Aluminum Dross

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024
Issue date: 5/25/2026 Revision date: 5/25/2026 Version: 1.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : Aluminum Dross

1.2. Other means of identification

Synonyms : Aluminum Dross; Dross (Remelt Aluminum) / Secondary Dross; Skim; Salt Dross

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Process by-product to be recycled

1.4. Supplier's details

Manufacturer
Aluminum Dynamics, LLC
3413 Charleigh D.Ford Jr Drive
Columbus, MS 39701
U.S.A
T (662) 352-0500

1.5. Emergency phone number

Emergency number : For 24 hour emergency information call:
CHEMTREC (800) 424-9300

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Substances and mixtures which, in contact with water, emit flammable gases, Category 3	In contact with water releases flammable gas.
Skin irritation, Category 2	Causes skin irritation.
Eye irritation, Category 2	Causes serious eye irritation.
Carcinogenicity, Category 2	Suspected of causing cancer.
Reproductive toxicity, Category 1A	May damage fertility or the unborn child.
Reproductive toxicity, Additional category, Effects on or via lactation	May cause harm to breast-fed children.

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger
Hazard statements (GHS US) : In contact with water releases flammable gas
Causes skin irritation
Causes serious eye irritation
Suspected of causing cancer.
May damage fertility or the unborn child
May cause harm to breast-fed children

Precautionary statements (GHS US) : Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Protect from moisture.
Do not breathe dust, fume, gas, mist, vapors, spray.
Avoid contact during pregnancy and while nursing.
Wash hands, forearms and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.
If exposed or concerned: Get medical advice/attention.
If on skin: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
If skin irritation occurs: Get medical advice or attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice or attention.
In case of fire: Use Class D extinguisher to extinguish.
Store in a dry place. Store in a closed container.
Store locked up.
Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

Hot dross dust (above 1290°F or 700°C) may ignite readily.

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

Not applicable

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc. (% w/w) Weight*
Aluminum	CAS-No.: 7429-90-5	25 – 75
Aluminum oxide (Al2O3)	CAS-No.: 1344-28-1	10 – 75
Magnesium chloride	CAS-No.: 14989-29-8	0 – 35
Silicon	CAS-No.: 7440-21-3	0 – 13
Aluminum carbide (Al4C3)	CAS-No.: 1299-86-1	0 – 10
Aluminum nitride (AlN)	CAS-No.: 24304-00-5	0 – 10
Copper	CAS-No.: 7440-50-8	0 – 6
Magnesium	CAS-No.: 7439-95-4	0 – 2
Magnesium oxide (MgO)	CAS-No.: 1309-48-4	0 – 2
Lead	CAS-No.: 7439-92-1	< 1

Name	Product identifier	Conc. (% w/w) Weight*
Chromium	CAS-No.: 7440-47-3	< 1

Comments : The concentrations listed represent actual ranges that result from batch variability.

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : IF exposed or concerned: Get medical advice or attention.

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice or attention if you feel unwell.

First-aid measures after skin contact : IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice or attention. Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

First-aid measures after ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical advice or attention if you feel unwell.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects : May cause harm to breast-fed children. May damage fertility. May damage the unborn child.

Symptoms/effects after inhalation : May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Symptoms/effects after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic symptoms : Suspected of causing cancer.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Class D extinguisher.

Unsuitable extinguishing media : Water.

5.2. Specific hazards arising from the chemical

Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon. Irritating vapors.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

For non-emergency personnel

No additional information available

For emergency responders

Environmental precautions : Prevent entry to sewers and public waters.

6.2. Methods and materials for containment and cleaning up

For containment : Contain spill, then place in a suitable container. Minimize dust generation. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Provide ventilation. Use dry sand to contain the flow of material. All tooling (e.g, shovels or hand tools) and containers which come in contact with molten metal must be preheated or specially coated, rust free and approved for such use. Allow the spill to cool before remelting as scrap.

For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust, fume, gas, mist, vapors,spray. Do not swallow. Avoid contact with skin and eyes. Avoid contact during pregnancy, while nursing. Handle and open container with care. When using do not eat, drink or smoke. Protect from moisture.

Hygiene measures : Wash contaminated clothing before reuse. Always wash hands after handling the product. Wash hands, forearms, and face thoroughly after handling.

