1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Detail: 1150-235 Thermal pads
Application of the substance / the preparation: Heat leading silicone foil
Manufacturer / supplier: Holland Shielding Systems B.V.
                 Jacobus Lipsweg 124
                 3316 BP Dordrecht
                 the Netherlands
                 Ph: +31(0)78 - 204 90 00
                 Fax: +31(0)78 - 204 90 08
                 info@hollandshielding.com

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]
No classification.

2.2 Label elements
This product is an article and therefore it does not require labelling according to EC directives [REACH/CLP].

Hazard pictograms None
Signal word None
Hazard statements None
Precautionary statements None

2.3 Other hazards
Human health dangers No particular hazards known.
Environmental hazards Does not contain any PBT or vPvB substances.
Other hazards None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Product-type: The product is a mixture.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Range [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium oxide</td>
<td>&lt; 60</td>
</tr>
</tbody>
</table>

Comment on component parts:
No dangerous components.
Aluminium oxide is bound in the foil.
Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General information
No special measures necessary.

In the event of symptoms seek medical treatment.

Inhalation
When in contact with the skin, clean with soap and water.
Consult a doctor if skin irritation persists.

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing. If eye irritation persists: Get medical advice/attention.
Seek medical advice immediately.

Eye contact

Skin contact

Ingestion

Revision date: 28-07-2016
4.2 Most important symptoms and effects, both acute and delayed
None known.

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

5. **FIREFIGHTING MEASURES**

5.1 Extinguishing media

| Suitable extinguishing media | Carbon dioxide.  
|                             | Water spray jet.  
|                             | Dry powder.  
|                             | Foam.  
| Extinguishing media that must not be used | Full water jet.

5.2 Special hazards arising from the substance or mixture
Risk of formation of toxic pyrolysis products.

5.3 Advice for firefighters
Use self-contained breathing apparatus.
Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

6. **ACCIDENTAL RELEASE MEASURES**

6.1 Personal precautions, protective equipment and emergency procedures
Wear suitable protective equipment. For personal protection see SECTION 8.

6.2 Environmental precautions
Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up
Take up mechanically.
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections
See SECTION 8+13

7. **HANDLING AND STORAGE**

7.1 Precautions for safe handling
Avoid contact with eyes and skin. Use personal protective equipment. Wash hands before breaks and after work. Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities
Keep only in original container.
Store in a dry place.
Protect from sun.

7.3 Specific end use(s)
See product use, SECTION 1.2
THERMAL PADS 1150

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Ingredients with occupational exposure limits to be monitored (GB)

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS: 1344-28-1, EINECS/ELINCS: 215-691-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium oxide</td>
<td></td>
</tr>
<tr>
<td>Long-term exposure: 10 mg/m³, inhalable dust (respirable dust: 4 mg/m³)</td>
<td></td>
</tr>
</tbody>
</table>

DNEL

<table>
<thead>
<tr>
<th>Substance</th>
<th>Aluminium oxide, CAS: 1344-28-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial, inhalative (dust), Long-term-local effects: 15,63 mg/m³ (AF=3).</td>
<td></td>
</tr>
<tr>
<td>General population, oral, Long-term-systemic effects: 3,29 mg/kg bw/d (AF=40).</td>
<td></td>
</tr>
</tbody>
</table>

PNEC

<table>
<thead>
<tr>
<th>Substance</th>
<th>Aluminium oxide, CAS: 1344-28-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sewage treatment plants (STP), 20 mg/l (AF=10).</td>
<td></td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Additional advice on system design

<table>
<thead>
<tr>
<th>Eye protection</th>
<th>Safety glasses. (EN 166:2001)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand protection</td>
<td>0,4mm: Butyl rubber, &gt;120 min (EN 374).</td>
</tr>
<tr>
<td>Skin protection</td>
<td>The details concerned are recommendations. Please contact the glove supplier for further information.</td>
</tr>
<tr>
<td>Other</td>
<td>Not required under normal conditions.</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>Avoid contact with eyes and skin.</td>
</tr>
<tr>
<td>Thermal hazards</td>
<td>Not required under normal conditions.</td>
</tr>
<tr>
<td>Delimitation and monitoring of the environmental exposition</td>
<td>Not determined</td>
</tr>
<tr>
<td></td>
<td>Comply with applicable environmental regulations limiting discharge to air, water and soil.</td>
</tr>
</tbody>
</table>

Ensure adequate ventilation on workstation.
THERMAL PADS 1150

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Solid</td>
</tr>
<tr>
<td>Color</td>
<td>Yellow / orange</td>
</tr>
<tr>
<td>Odour</td>
<td>Characteristic</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH-value</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH-value [1%]</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point [°C]</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point [°C]</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas) [°C]</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No</td>
</tr>
<tr>
<td>Vapour pressure/gas pressure [kPa]</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Density [g/ml]</td>
<td>1.65 (20 °C / 68.0 °F)</td>
</tr>
<tr>
<td>Bulk density [kg/m³]</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Partition coefficient [n-octanol/water]</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative vapour density in air determined</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation speed</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting point [°C]</td>
<td>No information available.</td>
</tr>
<tr>
<td>Autoignition temperature [°C]</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature [°C]</td>
<td>No information available.</td>
</tr>
</tbody>
</table>

9.2 Other information

Operation temperature: -40 - +180°C

10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

The product is stable under standard conditions.

