MATERIAL SAFETY DATA SHEET

TRADE NAME: Electric Arc Furnace Steel Slag
SYNONYMS: Steel Slag, EAF Slag

I. PRODUCT AND COMPONENT DATA

<table>
<thead>
<tr>
<th>Component(s):</th>
<th>CAS Registry</th>
<th>% (Approx.)</th>
<th>ACGIH TLV-TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel Furnace Slag</td>
<td>65996-71-6</td>
<td>100</td>
<td>None Known</td>
</tr>
</tbody>
</table>

Typical EAF Slag Analysis

- \( \text{SiO}_2 \): 10-15%
- \( \text{Al}_2\text{O}_3 \): 0-2%
- \( \text{CaO} \): 35-50%
- \( \text{MgO} \): 0-10%
- \( \text{MnO} \): 0-8%
- \( \text{FeO} \): 10-40%
- \( \text{S} \): 0-1%

* Composition varies due to the many different types of steel manufactured, the exact chemistry of EAF/SF slag may vary. Composition consists primarily of silicates and alumino-silicates of calcium plus lime-iron compounds and free lime.

II. PHYSICAL DATA

- SOLUBILITY: Trace, <1%
- FLASH POINT: None
- SPECIFIC GRAVITY: 3.4 - 3.8 Bulk
- FLAMMABLE LIMITS: None
- STABILITY: Un-weathered steel slag may contain potentially expansive compounds
- APPEARANCE & ODOR: Dark Gray, vesicular stony material, no distinctive odor.

III. PERSONAL PROTECTION AND CONTROLS

RESPIRATORY: If airborne concentrations exceed recommended exposure limits, a suitable NIOSH/MSHA approved filter respirator should be worn. General ventilation or local exhaust is normally adequate to control dust emissions, if not engineering controls should be
EYE: Safety glasses with side shields should be worn as minimum protection from impact. Dust goggles should be worn when excessively dusty conditions are present or anticipated.

GENERAL: The use of hard hats and hard toed shoes is recommended. Gloves may be worn to protect from abrasion.

IV. FIRST AID

INHALATION: Remove to fresh air. *

SKIN: Wash with soap and water.

EYE: Flush with water immediately. *

*Note: If irritation is aggravated or persists, contact a physician.

V. HEALTH HAZARDS

EXPOSURE LIMITS: ACGIH TLV's:

Total Dust: 10mg/M3 < 1% quartz
Respirable dust: 5mg/M3 < 1% quartz

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Exposure to dust may cause irritation to the skin, eyes, or respiratory system or may aggravate existing skin, eye, or respiratory system disease.

ROUTE OF EXPOSURE: Inhalation

ACUTE TOXICITY: Exposure to dust may irritate the respiratory system, eyes, or skin.

CHRONIC TOXICITY: Steel furnace slag is not listed on the NTP, IARC, or OSHA lists of carcinogens.

VI. STORAGE AND SPECIAL PRECAUTIONS

Respirable dust may be generated during processing, handling, and storage. Use personal protective equipment as noted in Section III.
VII. **SPILL, LEAK, AND DISPOSAL METHODS**

Pick up mechanically or by hand tools and reuse or dispose of as a common non-hazardous material in accordance with applicable Federal, State, and local laws. Wetting the material prior to cleanup may be necessary to suppress dust; use personal protective equipment as described in Section III.

VIII. **TRANSPORTATION**

DOT Hazard Classification and placard not required. Some areas require the use of tarps on trucks for containment of dust.

IX. **ADDITIONAL INFORMATION**

Contact: Edw. C. Levy Co.  Business phone: 313-429-2200
8800 Dix Avenue
Detroit, MI 48209

This product contains the following EPCRA Section 313 chemical subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372):

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>Manganese Compounds</td>
<td>3-8%</td>
</tr>
</tbody>
</table>

X. **DATE ISSUED**

**ISSUED:** May 2009  **SUPERCEDES:** May 2002

**DISCLAIMER:**
The data supplied in this Material Safety Data Sheet is, to the best of our knowledge and belief, accurate and reliable. The Levy Company does not warrant or guarantee their accuracy or reliability, and will not be liable for any loss or damage arising out of the use thereof. The information contained herein is offered for the user’s consideration, examination, and determination of suitability.