**SECTION 1: Identification**

1. **Identification**
   - Product form: Mixture
   - Trade name: HF 753
   - Product code: A00001374

1.2. **Recommended use and restrictions on use**
   - Use of the substance/mixture: Flux for metal brazing
   - Recommended use: Flux for metal brazing

1.3. **Supplier**
   - Lucas-Milhaupt, Inc.
   - 5656 South Pennsylvania Ave.
   - Cudahy, WI 53110 - USA
   - T (414)-769-6000
   - Contact: SDS Contact

1.4. **Emergency telephone number**
   - Emergency number: CHEMTREC within the USA and Canada: 1-800-424-9300
   - CHEMTREC outside the USA and Canada +1 701-741-5970

**SECTION 2: Hazard(s) identification**

2.1. **Classification of the substance or mixture**
   - GHS US classification
     - Skin corrosion/irritation, Category 2: H315 - Causes skin irritation.
     - Serious eye damage/eye irritation, Category 2: H319 - Causes serious eye irritation.
   - Full text of H statements: see section 16

2.2. **GHS Label elements, including precautionary statements**
   - GHS US labelling
   - Hazard pictograms (GHS US): ![Warning]
   - Signal word (GHS US): Warning
   - H319 - Causes serious eye irritation.
   - Precautionary statements (GHS US):
     - P264 - Wash hands, forearms and face thoroughly after handling.
     - P280 - Wear protective gloves/protective clothing/eye protection/face protection.
     - P302+P352 - If on skin: Wash with plenty of water
     - P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
     - P321 - Specific treatment (see supplemental first aid instruction on this label)
     - P332+P313 - If skin irritation occurs: Get medical advice/attention.
     - P337+P313 - If eye irritation persists: Get medical advice/attention.
     - P362+P364 - Take off contaminated clothing and wash it before reuse.

2.3. **Other hazards which do not result in classification**
   - No additional information available

2.4. **Unknown acute toxicity (GHS US)**
   - Not applicable

**SECTION 3: Composition/information on ingredients**

3.1. **Substances**
   - Not applicable

3.2. **Mixtures**
   - Not applicable
Full text of hazard classes and H-statements: see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures
First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact: Wash skin with plenty of water.
First-aid measures after eye contact: Rinse eyes with water as a precaution.
First-aid measures after ingestion: Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)
No additional information available

4.3. Immediate medical attention and special treatment, if necessary
Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

5.2. Specific hazards arising from the chemical
No additional information available

5.3. Special protective equipment and precautions for fire-fighters
Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
Emergency procedures: Ventilate spillage area.

6.1.2. For emergency responders
Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Mechanically recover the product.
Other information: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections
For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4-Pentanediol, 2-methyl-</td>
<td>(CAS-No.) 107-41-5</td>
<td>24.75 - 45</td>
</tr>
</tbody>
</table>

ACGIH ACGIH TWA (ppm) 25 ppm (vapor fraction)
ACGIH ACGIH STEL (mg/m³) 10 mg/m³ (inhalable particulate matter, aerosol only)
8.2. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

Environmental exposure controls: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Solid
Colour: No data available
Odour: No data available
Odour threshold: No data available
pH: No data available
Melting point: No data available
Freezing point: Not applicable
Boiling point: No data available
Flash point: Not applicable
Relative evaporation rate (butylacetate=1): No data available
Flammability (solid, gas): Non flammable.
Vapour pressure: No data available
Relative vapour density at 20 °C: No data available
Relative density: No data available
Solubility: No data available
Log Pow: No data available
Auto-ignition temperature: Not applicable
Decomposition temperature: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosive limits: Not applicable
Explosive properties: No data available
Oxidising properties: No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
The product is non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

2,4-Pentanediol, 2-methyl- (107-41-5)
LD50 oral rat 3700 mg/kg
LD50 dermal rabbit 12300 mg/kg
LC50 inhalation rat (mg/l) > 310 mg/m³ (Exposure time: 1 h)
ATE US (oral) 3700 mg/kg bodyweight
ATE US (dermal) 12300 mg/kg bodyweight
Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Viscosity, kinematic : No data available

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

2,4-Pentanediol, 2-methyl- (107-41-5)
LC50 fish 1 10500 - 11000 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1 2700 - 3700 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2 10000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential

2,4-Pentanediol, 2-methyl- (107-41-5)
Log Pow < 0.14

12.4. Mobility in soil
No additional information available
12.5. **Other adverse effects**
No additional information available

### SECTION 13: Disposal considerations

13.1. **Disposal methods**
Waste treatment methods: Dispose of contents/container in accordance with licensed collector's sorting instructions.

### SECTION 14: Transport information

**Department of Transportation (DOT)**
In accordance with DOT
Not applicable

**Transportation of Dangerous Goods**
Not applicable

**Transport by sea**
Not applicable

**Air transport**
Not applicable

### SECTION 15: Regulatory information

15.1. **US Federal regulations**

<table>
<thead>
<tr>
<th>2,4-Pentanediol, 2-methyl- (107-41-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
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</table>

15.2. **International regulations**

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<tr>
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</table>

15.3. **US State regulations**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>U.S. - California - Proposition 65 - Carcinogens List</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Developmental Toxicity</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>State or local regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4-Pentanediol, 2-methyl-(107-41-5)</td>
<td>U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List</td>
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</tbody>
</table>

### SECTION 16: Other information
Full text of H-statements:

<p>| | |</p>
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SDS US (GHS HazCom 2012)

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Lucas-Milhaupt, Inc.