10.3 Possibility of hazardous reactions

If product is heated above decomposition temperature toxic vapours may be released.

10.4 Conditions to avoid

See SECTION 7.2.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

No hazardous decomposition products known.
THERMAL PADS 1150

11. TOXICOLOGICAL INFORMATION

Acute toxicity

<table>
<thead>
<tr>
<th>Classification</th>
<th>Based on the available information, the classification criteria are not fulfilled.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/irritation</td>
<td></td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td></td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td></td>
</tr>
<tr>
<td>Specific target organ toxicity—single exposure</td>
<td></td>
</tr>
<tr>
<td>Specific target organ toxicity—repeated exposure</td>
<td></td>
</tr>
<tr>
<td>Mutagenicity</td>
<td></td>
</tr>
<tr>
<td>Reproduction toxicity</td>
<td></td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td></td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td></td>
</tr>
<tr>
<td>General remarks</td>
<td>None</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

12.1 Toxicity

12.2 Persistence and degradability

Behaviour in environment compartments: No information available.
Behaviour in sewage plant: No information available.
Biological degradability: No information available.

12.3 Bioaccumulative potential
No information available.

12.4 Mobility in soil
No information available.

12.5 Results of PBT and vPvB assessment
Not applicable.

12.6 Other adverse effects
The product is insoluble in water.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

In accordance with RoHS I:
Disposal in an incineration plant in accordance with the regulations of the local authorities.

<table>
<thead>
<tr>
<th>Product</th>
<th>Waste no. (recommended)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste no. (recommended)</td>
<td>070217</td>
</tr>
<tr>
<td>Contaminated packaging</td>
<td>Uncontaminated packaging may be taken for recycling.</td>
</tr>
<tr>
<td>Waste no. (recommended)</td>
<td>150102</td>
</tr>
</tbody>
</table>
14. TRANSPORT INFORMATION

14.1 UN number

Transport by land according to ADR/RID: Not applicable
Inland navigation (ADN): Not applicable
Marine transport in accordance with IMDG: Not applicable
Air transport in accordance with IATA: Not applicable

14.2 UN proper shipping name

Transport by land according to ADR/RID: NO DANGEROUS GOODS
Inland navigation (ADN): NO DANGEROUS GOODS
Marine transport in accordance with IMDG: NOT CLASSIFIED AS "DANGEROUS GOODS"
Air transport in accordance with IATA: NOT CLASSIFIED AS "DANGEROUS GOODS"

14.3 Transport hazard class(es)

Transport by land according to ADR/RID: Not applicable
Inland navigation (ADN): Not applicable
Marine transport in accordance with IMDG: Not applicable
Air transport in accordance with IATA: Not applicable

14.4 Packing group

Transport by land according to ADR/RID: Not applicable
Inland navigation (ADN): Not applicable
Marine transport in accordance with IMDG: Not applicable
Air transport in accordance with IATA: Not applicable

14.5 Environmental hazards

Transport by land according to ADR/RID: No
Inland navigation (ADN): No
Marine transport in accordance with IMDG: No
Air transport in accordance with IATA: No

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable
THERMAL PADS 1150

15. REGULATORY INFORMATION

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

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NATIONAL REGULATIONS (GB);</td>
<td>EH40/2005 Workplace exposure limits (Second edition, published December 2011).</td>
</tr>
<tr>
<td>- Observe employment restrictions for people;</td>
<td>None</td>
</tr>
<tr>
<td>- VOC (2010/75/CE);</td>
<td>0 %</td>
</tr>
</tbody>
</table>

15.2 Chemical safety assessment
Not applicable.

16. OTHER INFORMATION

16.1 Hazard statements
(SECTION 03)

16.2 Abbreviations and acronyms
THERMAL PADS 1150

16.3 Other information
Classification procedure
Modified position
SECTION 2 deleted: The product does not require a hazard warning label in accordance with EC-directives.
SECTION 2 been added: This product is an article and therefore it does not require labelling according to EC directives [REACH/CLP].
SECTION 4 been added: No special measures necessary.
SECTION 4 deleted: In case of contact with eyes rinse thoroughly with water.
SECTION 4 been added: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
SECTION 4 deleted: In the event of symptoms seek medical treatment.
SECTION 4 been added: If eye irritation persists: Get medical advice/attention.
SECTION 4 deleted: not applicable
SECTION 6 deleted: No special measures necessary.
SECTION 6 been added: Wear suitable protective equipment. For personal protection see SECTION 8.
SECTION 7 been added: Avoid contact with eyes and skin. Use personal protective equipment.
SECTION 7 deleted: No special measures necessary if used correctly.
SECTION 9 been added: Operation temperature: [x]
SECTION 9 deleted: not determined
SECTION 9 been added: No information available.
SECTION 9 deleted: none
SECTION 11 deleted: not determined
SECTION 11 been added: Based on the available information, the classification criteria are not fulfilled.
SECTION 12 deleted: not determined
SECTION 12 been added: No information available.
SECTION 12 been added: The product is insoluble in water.