Safety Data Sheet

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier
Product Name  • Multidex® Powder Wound Dressing

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified use(s)  • A hydrophilic Maltodextrin NF wound dressing clinically proven to promote the growth of granulation tissue and epithelial proliferation.

1.3 Details of the supplier of the safety data sheet
Manufacturer  • DeRoyal Industries, Inc.
200 DeBusk Lane
Powell, TN 37849
United States
www.deroxal.com
customerservice@deroyal.com

Telephone (General)  • 800-251-9864

1.4 Emergency telephone number
• 800-524-3416

Section 2: Hazards Identification

EU/EEC
According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture
CLP  • Not classified
DSD/DPD  • Not classified

2.2 Label Elements
CLP
Hazard statements  • No label element(s) required
Risk phrases  • No label element(s) required

DSD/DPD

2.3 Other Hazards
CLP  • According to Regulation (EC) No. 1272/2008 (CLP) this material is not considered hazardous.
DSD/DPD  • According to European Directive 1999/45/EC this preparation is not considered dangerous.
UN GHS
According to Third Revised Edition

2.1 Classification of the substance or mixture
UN GHS  ● Not classified

2.2 Label elements
UN GHS
Hazard statements  ● No label element(s) required

2.3 Other hazards
UN GHS  ● According to the Globally Harmonized System for Classification and Labeling (GHS) this product is not considered hazardous.

United States (US)
According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture
OSHA HCS 2012  ● Not classified

2.2 Label elements
OSHA HCS 2012
Hazard  ● No label element(s) required
statements

2.3 Other hazards
OSHA HCS 2012  ● This product is not considered hazardous under the U.S. OSHA 29 CFR 1910.1200 Hazard Communication Standard.

Canada
According to WHMIS

2.1 Classification of the substance or mixture
WHMIS  ● Not classified

2.2 Label elements
WHMIS  ● No label element(s) required

2.3 Other hazards
WHMIS  ● In Canada, the product mentioned above is not considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients

3.1 Substances
● Material does not meet the criteria of a substance.
3.2 Mixtures

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Identifiers</th>
<th>%</th>
<th>LD50/LC50</th>
<th>Classifications According</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Maltodextrin</td>
<td>CAS:9050-36-6</td>
<td>&gt;80%</td>
<td>NDA</td>
<td>UN GHS: Not Classified</td>
<td>NDA</td>
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<td></td>
<td>EC Number:232-940-4</td>
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<td>EU DSD/DPD: Not Classified</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>EU CLP: Not Classified</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>OSHA HCS 2012: Not Classified</td>
<td></td>
</tr>
<tr>
<td>L-Ascorbic Acid</td>
<td>CAS:50-81-7</td>
<td>&lt;5%</td>
<td>Ingestion/Oral-Rat</td>
<td>UN GHS: Not Classified</td>
<td>NDA</td>
</tr>
<tr>
<td></td>
<td>EINECS:200-066-2</td>
<td></td>
<td>LD50 • 11900 mg/kg</td>
<td>EU DSD/DPD: Not Classified</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>EU CLP: Not Classified</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>OSHA HCS 2012: Not Classified</td>
<td></td>
</tr>
<tr>
<td>D-Fructose</td>
<td>CAS:57-48-7</td>
<td>&lt;5%</td>
<td>NDA</td>
<td>UN GHS: Not Classified</td>
<td>NDA</td>
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<td></td>
<td>EINECS:200-333-3</td>
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<td>EU DSD/DPD: Not Classified</td>
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<td>EU CLP: Not Classified</td>
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</tr>
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<td></td>
<td></td>
<td></td>
<td>OSHA HCS 2012: Not Classified</td>
<td></td>
</tr>
</tbody>
</table>

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation  • Move victim to fresh air. Get medical attention if symptoms occur.
Skin      • First-aid is not expected to be necessary under normal conditions of use.
Eye       • If contact with eyes directly, flush with gently flowing fresh water thoroughly. Get medical attention if symptoms occur.
Ingestion • Rinse mouth with water. Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

• Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician • No specific actions or treatments recommended related to exposure to this material.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media  • Water, Carbon Dioxide, or Dry Chemical.
Unsuitable Extinguishing Media  • No data available

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards  • None
Hazardous Combustion Products  • No data available

5.3 Advice for firefighters

• Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters’ protective clothing will only provide limited protection.
Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions • It is unlikely that this product, when spilled, will cause a problem; packaged as individual packets. Do not walk through spilled material. Use appropriate Personal Protective Equipment (PPE).

