



Safety Data Sheet (SDS)

Section 1 – Identification

1(a) Product Identifier used on Label: Aluminum Re-melting By-Product (Aluminum Dross)
1(b) Other means of identification: EA-01
1(c) Recommended use of the chemical and restrictions on use: Metal alloy for multiple production uses
1(d) Name, address, and telephone number:
 Ellwood Aluminum Phone number: 330-568-8668
 7158 Hubbard-Masury Road Email: NCesene@elwd.com
 Hubbard, OH 44425
1(e) Emergency phone number: 1-800-424-9300 or CHEMTREC (Day or Night): 1-800-424-9300

Section 2 – Hazard(s) Identification

2(a) Classification of the chemical: Dross is considered a hazardous material according to the criteria specified in REACH [REGULATION (EC) No 1907/2006] and CLP [REGULATION (EC) No 1272/2008] and OSHA 29 CFR 1910.1200 Hazard Communication Standard. The categories of Health Hazards as defined in “GLOBALY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELING OF CHEMICALS (GHS), Third revised edition ST/SG/AC.10/30/Rev. 3” United Nations, New York and Geneva, 2009 have been evaluated. Refer to Section 3, 8 and 11 for additional information.

2(b) Signal word, hazard statement(s), symbols and precautionary statement(s):

Hazard Symbol	Hazard Classification	Signal Word	Hazard Statement(s)
	Single Target Organ Toxicity (STOT) Repeat Exposure -2	WARNING	May cause damage to lungs through prolonged or repeated inhalation exposure.

Precautionary Statement(s):

Prevention	Response	Storage/Disposal
Do not breathe dusts or fumes.	Get medical advice/attention if you feel unwell.	Dispose of contents in accordance with federal, state and local regulations.

2(c) Hazards not otherwise classified: None Known

2(d) Unknown acute toxicity statement (mixture): None Known

Section 3 – Composition/Information on Ingredients

3(a-c) Chemical name, common name (synonyms), CAS number and other identifiers, and concentration:

Chemical Name	CAS Number	EC Number	% weight*
Aluminum and Aluminum Oxide	7429-90-5	231-072-3	90-95
	1344-28-1	215-691-6	
Magnesium Oxide and Magnesium Compounds	14452-57-4	238-438-1	1-3
	1309-48-4	215-171-9	
	7439-95-4	231-104-6	
Copper	7440-50-8	231-159-6	<1
Calcium Oxide and Calcium compounds	1305-78-8	215-138-9	<1
	7440-70-2	231-179-5	

EC - European Community

CAS - Chemical Abstract Service

* Percentages are expressed as typical ranges or maximum concentrations of trace elements for the purpose of communicating the potential hazards of the finished product.

Section 4 – First-aid Measures

4(a) Description of necessary measures:

- **Inhalation:** Dross as sold/shipped is not a likely form of exposure. However, during further processing (welding, grinding, burning, etc.), if exposed, concerned or feel unwell: Get medical advice/attention.
- **Eye Contact:** Dross as sold/shipped is not a likely form of exposure. However, during further processing (welding, grinding, burning, etc.), if in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing.
- **Skin Contact:** Dross as sold/shipped is not a likely form of exposure. However, during further processing (welding, grinding, burning, etc.), if exposed, concerned or feel unwell: Get medical advice/attention.



Section 4 – First-aid Measures (continued)

4(a) Description of necessary measures (continued):

- **Ingestion:** Dross as sold/shipped is not a likely form of exposure. However, during further processing (welding, grinding, burning, etc.), if exposed, concerned or feel unwell: Get medical advice/attention.

4(b) Most important symptoms/effects, acute and delayed (chronic):

- **Inhalation:** Dross as sold/shipped is not likely to present an acute or chronic health effect.
- **Eye:** Dross as sold/shipped is not likely to present an acute or chronic health effect.
- **Skin:** Dross as sold/shipped is not likely to present an acute or chronic health effect.
- **Ingestion:** Dross as sold/shipped is not likely to present an acute or chronic health effect.

