. Label elements

**Label according to Regulation (EC) No. 1272/2008 as amended**

This item is defined as an article per OSHA and REACH and is therefore exempt from labeling. A Safety Data Sheet is available.

This item is not Classified as hazardous per CLP Regulations. However, individual customer processes (such as grinding, sawing, or blasting) may result in the formation of dust that may present health hazards. Limit skin contact. Wash hands after handling. Wear protective gloves/protective clothing/eye protection.

2.3. Other hazards

Not a PBT or vPvB substance or mixture.

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>Mullite</td>
<td>30 - 50</td>
<td>1302-93-8</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>215-113-2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Classification:** -

Other components below reportable levels 70 - 90

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

- #: This substance has been assigned Union workplace exposure limit(s).
- M: M-factor
- PBT: persistent, bioaccumulative and toxic substance.
- vPvB: very persistent and very bioaccumulative substance.

## 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:** Rinse with water. Get medical attention if irritation develops and persists.
- **Ingestion:** Rinse mouth. Get medical attention if symptoms occur.

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

Exposure may cause temporary irritation, redness, or discomfort.

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

Treat symptomatically.

## 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. For personal protection, see section 8 of the SDS.
- **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

Stop the flow of material, if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

#### 6.4. Reference to other sections

For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.
SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid prolonged exposure. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities
Store away from incompatible materials (see Section 10 of the SDS).

7.3. Specific end use(s)
Industrial refractory material

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

- **Occupational exposure limits**: No exposure limits noted for ingredient(s).
- **Biological limit values**: No biological exposure limits noted for the ingredient(s).
- **Recommended monitoring procedures**: Follow standard monitoring procedures.
- **Derived no effect levels (DNELs)**: Not available.
- **Predicted no effect concentrations (PNECs)**: Not available.

**Exposure guidelines**
Zirconium silicates (zircon sands) contain trace amounts (106-120 pCi/g) of naturally occurring radioactive uranium and thorium. Overexposure by inhalation to respirable dust containing uranium and thorium may cause lung cancer. Eye contact with the dust may cause eye irritation. Measurements made by Dupont during the use of a similar mineral sand indicated the observance of the 5 mg/m³ OSHA PEL for respirable dust and/or the PEL for quartz ensures the user is below the exposure limits established for uranium and thorium. No LD50 or LC50 can be found for zircon sand.

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.

**Individual protection measures, such as personal protective equipment**

- **General information**: 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**: Brick or Cast Shape
  - **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) Not available.
  Solubility (water) Not available.
Partition coefficient (n-octanol/water) Not available.
Auto-ignition temperature Not available.
Decomposition temperature Not available.
Viscosity Not available.
Explosive properties Not explosive.
Oxidising properties Not oxidising.
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 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials.
10.5. Incompatible materials Strong oxidising agents. 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 Direct contact with eyes may cause temporary irritation.
  Ingestion May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

Symptoms Exposure may cause temporary irritation, redness, or discomfort.

11.1. Information on toxicological effects
  Acute toxicity Not known.
  Skin corrosion/irritation Due to partial or complete lack of data the classification is not possible.
  Serious eye damage/eye irritation Due to partial or complete lack of data the classification is not possible.
  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 Due to partial or complete lack of data the classification is not possible.
Reproductive toxicity
- single exposure
- repeated exposure
Specific target organ toxicity
Aspiration hazard
Mixture versus substance information
Other information

SECTION 12: Ecological information

12.1. Toxicity
Based on available data, the classification criteria are not met for hazardous to the aquatic environment.

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

12.3. Bioaccumulative potential
No data available.

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment
Not a PBT or vPvB substance or mixture. 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
Contaminated packaging
EU waste code
Disposal methods/information

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.

SECTION 14: Transport information

ADR
- 14.1. - 14.6.: Not regulated as dangerous goods.

RID
- 14.1. - 14.6.: Not regulated as dangerous goods.

ADN
- 14.1. - 14.6.: Not regulated as dangerous goods.

IATA
- 14.1. - 14.6.: Not regulated as dangerous goods.

IMDG
- 14.1. - 14.6.: 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. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended
  Not listed.
  Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended
Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended
Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended
Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended
Not listed.
Not listed.
Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA
Not listed.

Authorisations
Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended
Not listed.

Restrictions on use
Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.
Not listed.

Other EU regulations
Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended
Not listed.

Other regulations
The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended.

National regulations
Follow national regulation on the protection of workers from the risks of exposure to carcinogens and mutagens at work, in accordance with Directive 2004/37/EC.

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 H-statements not written out in full under Sections 2 to 15
None.

Revision information
Product and Company Identification: Product and Company Identification Composition / Information on Ingredients: After Reaction Composition

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.