MATERIAL SAFETY DATA SHEET
DEUREX® H 80 Series

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

1.1. Product identifier
Trade names:
DEUREX® H 81 G
DEUREX® H 82 G
DEUREX® H 83 G
DEUREX® H 84 G

1.2. Relevant identified uses of the substance or mixture and uses advised against
Industrial use
• Additive for plastics, inks and coatings, care products, road constructions

1.3. Details of the supplier of the safety data sheet
DEUREX AG
Dr.-Bergius-Straße 8 – 12
D - 06729 Elsteraue
Tel.: +49(0) 3441 / 8 29 29 29, Fax: +49(0)3441 / 8 29 29 28
Material-Safety@Deurex.com
www.Deurex.com

1.4 Emergency telephone number
Common poisons information centre of the Federal States
Mecklenburg-Western Pomerania, Saxony, Saxony-Anhalt and Thuringia
D-99089 Erfurt
T.: +49(0)361 - 730730

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture
Classification according to Directive 67/548/EEC:
R phrases: None.
S phrases: None.

Classification according to Regulation (EC) 1272/2008 (GHS):
H phrases: None.
P phrases: None.

2.2. Label elements
Labelling according to Directive 67/548/EEC:
None.

Labelling according to Regulation (EC) 1272/2008 (GHS):
None.
2.3. Other hazards
Based on the available evidence and when handled correctly, the product poses no danger for humans and the environment. The usual minimum standards for protective measures in the chemical industry must be observed.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Substances
Chemical identity and characterisation: vegetable wax
Substance: Natural vegetable wax from sugar cane
CAS-No.: 8001-39-6
REACH-No.: Exempted

4. FIRST AID MEASURES

4.1. Description of first aid measures
General: A hazard originated from the substance can occur during processing in hot state (risk of burning).

Inhalation: Dust can irritate the respiratory tract. If breathing fumes, smoke and gases produced at higher temperatures, irritations of the respiratory system are possible. Remove the person to fresh air.

Skin: Rinse contaminated skin with plenty of water. Remove contaminated clothing and shoes. If symptoms persist, seek medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse. In case of contact with hot product apply first aid according to the degree of burn. Cool affected area with cool water. Do not remove solidified product from the skin. Remove clothing only if it does not stick to the skin. Cover affected areas with sterile Metalline fire cloth and provide medical treatment.

Eye: Foreign bodies cause mechanical irritation. Remove foreign bodies. Rinse eye, holding the eye lids apart, thoroughly under running water. In case of complaints seek medical advice.

Swallowing: Rinse the mouth with water. In case of ingestion of larger amounts stomach troubles can emerge. Give water to drink. If you experience nausea do not let the person drink more since vomiting can be dangerous. Do not induce vomiting unless directed by medical personnel. If symptoms persist, seek medical attention. Never infuse an unconscious person anything through the mouth. In case of unconsciousness, place in recovery position and seek immediate medical attention.

4.2. Most important symptoms and effects, both acute and delayed
No typical symptoms and effects known.
4.3. Indication of any immediate medical attention and special treatment needed
No additional information available.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media
Suitable extinguishing media:
Foam, dry chemical, carbon dioxide, water spray.
Extinguishing media that suit the surrounding fire.

Unsuitable extinguishing media:
Water jet.

5.2. Special hazards arising from the substance or mixture
Take precautionary measures against electrostatic charges. Do not breath fumes of fire ➔ Chapter 10.

5.3. Advice for fire fighters
Use approved compressed air breathing apparatus and wear fire fighters protective clothing.

Do not empty fire water into drains. Fire residues and contaminated fire water must be disposed according to local regulations.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Personal protection measures / protective equipment ➔ Chapter 8.

6.2. Environmental precautions
Contain product mechanically for recovery or disposal. Solidify hot liquid product and collect it in clean containers for recycling or disposal. Do not empty into drains or surface water.