However, during further processing (welding, grinding, burning, etc.) individual components may illicit an acute or chronic health effect. Refer to Section 11-Toxicological Information.

4(c) Immediate Medical Attention and Special Treatment: None Known

Section 5 – Fire-fighting Measures

5(a) Suitable (and unsuitable) Extinguishing Media: Not Applicable for Dross as sold/shipped. Use extinguishers appropriate for surrounding materials.

5(b) Specific Hazards arising from the chemical: Not Applicable for Dross as sold/shipped. When burned, toxic smoke, fume and vapor may be emitted.

5(c) Special protective equipment and precautions for fire-fighters: Self-contained NIOSH approved respiratory protection and full protective clothing should be worn when fumes and/or smoke from fire are present. Heat and flames cause emittance of acrid smoke and fumes. Do not release runoff from fire control methods to sewers or waterways. Firefighters should wear full face-piece self-contained breathing apparatus and chemical protective clothing with thermal protection. Direct water stream will scatter and spread flames and, therefore, should not be used.

Section 6 - Accidental Release Measures

6(a) Personal Precautions, Protective Equipment and Emergency Procedures: Not Applicable for Dross as sold/shipped. For spills involving finely divided particles, clean-up personnel should be protected against contact with eyes and skin. If material is in a dry state, avoid inhalation of dust.

6(b) Methods and materials for containment and clean up: Not Applicable for Dross as sold/shipped. Collect material in appropriate, labeled containers for recovery or disposal in accordance with federal, state, and local regulations. Follow applicable OSHA regulations (29 CFR 1910.120) and all other pertinent state and federal requirements.

Section 7 - Handling and Storage

7(a) Precautions for safe handling: Not Applicable for Dross as sold/shipped, however further processing (welding, burning, grinding, etc.) with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary.

7(b) Conditions for safe storage, including any incompatibilities: Store away from acids and incompatible materials.

Section 8 - Exposure Controls / Personal Protection

8(a) Occupational Exposure Limits (OELs): Dross as sold/shipped in its physical form does not present an inhalation, ingestion or contact hazard, nor would any of the following exposure data apply. However, operations such as burning, welding (high temperature), sawing, brazing, machining, grinding, etc. may produce fumes and/or particulates. The following exposure limits are offered as reference for an experienced industrial hygienist to review.

Ingredients	OSHA PEL ¹	ACGIH TLV ²	NIOSH REL ³	IDLH ⁴
Aluminum (as metal, oxide and insoluble compounds)	15 mg/m ³ (as aluminum oxide, metal & insoluble compounds, total dust) 5.0 mg/m ³ (as aluminum oxide, metal & insoluble compounds, respirable fraction)	1.0 mg/m ³ (as metal & insoluble compounds, respirable fraction ⁵)	10 mg/m ³ (as metal & insoluble compounds, total dust) 5.0 mg/m ³ (as metal & insoluble compounds, respirable fraction) 5.0 mg/m ³ (as welding fumes & pyro powders)	NE
Calcium Oxide and Calcium compounds	5.0 mg/m ³ (as calcium oxide) 15 mg/m ³ (as calcium hydroxide & calcium silicate, total dust) 5.0 mg/m ³ (as calcium hydroxide & calcium silicate, respirable fraction)	2.0 mg/m ³ (as calcium oxide) 5.0 mg/m ³ (as calcium hydroxide)	2.0 mg/m ³ (as calcium oxide) 5.0 mg/m ³ (as calcium hydroxide) 10 mg/m ³ (as calcium silicate, total dust) 5.0 mg/m ³ (as calcium hydroxide, respirable fraction)	25 mg/m ³ (as calcium oxide)
Magnesium Oxide & Magnesium Compounds	15 mg/m ³ (as magnesium oxide fume, total particulate)	10 mg/m ³ (as magnesium oxide, inhalable fraction ⁶)	NE	750 mg/m ³ (as magnesium oxide fume)