Emergency Procedures • No emergency procedures are expected to be necessary if material is used under ordinary conditions as recommended.

6.2 Environmental precautions

• None expected to be necessary under normal conditions of use.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures • Use normal clean up procedures. Sweep up and remove immediately. Avoid generating dust.

6.4 Reference to other sections

• Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling • Avoid breathing dust. Do not get in eyes.

7.2 Conditions for safe storage, including any incompatibilities

Storage • Store away from heat sources.

7.3 Specific end use(s)

• Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines • No applicable exposure limits available for product or components.

8.2 Exposure controls

Engineering Measures/Controls • No special engineering measures/controls expected to be necessary under normal conditions of use.

Personal Protective Equipment

Respiratory • None required under normal conditions of use.

Eye/Face • Wear appropriate eye protection.

Skin/Body • Wear appropriate gloves.

Environmental Exposure Controls • Follow best practice for site management and disposal of waste.
Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Physical Form</th>
<th>Appearance/Description</th>
<th>Odor Threshold</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Solid</td>
<td>White powder with little odor</td>
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</tr>
<tr>
<td>Color</td>
<td>White</td>
<td>Odor</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td></td>
<td>Little odor</td>
<td></td>
</tr>
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<table>
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<table>
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<table>
<thead>
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<table>
<thead>
<tr>
<th>Odorizing Properties</th>
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</thead>
</table>

<table>
<thead>
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<table>
<thead>
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<th>Flammability</th>
<th>Flash Point</th>
<th>UEL</th>
<th>Autoignition</th>
</tr>
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<td>Not relevant</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>LEL</th>
<th>Autoignition</th>
<th>No data available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Environmental</th>
<th>Octanol/Water Partition coefficient</th>
<th>No data available</th>
</tr>
</thead>
</table>

9.2 Other Information
- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity
- No dangerous reaction known under normal conditions of use.