7.2. Conditions for safe storage, including incompatibilities

Storage conditions : Keep out of the reach of children. Keep container tightly closed. Store in a dry, cool and well-ventilated place.

Special rules on packaging : Store in a closed container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Aluminum (7429-90-5)	
USA - ACGIH® - Threshold Limit Values	
Local name	Aluminum, metal and insoluble compounds
ACGIH® TLV® TWA	1 mg/m³ (respirable particulate matter)
Remark (ACGIH®)	TLV® Basis: Pneumoconiosis; LRT irr; neurotoxicity. Notations: A4 (Not classifiable as a Human Carcinogen)
ACGIH® chemical category	Not Classifiable as a Human Carcinogen
Regulatory reference	ACGIH 2025

Aluminum (7429-90-5)	
USA - OSHA - Occupational Exposure Limits	
Local name	Aluminum Metal (as Al)
OSHA PEL TWA	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - NIOSH - Occupational Exposure Limits	
Local name	Aluminum Metal (as Al)
NIOSH REL (TWA)	10 mg/m³ (total dust) 5 mg/m³ (respirable dust)
NIOSH REL 10h TWA	10 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)
Regulatory reference (US-NIOSH)	OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG))

Aluminum oxide (Al2O3) (1344-28-1)	
USA - OSHA - Occupational Exposure Limits	
Local name	alpha-Alumina
OSHA PEL TWA	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - Cal/OSHA - Occupational Exposure Limits	
Local name	Alumina
Cal/OSHA PEL (OEL TWA)	10 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)
Regulatory reference	California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1)

Silicon (7440-21-3)	
USA - OSHA - Occupational Exposure Limits	
Local name	Silicon
OSHA PEL TWA	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - Cal/OSHA - Occupational Exposure Limits	
Local name	Silicon
Cal/OSHA PEL (OEL TWA)	10 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)
Regulatory reference	California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1)
USA - NIOSH - Occupational Exposure Limits	
Local name	Silicon
NIOSH REL (TWA)	10 mg/m³ (total dust) 5 mg/m³ (respirable dust)

Silicon (7440-21-3)	
NIOSH REL 10h TWA	10 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)
Regulatory reference (US-NIOSH)	OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG))

Copper (7440-50-8)	
USA - ACGIH® - Threshold Limit Values	
Local name	Copper, as Cu
ACGIH® TLV® TWA	0.2 mg/m³ (fume)
Remark (ACGIH®)	TLV® Basis: Irr; GI; metal fume fever
Regulatory reference	ACGIH 2025
USA - OSHA - Occupational Exposure Limits	
Local name	Copper
OSHA PEL TWA	0.1 mg/m³ (fume) 1 mg/m³ (dust and mist)
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - Cal/OSHA - Occupational Exposure Limits	
Local name	Copper metal fume, as Cu
Cal/OSHA PEL (OEL TWA)	0.1 mg/m³
Regulatory reference	California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1)
USA - IDLH - Occupational Exposure Limits	
IDLH	100 mg/m³ (dust, fume and mist)
USA - NIOSH - Occupational Exposure Limits	
Local name	Copper
NIOSH REL (TWA)	1 mg/m³ (dust and mist) 0.1 mg/m³ (fume)
NIOSH REL 10h TWA	0.1 mg/m³ (Fume (as Cu)) 1 mg/m³ (Dusts and mists (as Cu))
Regulatory reference (US-NIOSH)	OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG))

Magnesium oxide (MgO) (1309-48-4)	
USA - ACGIH® - Threshold Limit Values	
Local name	Magnesium oxide
ACGIH® TLV® TWA	10 mg/m³ (inhalable particulate matter)
Remark (ACGIH®)	TLV® Basis: Irr; Metal fume fever. Notations: A4 (Not classifiable as a Human Carcinogen)
ACGIH® chemical category	Not Classifiable as a Human Carcinogen
Regulatory reference	ACGIH 2025
USA - OSHA - Occupational Exposure Limits	
Local name	Magnesium oxide fume - Total Particulate
OSHA PEL TWA	15 mg/m³ (fume, total particulate)