Section 8 - Exposure Controls / Personal Protection (continued)

8(a) Occupational Exposure Limits (OELs) (continued)

Ingredients	OSHA PEL ¹	ACGIH TLV ²	NIOSH REL ³	IDLH ⁴
Copper	0.1 mg/m ³ (as fume, Cu) 1.0 mg/m ³ (as dusts & mists, Cu)	0.2 mg/m ³ (as fume) 1.0 mg/m ³ (as dusts & mists, Cu)	0.1 mg/m ³ (as fume, Cu) 1.0 mg/m ³ (as dusts & mists, Cu)	100 mg Cu/m ³

NE - None Established

- OSHA PELs (Permissible Exposure Limits) are 8-hour TWA (time-weighted average) concentrations unless otherwise noted. A ("C") designation denotes a ceiling limit, which should not be exceeded during any part of the working exposure unless otherwise noted. A Short Term Exposure Limit (STEL) is defined as a 15-minute exposure, which should not be exceeded at any time during a workday. An Action level (AL) is used by OSHA and NIOSH to express a health or physical hazard. They indicate the level of a harmful or toxic substance/activity, which requires medical surveillance, increased industrial hygiene monitoring, or biological monitoring. Action Levels are generally set at one half of the PEL but the actual level may vary from standard to standard. The intent is to identify a level at which the vast majority of randomly sampled exposures will be below the PEL.
- Threshold Limit Values (TLV) established by the American Conference of Governmental Industrial Hygienists (ACGIH) are 8-hour TWA concentrations unless otherwise noted. ACGIH TLVs are for guideline purposes only and as such are not legal, regulatory limits for compliance purposes. DSEN – May cause dermal sensitization. This notation is used to indicate the potential for dermal sensitization resulting from the interaction of an absorbed agent and ultraviolet light (i.e. photosensitization). RSEN – May cause respiratory sensitization.
- The National Institute for Occupational Safety and Health Recommended Exposure Limits (NIOSH-REL)- Compendium of Policy and Statements. NIOSH, Cincinnati, OH (1992). NIOSH is the federal agency designated to conduct research relative to occupational safety and health. As is the case with ACGIH TLVs, NIOSH RELs are for guideline purposes only and as such are not legal, regulatory limits for compliance purposes.
- The "immediately dangerous to life or health air concentration values (IDLHs)" are used by NIOSH as part of the respirator selection criteria and were first developed in the mid-1970's by NIOSH. The Documentation for Immediately Dangerous to Life or Health Concentrations (IDLHs) is a compilation of the rationale and sources of information used by NIOSH during the original determination of 387 IDLHs and their subsequent review and revision in 1994. Ca is designated as carcinogen.
- Respirable fraction. The concentration of respirable dust for the application of this limit is to be determined from the fraction passing a size-selector with the characteristics defined in ACGIH 2021 TLVs[®] and BEIs[®] Appendix D, paragraph C.
- Inhalable fraction. The concentration of inhalable particulate for the application of this TLV is to be determined from the fraction passing a size-selector with the characteristics defined in the ACGIH 2021 TLVs[®] and BEIs[®] (Biological Exposure Indices) Appendix D, paragraph A.

8(b) Appropriate Engineering Controls: Use controls as appropriate to minimize exposure to metal fumes and dusts during handling operations. Provide general or local exhaust ventilation systems to minimize airborne concentrations. Local exhaust is necessary for use in enclosed or confined spaces. Provide sufficient general/local exhaust ventilation in pattern/volume to control inhalation exposures below current exposure limits.