10.2 Chemical stability
- Stable

10.3 Possibility of hazardous reactions
- Hazardous polymerization will not occur.

10.4 Conditions to avoid
- Practices which produce dust.

10.5 Incompatible materials
- Strong oxidizing agents

10.6 Hazardous decomposition products
- Oxides of carbon
# Section 11 - Toxicological Information

## 11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>GHS Properties</th>
<th>Classification</th>
</tr>
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<tr>
<td>Acute toxicity</td>
<td>EU/CLP: No data available</td>
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<tr>
<td></td>
<td>OSHA HCS 2012: No data available</td>
</tr>
<tr>
<td></td>
<td>UN GHS: No data available</td>
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<tr>
<td>Aspiration Hazard</td>
<td>EU/CLP: No data available</td>
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<tr>
<td></td>
<td>OSHA HCS 2012: No data available</td>
</tr>
<tr>
<td></td>
<td>UN GHS: No data available</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>EU/CLP: No data available</td>
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<tr>
<td></td>
<td>OSHA HCS 2012: No data available</td>
</tr>
<tr>
<td></td>
<td>UN GHS: No data available</td>
</tr>
<tr>
<td>Germ Cell Mutagenicity</td>
<td>EU/CLP: No data available</td>
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<tr>
<td></td>
<td>OSHA HCS 2012: No data available</td>
</tr>
<tr>
<td></td>
<td>UN GHS: No data available</td>
</tr>
<tr>
<td>Skin corrosion/Irritation</td>
<td>EU/CLP: No data available</td>
</tr>
<tr>
<td></td>
<td>OSHA HCS 2012: No data available</td>
</tr>
<tr>
<td></td>
<td>UN GHS: No data available</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>EU/CLP: No data available</td>
</tr>
<tr>
<td></td>
<td>OSHA HCS 2012: No data available</td>
</tr>
<tr>
<td></td>
<td>UN GHS: No data available</td>
</tr>
<tr>
<td>STOT-RE</td>
<td>EU/CLP: No data available</td>
</tr>
<tr>
<td></td>
<td>OSHA HCS 2012: No data available</td>
</tr>
<tr>
<td></td>
<td>UN GHS: No data available</td>
</tr>
<tr>
<td>STOT-SE</td>
<td>EU/CLP: No data available</td>
</tr>
<tr>
<td></td>
<td>OSHA HCS 2012: No data available</td>
</tr>
<tr>
<td></td>
<td>UN GHS: No data available</td>
</tr>
<tr>
<td>Toxicity for Reproduction</td>
<td>EU/CLP: No data available</td>
</tr>
<tr>
<td></td>
<td>OSHA HCS 2012: No data available</td>
</tr>
<tr>
<td></td>
<td>UN GHS: No data available</td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>EU/CLP: No data available</td>
</tr>
<tr>
<td></td>
<td>OSHA HCS 2012: No data available</td>
</tr>
<tr>
<td></td>
<td>UN GHS: No data available</td>
</tr>
<tr>
<td>Serious eye damage/Irritation</td>
<td>EU/CLP: No data available</td>
</tr>
<tr>
<td></td>
<td>OSHA HCS 2012: No data available</td>
</tr>
<tr>
<td></td>
<td>UN GHS: No data available</td>
</tr>
</tbody>
</table>

### Potential Health Effects

#### Inhalation

**Acute (Immediate)** • Under normal conditions of use, no health effects are expected.

**Chronic (Delayed)** • No data available

#### Skin

**Acute (Immediate)** • Under normal conditions of use, no health effects are expected.

**Chronic (Delayed)** • No data available
Eye

Acute (Immediate) • Under normal conditions of use, no health effects are expected.

Chronic (Delayed) • No data available

Ingestion

Acute (Immediate) • Under normal conditions of use, no health effects are expected.

Chronic (Delayed) • No data available

Key to abbreviations

LD = Lethal Dose
TD = Toxic Dose

Section 12 - Ecological Information

12.1 Toxicity

• No data available

12.2 Persistence and degradability

• No data available

12.3 Bioaccumulative potential

• No data available

12.4 Mobility in Soil

• No data available

12.5 Results of PBT and vPvB assessment

• No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

• No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

<table>
<thead>
<tr>
<th>14.1 UN number</th>
<th>14.2 UN proper shipping name</th>
<th>14.3 Transport hazard class(es)</th>
<th>14.4 Packing group</th>
<th>14.5 Environmental hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT</td>
<td>Not regulated</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
</tr>
<tr>
<td>TDG</td>
<td>Not regulated</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
</tr>
</tbody>
</table>

Key to abbreviations

DOT = Department of Transportation
TDG = Transportation of Dangerous Goods
NDA = Not Available

Preparation Date: 12/January/2015
### Section 15 - Regulatory Information

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

**SARA Hazard Classifications**  
- None

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>Canada DSL</th>
<th>Canada NDSL</th>
<th>EU EINECS</th>
<th>EU ELNICS</th>
<th>TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-Fructose</td>
<td>57-48-7</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>L-Ascorbic acid</td>
<td>50-81-7</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Maltodextrin</td>
<td>9050-36-6</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Canada**

**Labor**

**Canada - WHMIS - Classifications of Substances**

- L-Ascorbic acid 50-81-7  
  Uncontrolled product according to WHMIS classification criteria
- Maltodextrin 9050-36-6  
  Not Listed
- D-Fructose 57-48-7  
  Uncontrolled product according to WHMIS classification criteria

