1. Identification of the substance/preparation and of the Company/undertaking

Product Identifier
- Product Type: KMT - Ceramic tools, articles
- Product name: KY3500
- Product code: KA0083-0

Other means of identification
- Synonyms: No information available

Recommended use of the chemical and restrictions on use
- Recommended Use: For use in industrial installations only. Metalworking Tools.

Details of the Supplier of the Safety Data Sheet
- Emergency Telephone Number
  - CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
  - 1-800-424-9300 (NORTH AMERICA)

- NRC (National Response Center)
  - USA, Poison Centres +1 800 222 1222
  - Canada, IWK Regional Poison Center +1 902 470 8161 or 1 800 565 8161

Prepared by: Kennametal Inc. 1600 Technology Way Latrobe, PA 15650, USA
E-mail: k-corp-product.safety@kennametal.com

2. Hazards Identification

Classification

Label Elements

Emergency Overview

Appearance: grey  Physical State: solid  Odor: none

Hazards not otherwise classified (HNOC)

OTHER INFORMATION

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Formula</th>
<th>CAS-No</th>
<th>weight-%</th>
<th>GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon Nitride</td>
<td>Si₃N₄</td>
<td>12033-89-5</td>
<td>&gt; 50</td>
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</tr>
<tr>
<td>Yttrium Oxide</td>
<td>Y₂O₃</td>
<td>1314-36-9</td>
<td>1 - 2.5</td>
<td></td>
</tr>
<tr>
<td>Magnesium silicate, forsterite</td>
<td>Mg₆SiO₄</td>
<td>15118-03-3</td>
<td>1 - 2.5</td>
<td></td>
</tr>
</tbody>
</table>
Product Safety Information

* The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First aid measures

FIRST AID MEASURES

General advice
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Eye Contact
Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.

Skin contact
Wash skin with soap and water.

Inhalation
Move to fresh air.

Ingestion
Clean mouth with water.

Self-protection of the first aider
Self-protection of the first aider. Wear suitable gloves.

Most important symptoms and effects, both acute and delayed

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

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical

Protective equipment and precautions for firefighters
Use personal protective equipment as required

Component Information

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions

Environmental precautions
Avoid release to the environment.

Methods and material for containment and cleaning up
Prevent further leakage or spillage if safe to do so. Collect in closed and suitable containers for disposal.

7. Handling and Storage

Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place.
Incompatible products

None known based on information supplied.

8. Exposure Controls/Personal Protection

Control parameters

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>USA - ACGIH TLV</th>
<th>USA - OSHA PEL</th>
<th>USA - NIOSH IDLH</th>
<th>Argentina</th>
<th>Brazil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yttrium Oxide</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>TWA: 1 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Chemical name</td>
<td>Canada - Alberta</td>
<td>Canada - British Columbia</td>
<td>Canada - Ontario</td>
<td>Canada - Quebec</td>
<td>Canada - Manitoba</td>
</tr>
<tr>
<td>Yttrium Oxide</td>
<td>Chile</td>
<td>Mexico OEL (TWA)</td>
<td>Peru</td>
<td>Uruguay</td>
<td>Venezuela</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TWA: 1 mg/m³</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

- Showers
- Eyewash stations
- Ventilation systems.

Individual protection measures, such as personal protective equipment

- **Eye Protection**
  Wear safety glasses with side shields (or goggles).

- **Skin Protection**
  Long sleeved clothing.

- **Hand Protection**
  Protective gloves.

- **Hygiene Measures**
  Handle in accordance with good industrial hygiene and safety practice.

9.1 Information on basic physical and chemical properties

- **Physical State**
  solid

- **Odor**
  none

- **Appearance**
  grey

- **flash point**
  not applicable

9.2. Other information

VOC Content (%)

- Not Applicable

Component Information

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Silicon Nitride</td>
<td>140.28 g/mol</td>
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<tr>
<td>Yttrium Oxide</td>
<td>225.80 g/mol</td>
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</tr>
</tbody>
</table>

10. Stability and Reactivity

Reactivity

- No data available

Chemical stability

- **Possibility of Hazardous Reactions**
  None under normal processing.

- **Conditions to avoid**
  Extremes of temperature and direct sunlight.

- **incompatible materials**

- **Hazardous decomposition products**
  None known based on information supplied.

11. Toxicological Information
Product Safety Information

Information on likely routes of exposure

Information on toxicological effects

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Target organ effects

Eyes, respiratory system, Skin.

Numerical measures of toxicity - Product Information

mg/kg  mg/l

12. Ecological Information

12.1. Ecotoxicity

12.2 Persistence and degradability

No information available.

Bioaccumulation/Accumulation

No information available.

12.6 Other adverse effects

None known

13. Disposal Considerations

Waste treatment methods

It must undergo special treatment, e.g. at suitable disposal site, to comply with local regulations. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

14. Transport Information

DOT

Not regulated

TDG

Not regulated

MEX

Not regulated

IMO / IMDG

Not regulated

ICAO / IATA-DGR

Not regulated

15. Regulatory Information

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372
Product Safety Information

SARA 311/312 Hazard Categories
- Acute health hazard: no
- Chronic Health Hazard: no
- Fire Hazard: no
- Sudden release of pressure hazard: no
- Reactive Hazard: no

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

U.S. State Regulations
California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

U.S. EPA Label information

CANADA
WHMIS Statement
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. Other Information

Global Automotive Declarable Substance List Classifications

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health hazard</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and Chemical Hazards - Physical hazards</th>
<th>Personal precautions</th>
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</thead>
<tbody>
<tr>
<td>HMIS</td>
<td>Health hazard</td>
<td>Flammability</td>
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<td>X</td>
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</tbody>
</table>

Issuing Date: 2013-07-15
Revision Date: 2015-11-04
Revision Note: No information available

Disclaimer
Kennametal urges each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific SDSs, we are not and cannot be responsible for SDS's obtained from any source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.

End of Safety Data Sheet