8(c) Individual Protection Measures:

- Respiratory Protection:** Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, use only a NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. Concentration in air of the various contaminants determine the extent of respiratory protection needed. Half-face, negative-pressure, air-purifying respirator equipped with P100 filter is acceptable for concentrations up to 10 times the exposure limit. Full-face, negative-pressure, air-purifying respirator equipped with P100 filter is acceptable for concentrations up to 50 times the exposure limit. Protection by air-purifying negative-pressure and powered air respirators is limited. Use a positive-pressure-demand, full-face, supplied air respirator or self-contained breathing apparatus (SCBA) for concentrations above 50 times the exposure limit. If exposure is above the IDLH (Immediately dangerous to life or health) for any of the constituents, or there is a possibility of an uncontrolled release or exposure levels are unknown, then use a positive-demand, full-face, supplied air respirator with escape bottle or SCBA.

Warning! Air-purifying respirators both negative-pressure and powered-air do not protect workers in oxygen-deficient atmospheres.

- Eyes:** Wear appropriate eye protection to prevent eye contact. For operations which result in elevating the temperature of the product to or above its melting point or result in the generation of airborne particulates, use safety glasses to prevent eye contact. Contact lenses should not be worn where industrial exposures to this material are likely. Use safety glasses or goggles as required for welding, burning, sawing, brazing, grinding or machining operations.
- Skin:** Wear appropriate personal protective clothing to prevent skin contact. Cut resistant gloves and sleeves should be worn when working with steel products. For operations which result in elevating the temperature of the product to or above its melting point or result in the generation of airborne particulates, use protective clothing, and gloves to prevent skin contact. Protective gloves should be worn as required for welding, burning or handling operations. Contaminated work clothing must not be allowed out of the workplace.
- Other protective equipment:** An eyewash fountain and deluge shower should be readily available in the work area.

Section 9 - Physical and Chemical Properties

9(a) Appearance (physical state, color, etc.): Solid, Metallic, Silver, Gray	9(j) Upper/lower Flammability or Explosive Limits: NA
9(b) Odor: Odorless	9(k) Vapor Pressure: NA
9(c) Odor Threshold: NA	9(l) Vapor Density (Air = 1): NA
9(d) pH: 9.40	9(m) Relative Density: 2.55 g/ml
9(e) Melting Point/Freezing Point: ND	9(n) Solubility(ies): Insoluble
9(f) Initial Boiling Point and Boiling Range: ND	9(o) Partition Coefficient n-octanol/water: ND
9(g) Flash Point: NA	9(p) Auto-ignition Temperature: NA
9(h) Evaporation Rate: NA	9(q) Decomposition Temperature: ND
9(i) Flammability (solid, gas): Non-flammable, non-combustible	9(r) Viscosity: NA

NA - Not Applicable


ND - Not Determined for product as a whole

Section 10 - Stability and Reactivity

- 10(a) Reactivity:** Not Determined (ND) for product in a solid form. Do not use water on molten metal.
- 10(b) Chemical Stability:** Metal products are stable under normal storage and handling conditions.
- 10(c) Possibility of hazardous reaction:** None Known
- 10(d) Conditions to Avoid:** Storage with strong acids or calcium hypochlorite.
- 10(e) Incompatible Materials:** Will react with strong acids to form hydrogen.
- 10(f) Hazardous Decomposition Products:** Thermal oxidative decomposition of metal products can produce fumes containing oxides.

Section 11 - Toxicological Information

11 Information on toxicological effects: The following toxicity data has been determined for **Dross** when further processed using the information available for its components applied to the guidance on the preparation of an SDS under the GHS requirements of OSHA and the EU CPL:

Hazard Classification	Hazard Category		Hazard Symbols	Signal Word	Hazard Statement
	EU	OSHA			
STOT following Repeated Exposure (covers Categories 1 and 2)	NR*	2 ¹		Warning	Causes damage to lungs through prolonged or repeated inhalation exposure. Rating due to aluminum particulate or fume that can enter the body generated when further processed (welding, grinding, burning, etc.).

* NR - Not Rated, Available data does not meet criteria for classification.

Toxicological data listed below are presented regardless to classification criteria. Individual hazard classification categories where the toxicological information has met or exceeded a classification criteria threshold are listed above.