Magnesium oxide (MgO) (1309-48-4)	
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - Cal/OSHA - Occupational Exposure Limits	
Local name	Magnesium oxide fume, as Mg
Cal/OSHA PEL (OEL TWA)	10 mg/m³
Regulatory reference	California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1)
USA - IDLH - Occupational Exposure Limits	
IDLH	750 mg/m³ (fume)

Lead (7439-92-1)	
USA - ACGIH® - Threshold Limit Values	
ACGIH® TLV® TWA	0.05 mg/m³
ACGIH® chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
USA - ACGIH® - Biological Exposure Indices	
BEI (BLV)	200 µg/l Parameter: Lead - Medium: blood - Sampling time: not critical (Note: Persons applying this BEI are encouraged to counsel female workers of child-bearing age about the risk of delivering a child with a PbB (lead in blood level) over the current CDC reference value.)
USA - OSHA - Occupational Exposure Limits	
OSHA PEL TWA	50 µg/m³
Remark (OSHA)	Lead is subject to the standard 29 CFR 1910.1025, which may contain specific requirements for handling including protective equipment, regulated areas, monitoring and medical surveillance. The employer should review the standard and assure compliance with applicable requirements.
USA - IDLH - Occupational Exposure Limits	
IDLH	100 mg/m³
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA)	0.05 mg/m³

Chromium (7440-47-3)	
USA - ACGIH® - Threshold Limit Values	
Local name	Chromium, Metallic chromium, as Cr(0)
ACGIH® TLV® TWA	0.5 mg/m³ (inhalable particulate matter)
Remark (ACGIH®)	TLV® Basis: Resp tract irr
Regulatory reference	ACGIH 2025
USA - ACGIH® - Biological Exposure Indices	
Local name	Chromium
BEI (BLV)	0.7 µg/l Parameter: total Chromium - Medium: urine - Sampling time: end of shift at end of workweek (population based)
Regulatory reference	ACGIH 2025
USA - OSHA - Occupational Exposure Limits	
Local name	Chromium

Chromium (7440-47-3)	
OSHA PEL TWA	1 mg/m³
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - Cal/OSHA - Occupational Exposure Limits	
Local name	Chromium metal
Cal/OSHA PEL (OEL TWA)	0.5 mg/m³
Regulatory reference	California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1)
USA - IDLH - Occupational Exposure Limits	
IDLH	250 mg/m³
USA - NIOSH - Occupational Exposure Limits	
Local name	Chromium
NIOSH REL (TWA)	0.5 mg/m³
NIOSH REL 10h TWA	0.5 mg/m³ (II) compounds (as Cr) 0.5 mg/m³ (III) compounds (as Cr) 0.5 mg/m³ metal and insol. salts (as Cr)
Regulatory reference (US-NIOSH)	OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG))

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Provide readily accessible eye wash stations and safety showers.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Hand protection:

Wear suitable gloves resistant to chemical penetration. Consult glove manufacturer's product information on material suitability and material thickness.

Eye protection:

Wear eye/face protection

Skin and body protection:

Wear suitable protective clothing. Personnel who handle and work with molten metal should utilize primary protective clothing like polycarbonate face shields, fire resistant tapper's jackets, neck shades (snoods), leggings, spats and similar equipment to prevent burn injuries. In addition to primary protection, secondary or day-to-day work clothing that is fire resistant and sheds metal splash is recommended for use with molten metal. Synthetic materials should never be worn even as secondary clothing (undergarments).

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. SDSs cannot provide detailed and complete respiratory protection guidelines. Selection of respiratory protection must be done by a qualified person who has assessed the work environment.

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Dust.Large chunks
Color	:	Gray Silver
Odor	:	No data available
Odor threshold	:	No data available
pH	:	11.5 (maximum, saturated solution)
Melting point	:	1200 °F (648.89 °C) metallic portion only
Freezing point	:	No data available
Boiling point	:	4727.75 °F (2608.75 °C) estimated
Flash point	:	No data available
Flammability (solid, gas)	:	Not flammable. In contact with water releases flammable gas.
Vapor pressure	:	0.00001 hPa
Relative vapor density at 20°C	:	No data available
Relative density	:	No data available
Density	:	2.3 – 3 g/cm³ (146-191 lb/ft3)
Solubility	:	Slight.
Partition coefficient n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Explosion limits	:	No data available
Particle characteristics	:	No data available