6.3. Methods and material for containment and cleaning up
Mechanical containment. Observe Waste Act when disposing the waste and the contaminated material ➔ Chapter 13.
7. HANDLING AND STORAGE

7.1. Precautions for safe handling
Usual precautions when handling chemicals ➔ Chapter 8.
Keep away from ignition sources and take precautionary measures against electrostatic charges. Prevent dust formation and raise of dust. In the presence of deposited combustible dust, risk of explosion is expected. When processing explosive dust may be accumulated, which can result in an explosive atmosphere. Good ventilation of the workplace, appropriate extraction and ventilation is required at the processing machines. Waxes are lubricants, danger of slipping.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Dry and at room temperature (10 – 25 °C).
Relative humidity < 80%.
Avoid direct sunlight and heat, moisture, water and other harmful influences ➔ Chapter 10.
Do not store together with food and feeding stuff.
Shelf life: 4 years, when stored according to mentioned conditions.
Storage class: 11 – Flammable solids.
Fire class: B – Fires involving liquids or liquefiable substances.

7.3. Specific end use(s)
Risk of burn when handling with liquid (hot) product.

According to the formulation, the products do not contain:
- Heavy metals
- VOC
- Compounds listed in the Chemicals Prohibition Ordinance
- Substances according to Directive 2002/95/EC – Appendix II
- Substances according to Regulation (EC) 1907/2006 – Appendix XIV (SVHC listing)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters
Components with critical values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>EINECS No.</th>
<th>Chemical name</th>
<th>Description</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>---</td>
<td>---</td>
<td>- no information -</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8.2. Exposure controls
Exposure limitation and controlling are workplace related and must be regulated by the user.

8.2.1. Appropriate technical safety devices
Ensure good ventilation - local exhaust. If this is not sufficient, wear respiratory protection. Avoid formation of dust.

8.2.2. Personal protective equipment
General protective and hygiene measures: Usual precautions for handling chemicals. Do not eat, drink or smoke during work, and wear suitable protective clothing. Do not breathe dust. Wash hands before breaks. Remove contaminated clothing. After contact, clean skin with water and soap or use suitable cleanser. Do not use organic solvents.

Eye / Face protection:
Wear protective shield when handling hot material. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin / Body protection:
Wear protective gloves made of nitrile rubber. Wear heat-resistant gloves when handling hot material. The selected gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Breathing protection:
If required, wear dust mask for fine particles when processing the product.

Wear respirator filter or breathing apparatus against vapours during thermal processing. Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air
8.2.3. Limitation and controlling of environmental exposure:
Information on environmental exposure → Chapters 6, 7 and 12.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties
Colour: Light brown to brown
Aggregate state: Solid
Odour: Typical

9.2. Other information

<table>
<thead>
<tr>
<th></th>
<th>DEUREX® H 81 G</th>
<th>DEUREX® H 82 G</th>
<th>DEUREX® H 83 G</th>
<th>DEUREX® H 84 G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drop point, °C</td>
<td>80 – 100</td>
<td>90 – 110</td>
<td>90 – 110</td>
<td>120 – 130</td>
</tr>
<tr>
<td>Flash point, °C</td>
<td>&gt; 250</td>
<td>&gt; 250</td>
<td>&gt; 250</td>
<td>&gt; 250</td>
</tr>
<tr>
<td>Acid value, mg KOH/g:</td>
<td>18 – 25</td>
<td>10 – 20</td>
<td>5 – 10</td>
<td>8 – 13</td>
</tr>
<tr>
<td>Specific Gravity, g/cm³:</td>
<td>0.85 – 0.90</td>
<td>0.90 – 0.95</td>
<td>0.90 – 0.95</td>
<td>0.90 – 0.95</td>
</tr>
<tr>
<td>Water solubility:</td>
<td>Insoluble</td>
<td>Insoluble</td>
<td>Insoluble</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Organic Solvents:</td>
<td>Soluble in HC</td>
<td>Soluble in HC</td>
<td>Soluble in HC</td>
<td>Soluble in HC</td>
</tr>
</tbody>
</table>

HC = Hydrocarbons. Sugar cane waxes are natural products. Properties are subject to slight variations.