- a. No LC₅₀ or LD₅₀ has been established for **Dross** as a mixture or its components.
- b. No Skin (Dermal) Irritation data available for **Dross** as a mixture or its components.
- c. No Eye Irritation data available for **Dross** as a mixture. The following Eye Irritation information was found for the components:
 - **Calcium Oxide:** Rabbit Irritating (REACH).
- d. No Skin (Dermal) Sensitization data available for **Dross** as a mixture or its components
- e. No Respiratory Sensitization data available for **Dross** as a mixture or its components.
- f. No Germ Cell Mutagenicity data available for **Dross** as a mixture or its components
- g. Carcinogenicity: IARC, NTP, and OSHA do not list **Dross** as a mixture or its components
 - **Aluminum (metal and insoluble compounds):** IARC-1 (production), carcinogen to humans; ACGIH TLV-A4, not classifiable as a human carcinogen
 - **Magnesium (oxide):** ACGIH TLV-A4, not classifiable as a human carcinogen
 - **Copper (dust, mist, fume, inorganic compounds, as Cu):** EPA-D, not classifiable as to human carcinogenicity (CBD, cannot be determined)
- h. No Toxic Reproduction data available for **Dross** as a mixture or its components
- i. No Specific Target Organ Toxicity (STOT) following a Single Exposure data available for **Dross** as a mixture or its components.
- j. No Specific Target Organ Toxicity (STOT) following Repeated Exposure data was available for **Dross** as a mixture. The following STOT following Repeated Exposure data was found for the components:
 - **Aluminum:** Repeated exposure associated with Asthma, Fibrosis in lungs and encephalopathy in humans.
 - **Copper:** Target organs affected - Skin, eyes liver, kidneys and respiratory tract.

The above toxicity information was determined from available scientific sources to illustrate the prevailing posture of the scientific community. The scientific resources includes: The American Conference of Governmental Industrial Hygienist (ACGIH) Documentation of the Threshold Limit Values (TLVs) and Biological Exposure indices (BEIs) with Other Worldwide Occupational Exposure Values 2021, The International Agency for Research on Cancer (IARC), The National Toxicology Program (NTP) updated documentation, the World Health Organization (WHO) and other available resources, the International Uniform Chemical Information Database (IUCLID), European Union Risk Assessment Report (EU-RAR), Concise International Chemical Assessment Documents (CICAD), European Union Scientific Committee for Occupational Exposure Limits (EU-SCOEL), Agency for Toxic Substances and Disease Registry (ATSDR), Hazardous Substance Data Bank (HSDB), and International Programme on Chemical Safety (IPCS), European Union Classification, Labeling and Packaging. (EU CPL), Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), International Uniform Chemical Information Database (IUCLID), Toxicology Data NETWORK (TOXNET), European Risk Assessment Reports (EU RAR).

The following health hazard information is provided regardless to classification criteria and is based on the individual component(s) and potential resultant components from further processing:

Acute Effects:

- **Inhalation:** Excessive exposure to high concentrations of metal dust may cause irritation to the eyes, skin and mucous membranes of the upper respiratory tract. Excessive inhalation of fumes of freshly formed metal oxide particles sized below 1.5 micrometer and usually between 0.02-0.05 micrometers from many metals can produce an acute reaction known as “metal fume fever”. Symptoms consist of chills and fever (very similar to and easily confused with flu symptoms), metallic taste in the mouth, dryness and irritation of the throat followed by weakness and muscle pain. The symptoms come on in a few hours after excessive exposures and usually last from 12 to 48 hours. Long-term effects from metal fume fever have not been noted. Freshly formed oxide fumes copper have been associated with causing metal fume fever.
- **Eye:** Excessive exposure to high concentrations of metal dust may cause irritation to the eyes.
- **Skin:** Skin contact with metal dusts may cause irritation or sensitization, possibly leading to dermatitis. Skin contact with metallic fumes and dusts may cause physical abrasion.