Aluminum	
Boiling point	2467 °C (at 101.325 hPa)
Auto-ignition temperature	590 °C
Vapor pressure	0.00013 hPa (at 974 °C)

Aluminum oxide (Al2O3)	
Boiling point	2977 °C
Vapor pressure	0 hPa (at 20 °C)

Silicon	
Boiling point	2355 – 3265 °C Atm. press.: 101,3 kPa

Copper	
Boiling point	2567 °C
Vapor pressure	0 hPa (at 1400 °C)

Magnesium	
Boiling point	1107 °C (at 1013.25 hPa)
Vapor pressure	1 mm Hg (at 621 °C)

Magnesium oxide (MgO)	
Boiling point	3600 °C (at 1000 hPa)
Vapor pressure	0 hPa (at 20 °C)

Lead	
Boiling point	> 600 °C Atm. press.: 1013 mBar
Vapor pressure	1.33 hPa (at 973 °C)

Chromium	
Boiling point	2642 °C

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. In contact with water releases flammable gas.

10.4. Conditions to avoid

Heat. Water. Incompatible materials.

10.5. Incompatible materials

Strong oxidizers. Halogenated compounds. Acids and alkalis;Iron powdeer and water.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon. Irritating vapors.

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

Aluminum (7429-90-5)	
LD50 oral rat	> 15900 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LC50 inhalation rat	> 0.888 mg/l air Animal: rat, Animal sex: male, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Aluminum oxide (Al2O3) (1344-28-1)	
LD50 oral rat	> 5000 mg/kg (Source: IUCLID)

Silicon (7440-21-3)	
LD50 oral rat	> 5000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 5000 mg/kg body weight Animal: rabbit

Copper (7440-50-8)	
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal)), Guideline: EPA OTS 798.1100 (Acute Dermal Toxicity), Guideline: other:
LC50 inhalation rat	> 5.11 mg/l air Animal: rat, Guideline: OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class Method)

Magnesium (7439-95-4)	
LD50 oral rat	> 2000 mg/kg body weight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 inhalation rat	> 2.1 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Guideline: EU Method B.2 (Acute Toxicity (Inhalation)), Guideline: EPA OPPTS 870.1300 (Acute inhalation toxicity)

Magnesium oxide (MgO) (1309-48-4)	
LD50 oral rat	3870 mg/kg (Source: NLM_HSDB)

Lead (7439-92-1)	
LD50 oral rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 inhalation rat	> 5.05 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Chromium (7440-47-3)	
LC50 inhalation rat	> 5.41 mg/l Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation : Causes skin irritation.
pH: 11.5 (maximum, saturated solution)

Magnesium oxide (MgO) (1309-48-4)	
pH	10.3 (saturated aqueous solution)

Serious eye damage/irritation : Causes serious eye irritation.
pH: 11.5 (maximum, saturated solution)

Magnesium oxide (MgO) (1309-48-4)	
pH	10.3 (saturated aqueous solution)

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Suspected of causing cancer.

Lead (7439-92-1)	
IARC group	2A - Probably carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

Lead (7439-92-1)	
In OSHA Hazard Communication Carcinogen list	Yes

Chromium (7440-47-3)	
IARC group	3 - Not classifiable

Reproductive toxicity : May damage fertility or the unborn child. May cause harm to breast-fed children.

Aluminum (7429-90-5)	
NOAEL (animal/male, F0/P)	1000 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Aluminum oxide (Al2O3) (1344-28-1)	
NOAEL (animal/male, F0/P)	1000 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Silicon (7440-21-3)	
NOAEL (animal/male, F0/P)	5000 mg/kg body weight Animal: rat, Animal sex: male, Guideline: other:

STOT-single exposure : Not classified

Aluminum carbide (Al4C3) (1299-86-1)	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified.