**Canada - WHMIS - Ingredient Disclosure List**

- L-Ascorbic acid 50-81-7  
  Not Listed
- Maltodextrin 9050-36-6  
  Not Listed
- D-Fructose 57-48-7  
  Not Listed

**Environment**

**Canada - CEPA - Priority Substances List**

- L-Ascorbic acid 50-81-7  
  Not Listed
- Maltodextrin 9050-36-6  
  Not Listed
- D-Fructose 57-48-7  
  Not Listed

**United States**

**Labor**

**U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

- L-Ascorbic acid 50-81-7  
  Not Listed
- Maltodextrin 9050-36-6  
  Not Listed
- D-Fructose 57-48-7  
  Not Listed

**U.S. - OSHA - Specifically Regulated Chemicals**
**Multidex® Powder Wound Dressing**

### Environment

#### U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants
- L-Ascorbic acid: 50-81-7 Not Listed
- Maltodextrin: 9050-36-6 Not Listed
- D-Fructose: 57-48-7 Not Listed

#### U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities
- L-Ascorbic acid: 50-81-7 Not Listed
- Maltodextrin: 9050-36-6 Not Listed
- D-Fructose: 57-48-7 Not Listed

#### U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities
- L-Ascorbic acid: 50-81-7 Not Listed
- Maltodextrin: 9050-36-6 Not Listed
- D-Fructose: 57-48-7 Not Listed

#### U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs
- L-Ascorbic acid: 50-81-7 Not Listed
- Maltodextrin: 9050-36-6 Not Listed
- D-Fructose: 57-48-7 Not Listed

#### U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs
- L-Ascorbic acid: 50-81-7 Not Listed
- Maltodextrin: 9050-36-6 Not Listed
- D-Fructose: 57-48-7 Not Listed

#### U.S. - CERCLA/SARA - Section 313 - Emission Reporting
- L-Ascorbic acid: 50-81-7 Not Listed
- Maltodextrin: 9050-36-6 Not Listed
- D-Fructose: 57-48-7 Not Listed

#### U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing
- L-Ascorbic acid: 50-81-7 Not Listed
- Maltodextrin: 9050-36-6 Not Listed
- D-Fructose: 57-48-7 Not Listed

### United States - California

#### Environment

##### U.S. - California - Proposition 65 - Carcinogens List
- L-Ascorbic acid: 50-81-7 Not Listed
- Maltodextrin: 9050-36-6 Not Listed
- D-Fructose: 57-48-7 Not Listed

##### U.S. - California - Proposition 65 - Developmental Toxicity
- L-Ascorbic acid: 50-81-7 Not Listed
- Maltodextrin: 9050-36-6 Not Listed
- D-Fructose: 57-48-7 Not Listed

##### U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)
- L-Ascorbic acid: 50-81-7 Not Listed
- Maltodextrin: 9050-36-6 Not Listed
- D-Fructose: 57-48-7 Not Listed

##### U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)
- L-Ascorbic acid: 50-81-7 Not Listed
- Maltodextrin: 9050-36-6 Not Listed
- D-Fructose: 57-48-7 Not Listed

##### U.S. - California - Proposition 65 - Reproductive Toxicity - Female
- L-Ascorbic acid: 50-81-7 Not Listed
- Maltodextrin: 9050-36-6 Not Listed
- D-Fructose: 57-48-7 Not Listed

##### U.S. - California - Proposition 65 - Reproductive Toxicity - Male
- L-Ascorbic acid: 50-81-7 Not Listed
• Maltodextrin 9050-36-6 Not Listed
• D-Fructose 57-48-7 Not Listed

15.2 Chemical Safety Assessment
• No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

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<th>Last Revision Date</th>
<th>12/January/2015</th>
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<td>Preparation Date</td>
<td>12/January/2015</td>
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<tr>
<td>Disclaimer/Statement of Liability</td>
<td>The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet. However, no warranty or representation, express or implied is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.</td>
</tr>
</tbody>
</table>

Key to abbreviations
NDA = No data available