10. STABILITY AND REACTIVITY

10.1. Reactivity
Unknown.

10.2. Chemical stability
The product is stable under normal conditions and the set handling and storage conditions described in Chapter 7.

10.3. Possibility of hazardous reactions
No data available

10.4. Conditions to avoid
Keep away from ignition sources and take precautionary measures against electrostatic charges. Avoid dust formation and the raise of dust. Keep away from open fire and flames.

10.5. Incompatible materials
Strong oxidants.

10.6. Hazardous decomposition products
In case of combustion, CO, CO₂, flammable hydrocarbons can be produced.
11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

**Acute toxicity:** No significant effects or critical hazards known.

**Irritating effects:** No significant effects or critical hazards known.

**Eye irritation:** No significant effects or critical hazards known.

**Sensitisation:** No significant effects or critical hazards known.

**Germ cell mutagenicity:** No significant effects or critical hazards known.

**Carcinogenicity:** No significant effects or critical hazards known.

**Reproductive toxicity:** No significant effects or critical hazards known.

Further information: When the products are handled correctly, in compliance with the industrial hygiene and the inhalation of dusts and fumes is avoided, there is no health risk.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

No significant effects or critical hazards known.

12.2. Persistence and degradability

No significant effects or critical hazards known.

12.3. Bio-accumulative potential

No significant effects or critical hazards known.

12.4. Mobility in soil

No significant effects or critical hazards known.

12.5. Results of PBT and vPvB assessment

No significant effects or critical hazards known.

12.6. Other adverse effects

No significant effects or critical hazards known.

13. DISPOSAL CONSIDERATION

13.1. Waste treatment methods

The producer of the waste must dispose the product according to its use, specific to the industry and the process, in cooperation with the local waste management company based on local waste disposal regulations and national regulations and laws. Contaminated packaging should be disposed according to local and national regulations and in consultation with the...
local waste management companies. For Europe, the waste producer sets the waste code in accordance with the European Waste List (Decision 2000/532/EC). According to the present knowledge, the products are not regarded as hazardous waste as defined by EU Directive 91/689/EEC.

14. TRANSPORT INFORMATION

Transport only in accordance with ADR for road haulage, RID for rail transportation, ADNR/IMDG for carriage by vessel/sea and IATA for carriage by air.

<table>
<thead>
<tr>
<th>Road traffic</th>
<th>Barge traffic</th>
<th>Air traffic</th>
</tr>
</thead>
<tbody>
<tr>
<td>- ADR -</td>
<td>- ADNR -</td>
<td>- IATA -</td>
</tr>
<tr>
<td>Rail traffic</td>
<td>Maritime traffic</td>
<td></td>
</tr>
<tr>
<td>- RID -</td>
<td></td>
<td>- IMDG -</td>
</tr>
</tbody>
</table>

14.1. UN number

No hazardous materials

14.2. UN proper shipping name

No hazardous materials

14.3. Transport hazard class(es)

No hazardous materials

14.4. Packing group

No hazardous materials

14.5. Environmental hazards

No hazardous materials

14.6. Special precautions for user

 Chapters 6 to 8

14.7. Transport in bulk according to Annex II of MARPOL73/8 and the IBC Code

Not applicable.

15. REGULATORY INFORMATION

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

Labelling

In accordance with EC directives: vegetable wax

This data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2. Chemical safety assessment

No data available.
16. OTHER INFORMATION

Restrictions:
This information relates only to the above class of products and need not be valid if used with another product or in any special process.

Further information:
The information is based on our present knowledge, it is correct and complete. However, this information is given without a guarantee. It remains the responsibility of the user to satisfy itself whether the information is appropriate and complete for his special use of the product.

Sources:
Internal information