Section 11 - Toxicological Information (continued)

11 Information on toxicological effects (continued):

Acute Effects (continued):

- **Ingestion:** Ingestion of harmful amounts of this product as distributed is unlikely due to its solid insoluble form. Ingestion of metal dust may cause nausea or vomiting.

Acute Effects by component:

- **Aluminum and Aluminum oxide:** Inhalation may cause cough.
- **Magnesium and magnesium oxides:** Headache, cough, sweating, nausea and fever may be caused by exposure to freshly formed fumes. The symptoms of metal fume fever do not become manifest until 4-12 hours after exposure.
- **Copper and copper oxides:** Copper may cause allergic skin reaction. Copper oxide is harmful if swallowed, causes skin and eye irritation, and may cause an allergic skin reaction.
- **Calcium and calcium oxides:** Calcium oxide is an eye and skin irritant.

Delayed (chronic) Effects by component:

- **Aluminum and Aluminum oxide:** Repeated exposure to aluminum metal has been associated with Asthma, Fibrosis in lungs and encephalopathy in humans.
- **Magnesium and magnesium oxides:** Irritation of eyes, nose, and throat. Symptoms may include dryness of nose and mouth, cough, feeling of weakness, tightness of chest, muscular pain, chills, fever, headache, nausea, and vomiting.
- **Copper and copper oxides:** Inhalation of high concentrations of freshly formed oxide fumes and dusts of copper can cause metal fume fever. Chronic inhalation of copper dust has caused, in animals, hemolysis of the red blood cells, deposition of hemofuscin in the liver and pancreas, injury to lung cells and gastrointestinal symptoms.
- **Calcium and calcium oxides:** Depending on the concentration and duration of exposure, repeated or prolonged inhalation may cause inflammation of the respiratory passages, ulcers of the mucous membranes, and possible perforation of the nasal septum. Repeated or prolonged skin contact may cause dermatitis.

Section 12 - Ecological Information

12(a) Ecotoxicity (aquatic & terrestrial): No Data Available for **Dross** as sold/shipped. However, individual components of the product when processed have been found to be toxic to the environment. Metal dusts may migrate into soil and groundwater and be ingested by wildlife as follows:

- **Calcium Oxide:** LC₅₀: 159 mg/L; invertebrates

12(b) Persistence & Degradability: No Data Available for **Dross** as sold/shipped or individual components.

12(c) Bioaccumulative Potential: No Data Available for **Dross** as sold/shipped or individual components.

12(d) Mobility (in soil): No data available for **Dross** as sold/shipped. However, individual components of the product have been found to be absorbed by plants from soil.

12(e) Other adverse effects: None Known

Additional Information:

Hazard Category: Not Reported

Signal Word: No Signal Word

Hazard Symbol: No Symbol

Hazard Statement: No Statement

Section 13 - Disposal Considerations

Disposal: Dispose of in accordance with Local, State, Federal and International regulations. Observe safe handling precautions.

Container Cleaning and Disposal: Follow Local, State, Federal and International regulations. Observe safe handling precautions

Please note this information is for Dross in its original form. Any alterations can void this information.

Section 14 - Transport Information

US Department of Transportation (DOT) under 49 CFR 172.101 regulates **Dross** as a hazardous material. All Local, State, Federal and international regulations that apply to the transport of this type of material must be adhered to.

<p>Shipping Name: Aluminum smelting by-products or Aluminum remelting by-products</p> <p>Shipping Symbols: Not Applicable</p> <p>Hazard Class: 4.3</p> <p>UN No: UN3170</p> <p>Packing Group: II</p> <p>DOT/IMO Label: 4.3</p> <p>Special Provisions (172.102): 128, B115, IB7, IP2, T3, TP33, W31, W40</p>	<p>Packaging Authorizations</p> <p>a) Exceptions: 151</p> <p>b) Non-bulk: 212</p> <p>c) Bulk: 242</p>	<p>Quantity Limitations</p> <p>a) Passenger Aircraft or Rail: 15kg</p> <p>b) Cargo Aircraft Only: 50kg</p> <p>Vessel Stowage Location: B</p> <p>Other: 113, 85, 103, 148</p>
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Section 15 - Regulatory Information

Regulatory Information: The following listing of regulations relating to an Ellwood Aluminum product may not be complete and should not be solely relied upon for all regulatory compliance responsibilities.

