

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 07/13/2015

Reviewed on 05/25/2016

* 1 Identification

- **Product identifier**
- **Trade name: Blast Furnace Slag**
- **CAS Number:** 65996-69-2
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Edward C. Levy Company
9300 Dix Avenue
Dearborn, Michigan 48120
Phone - (313) 429-2200
Fax - (219) 465-7313
www.edwclevy.com
- **Emergency telephone number:**
John J. Yzenas Jr.
Director of Technical Services
Phone - (219) 741-6098
jyzenas@levyco.net

* 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 4 H312 Harmful in contact with skin.
Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labeling:**
Basic Furnace Slag (BF)
- **Hazard statements**
Harmful if swallowed, in contact with skin or if inhaled.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.

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Precautionary statements

- Avoid breathing dust/fume/gas/mist/vapors/spray.
- Use only outdoors or in a well-ventilated area.
- Wear protective gloves.
- Wear protective gloves / protective clothing.
- Wear eye protection / face protection.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If swallowed: Call a poison center/doctor if you feel unwell.
- Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Call a poison center/doctor if you feel unwell.
- If skin irritation occurs: Get medical advice/attention.
- If eye irritation persists: Get medical advice/attention.
- Rinse mouth.
- If on skin: Wash with plenty of water.
- Take off contaminated clothing and wash it before reuse.
- Store in a well-ventilated place.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

NFPA ratings (scale 0 - 4)



HMS-ratings (scale 0 - 4)

HEALTH	2	Health = 2
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

Hazard(s) not otherwise classified (HNOC): None known

* 3 Composition/information on ingredients

Melilite [Ca ₂ MgFeAl] (SiAl) ₂ O ₇]
Merwinite, Calcium-Magnesium-Silicate [Ca ₃ MgSi ₂ O ₈]
Calcium-Silicate [CaSiO ₃]
Monticellite [CaMgSiO ₄]

Chemical characterization: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous Components:

65996-69-2	Ground Granulated Blast Furnace Slag	100%
	⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	

Additional information:

These constituents usually exist as an isomorphous mixture with the following general formula:
Ca₂(MgFeAl)(SiAl)₂O₇
This formula represent the Melilite series.
Some of the constituents may also occur as separate compounds such as those listed below:

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CaCO₃, CaS, Fe, Fe₂O₃, CaSO₄ · 2H₂O

* 4 First-aid measures

• **Description of first aid measures**

• **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

• **After inhalation:**

Remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Seek medical attention for discomfort or if coughing or other symptoms do not subside.

• **After skin contact:**

Wash with cool water and a pH neutral soap or a mild skin detergent. Seek medical attention for rash, burns, irritation and prolonged unprotected exposure.

• **After eye contact:**

Flush with water immediately for at least 15 minutes, including under the lids to remove all particles. Seek medical attention for abrasions and burns.

• **After swallowing:**

Do not induce vomiting. If conscious, have person drink plenty of water. Seek medical attention or contact poison control center immediately.

• **Information for doctor:**

• **Most important symptoms and effects, both acute and delayed:** No further relevant information available.

• **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

* 5 Fire-fighting measures

• **Extinguishing media**

• **Suitable extinguishing agents:**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

• **Special hazards arising from the substance or mixture** No further relevant information available.

• **Advice for firefighters**

• **Protective equipment:**

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

* 6 Accidental release measures

• **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

• **Environmental precautions:** None

• **Methods and material for containment and cleaning up:**

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 regulations. Wetting the material prior to clean up may be necessary to suppress dust.

• **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

* 7 Handling and storage

• **Handling:**

• **Precautions for safe handling**

Use personal protection equipment as outlined in section 8.

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- Respirable dust may be generated during processing, handling, and storage.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

* 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**

• **Components with occupational exposure limits:**

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TWA	Short-term value: 5 mg/m ³ Long-term value: 15 mg/m ³
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- **Additional information:** The lists that were valid during the creation of this SDS were used as basis.
- **Exposure controls**
Provide general ventilation in processing and storage. Provide local exhaust if necessary to reduce dust levels below acceptable limits.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Immediately remove all soiled and contaminated clothing and wash before reuse.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Breathing equipment:**



NIOSH/OSHA or EN approved respiratory protection is recommended for use in airborne concentrations exceeding exposure limits.