This product and/or its constituents are subject to the following regulations:

OSHA Regulations: Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-2, Z-3): The product, **Dross** as a whole is not listed. However, individual components of the product are listed: Refer to Section 8, Exposure Controls and Personal Protection.

EPA Regulations: The product, **Dross** is not listed as a whole. However, individual components of the product are listed:

Components	Regulations
Aluminum	SARA 313, TSCA, SDWA
Aluminum Oxide	SARA 313, TSCA
Copper	CERCLA, CWA, SARA 313, TSCA, SDWA

SARA 311/312 Potential Hazard Categories: Immediate Acute Health Hazard; Delayed Chronic Health Hazard

Section 313 Supplier Notification: The product, **Dross** contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act and 40 CFR part 372:

CAS #	Chemical Name	Percent by Weight
7429-90-5	Aluminum	95 max
1344-28-1	Aluminum Oxide	95 max
7440-50-8	Copper	1.0 max

Regulations Key:

- CAA Clean Air Act (42 USC Sec. 7412; 40 CFR Part 61 [As of: 8/18/06])
- CERCLA Comprehensive Environmental Response, Compensation and Liability Act (42 USC Secs. 9601(14), 9603(a); 40 CFR Sec. 302.4, Table 302.4, Table 302.4 and App. A)
- CWA Clean Water Act (33 USC Secs. 1311; 1314(b), (c), (e), (g); 136(b), (c); 137(b), (c) [as of 8/2/06])
- RCRA Resource Conservation Recovery Act (42 USC Sec. 6921; 40 CFR Part 261 App VIII)
- SARA Superfund Amendments and Reauthorization Act of 1986 Title III Section 302 Extremely Hazardous Substances (42 USC Secs. 11023, 13106; 40 CFR sec. 372.65) and Section 313 Toxic Chemicals (42 USC Secs. 11023, 13106; 40 CFR Sec. 372.65 [as of 6/30/05])
- TSCA Toxic Substance Control Act (15 U.S.C. s/s 2601 et seq. [1976])
- SDWA Safe Drinking Water Act (42 U.S.C. s/s 300f et seq. [1974])

State Regulations: The product, **Dross** as a whole is not listed in any state regulations. However, individual components of the product are listed in various state regulations:

Pennsylvania Right to Know: Contains regulated material in the following categories:

- Hazardous Substances: Aluminum, Aluminum Oxide, Magnesium, Magnesium Oxide, Copper, Calcium, Calcium Oxide
- Environmental Hazards: Aluminum, Aluminum Oxide, Copper
- Special Hazardous Substance: None

California Prop. 65: NA The product, **Dross** does not contain chemicals which is known to the State of California to cause cancer or reproductive toxicity. For more information go to www.P65Warnings.ca.gov.

New Jersey: Contains regulated material in the following categories:

- Hazardous Substance: Aluminum, Aluminum Oxide, Magnesium, Magnesium Oxide, Copper, Calcium, Calcium Oxide
- Environmental Hazards: Aluminum Oxide, Copper
- Special Hazardous Substance: Aluminum, Calcium, Calcium Oxide

Minnesota: Aluminum Oxide, Magnesium Oxide

Massachusetts: Aluminum, Aluminum Oxide, Magnesium, Magnesium Oxide, Copper (compounds), Calcium, Calcium Oxide

Other Regulations:

WHMIS Classification (Canadian): The product, **Dross** is not listed as a whole. However individual components are listed.

Ingredients	WHMIS Classification
Copper	Acute oral toxicity – oral – Category 4; Combustible dusts*
Calcium	Substances which, in contact with water, emit flammable gases - Category 2; Combustible dusts*
Calcium Oxide	Skin corrosion/irritation - Category 1; Serious eye damage/eye irritation - Category 1; Health hazards not otherwise classified (corrosion) - Category 1

* This product could belong to the hazard class "Combustible dust", based on various factors related to the combustibility and explosiveness of its dust, including composition, shape and size of the particles.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

Section 16 - Other Information

Prepared By: Ellwood Aluminum

Original Issue Date: 9/25/2021

Revised Date: NA

Section 16 - Other Information (continued)

Additional Information:

Hazardous Material Identification System (HMIS) Classification

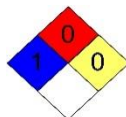
Health Hazard	1
Fire Hazard	0
Physical Hazard	0

HEALTH= 1, Denotes possible chronic hazard if airborne dusts or fumes are generated Irritation or minor reversible injury possible.

FIRE= 0, Materials that will not burn.

PHYSICAL HAZARD= 0, Materials that are normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosives.

National Fire Protection Association (NFPA)



HEALTH = 1, Exposure could cause irritation but only minor residual injury even if no treatment is given.

FLAMMABILITY = 0, Materials that will not burn.

INSTABILITY = 0, Normally stable, even under fire exposure conditions, and are not reactive with water.

ABBREVIATIONS/ACRONYMS:

ACGIH	American Conference of Governmental Industrial Hygienists	NIF	No Information Found
BEIs	Biological Exposure Indices	NIOSH	National Institute for Occupational Safety and Health
CAS	Chemical Abstracts Service	NTP	National Toxicology Program
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	ORC	Organization Resources Counselors
CLP	Classification, Labelling and Packaging	OSHA	Occupational Safety and Health Administration
CFR	Code of Federal Regulations	PEL	Permissible Exposure Limit
CNS	Central Nervous System	PNOR	Particulate Not Otherwise Regulated
GI, GIT	Gastro-Intestinal, Gastro-Intestinal Tract	PNOC	Particulate Not Otherwise Classified
HMIS	Hazardous Materials Identification System	PPE	Personal Protective Equipment
IARC	International Agency for Research on Cancer	ppm	parts per million
LC50	Median Lethal Concentration	RCRA	Resource Conservation and Recovery Act
LD50	Median Lethal Dose	REACH	Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals
LD_{Lo}	Lowest Dose to have killed animals or humans	RTECS	Registry of Toxic Effects of Chemical Substances
LEL	Lower Explosive Limit	SARA	Superfund Amendment and Reauthorization Act
LOEL	Lowest Observed Effect Level	SCBA	Self-contained Breathing Apparatus
LOAEC	Lowest Observable Adverse Effect Concentration	SDS	Safety Data Sheet
µg/m³	microgram per cubic meter of air	STEL	Short-term Exposure Limit
mg/m³	milligram per cubic meter of air	TLV	Threshold Limit Value
mppcf	million particles per cubic foot	TWA	Time-weighted Average
MSHA	Mine Safety and Health Administration	UEL	Upper Explosive Limit
NFPA	National Fire Protection Association		

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Dross

Signal Word: **Warning**

Symbols:



HAZARD STATEMENTS:

May cause damage to lungs through prolonged or repeated inhalation exposure.

PRECAUTIONARY STATEMENTS

Do not breathe dusts and fumes.
Get medical advice/attention if you feel unwell.
Dispose of contents in accordance with federal, state and local regulations.

SDS ID No.: EA-01

Ellwood Aluminum
7158 Hubbard-Masury Road
Hubbard, OH 44425

General Information: Phone: 330-568-8668

CHEMTREC (Day or Night): 1-800-424-9300

Original Issue Date: 9/25/2021

Revised: NA