- **Protection of hands:**



Protective gloves

- **Material of gloves** Waterproof or water resistant material
- **Eye protection:**
Wear ANSI approved glasses or goggles to prevent eye contact. Splash shields should be worn in wet conditions. Wearing contact lenses in dusty conditions is not recommended.
- **Body protection:**
Wear hard hats, protective clothing and hard toed shoes to protect from impact and abrasion. In wet conditions, impervious PPE should be worn to protect the skin.

* 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
Form: Granule

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Color:	Grey
· Odor:	Mild Sulfur
· Odor threshold:	Not determined.
· pH-value:	7-10.5 (in water)
· Change in condition	
Melting point/Melting range:	Not determined.
Boiling point/Boiling range:	Not determined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Not determined.
· Ignition temperature:	
Decomposition temperature:	Not determined.
· Auto igniting:	Product is not self-igniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure:	Not applicable.
· Density:	2.4-2.8 (Bulk)
· Relative density	Not determined.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with	
Water:	<1 % (trace)
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· Other information	No further relevant information available.

* 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
May produce CaS/CaCO₃ leachate when immersed in stagnant water for long periods of time.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**
Hydrogen sulfide gas may be released from moist or wet slag when it is heated.

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* 11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **Primary irritant effect:**

· Elevated pH in moist conditions may cause irritation to the skin, and eyes or aggravate existing conditions. Can cause serious eye irritation.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful / Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

Iron and steel furnace slag is not listed as a carcinogen by IARC; however, slag contains trace amounts of crystalline silica which is classified by IARC as known human carcinogens.

None of the ingredients are listed.

- **NTP (National Toxicology Program)**

None of the ingredients are listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:** Not known to be hazardous to water.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects** No further relevant information available.

* 13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

Observe all federal, state and local environmental regulations when disposing of this material.

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

* 14 Transport information

- **UN-Number**

- **DOT, ADR, ADN, IMDG, IATA**

Non-Regulated Material

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Trade name: Blast Furnace Slag

- **UN proper shipping name**
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **Transport hazard class**
- **DOT, ADR, ADN, IMDG, IATA**
- **Class** Non-Regulated Material
- **Packing group**
- **DOT, ADR, IMDG, IATA** Non-Regulated Material
- **Environmental hazards:** Not applicable.
- **Special precautions for user** Some areas require the use of tarps on trucks for containment of dust.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

*15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

- **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

- **Section 313 (Specific toxic chemical listings):**

This material may contain chemicals subject to the reporting requirements of this section of the Emergency Planning and Community Right to Know Act of 1986. Chemical Name: Manganese, Concentration Range: <1%

- **TSCA (Toxic Substances Control Act):**

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- **California Proposition 65**

- **Chemicals known to cause cancer:**

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- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

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- **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

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Trade name: Blast Furnace Slag

• **Hazard pictograms**



GHS07

• **Signal word** Warning

• **Hazard-determining components of labeling:**

Blast Furnace Slag (BF)

• **Hazard statements**

Harmful if swallowed, in contact with skin or if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

• **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wear protective gloves.

Wear protective gloves / protective clothing.

Wear eye protection / face protection.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If swallowed: Call a poison center/doctor if you feel unwell.

Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Call a poison center/doctor if you feel unwell.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Rinse mouth.

If on skin: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

Store in a well-ventilated place.


Store in a dry place.

Dispose of contents/container in accordance with local/regional/national/international regulations.

• **National regulations:**

The product is subject to be classified according with the latest version of the regulations on hazardous substances.

• **State Right to Know**

65996-69-2	Ground Granulated Blast Furnace Slag	100%
	 Acute Tox. 4, H332; Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	

All ingredients are listed.

• **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

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· **Date of last revision** 05/25/2016 Rev-2

· **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

· *** Data compared to the previous version altered. Previous Version 08/18/2015**