Aluminum (7429-90-5)	
LOAEC (inhalation, rat, dust/mist/fume, 90 days)	0.05 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
NOAEL (subchronic,oral,animal/male,90 days)	1034 mg/kg body weight Animal: dog, Animal sex: male, Guideline: OECD Guideline 409 (Repeated Dose 90-Day Oral Toxicity Study in Non-Rodents)
NOAEL (subchronic,oral,animal/female,90 days)	1087 mg/kg body weight Animal: dog, Animal sex: female, Guideline: OECD Guideline 409 (Repeated Dose 90-Day Oral Toxicity Study in Non-Rodents)

Silicon (7440-21-3)	
NOAEL (oral,rat,90 days)	> 5000 mg/kg body weight Animal: rat, Animal sex: male

Aluminum nitride (AlN) (24304-00-5)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Chromium (7440-47-3)	
LOAEC (inhalation, rat, dust/mist/fume, 90 days)	≥ 0.0044 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)

Aspiration hazard : Not classified

Symptoms/effects : May cause harm to breast-fed children. May damage fertility. May damage the unborn child.

Symptoms/effects after inhalation : May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Symptoms/effects after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic symptoms : Suspected of causing cancer.

Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

Aluminum (7429-90-5)	
EC50 72h - Algae [1]	1.05 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	0.2 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

Aluminum oxide (Al2O3) (1344-28-1)	
EC50 72h - Algae [1]	1.05 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	0.2 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

Silicon (7440-21-3)	
EC50 72h - Algae [1]	≈ 250 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

Copper (7440-50-8)	
LC50 - Fish [1]	0.0068 – 0.0156 mg/l (Exposure time: 96 h - Species: Pimephales promelas Source: EPA)
EC50 - Crustacea [1]	0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 - Fish [2]	< 0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: EPA)
EC50 72h - Algae [1]	0.0426 – 0.0535 mg/l (Species: Pseudokirchneriella subcapitata [static])
EC50 96h - Algae [1]	0.031 – 0.054 mg/l (Species: Pseudokirchneriella subcapitata [static])

Magnesium (7439-95-4)	
LC50 - Fish [1]	541 mg/l Test organisms (species): Pimephales promelas
LC50 - Fish [2]	569 mg/l Test organisms (species): Pimephales promelas
EC50 72h - Algae [1]	> 99.2 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	> 20 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

Lead (7439-92-1)	
LC50 - Fish [1]	1170 µg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	600 µg/l (Exposure time: 48 h - Species: water flea)
LC50 - Fish [2]	107 µg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)

Chromium (7440-47-3)	
EC50 - Crustacea [1]	13.1 – 14.7 mg/l Test organisms (species): Daphnia magna

12.2. Persistence and degradability

Aluminum Dross	
Persistence and degradability	Not established.

Aluminum (7429-90-5)	
Persistence and degradability	Rapidly degradable

Aluminum oxide (Al2O3) (1344-28-1)	
Persistence and degradability	Rapidly degradable

Magnesium chloride (14989-29-8)	
Persistence and degradability	Rapidly degradable

Silicon (7440-21-3)	
Persistence and degradability	Rapidly degradable

Aluminum carbide (Al4C3) (1299-86-1)	
Persistence and degradability	Rapidly degradable

Aluminum nitride (AlN) (24304-00-5)	
Persistence and degradability	Rapidly degradable

Copper (7440-50-8)	
Persistence and degradability	Rapidly degradable

Magnesium (7439-95-4)	
Persistence and degradability	Rapidly degradable

Magnesium oxide (MgO) (1309-48-4)	
Persistence and degradability	Rapidly degradable

Lead (7439-92-1)	
Persistence and degradability	Rapidly degradable

Chromium (7440-47-3)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

Aluminum Dross	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

Other information : No other effects known.

SECTION 13 Disposal considerations

Product/Packaging disposal recommendations : Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and international regulation.

SECTION 14 Transport information

In accordance with DOT
Shipment Prohibited Wet or Hot.

14.1. UN number

UN-No. (DOT) : UN2813

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT) : Water-reactive solid, n.o.s. RQ (Aluminum carbide, Lead)

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 4.3

Hazard labels (DOT) : 4.3

14.4. Packing group

Packing group (DOT) : III

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.	
Contains chemical(s) subject to TSCA 12b export notification if product is shipped outside the U.S	
Lead	CAS-No. 7439-92-1

15.2. International regulations

No additional information available

15.3. State regulations

WARNING: This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16 Other information

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2024

Revision date	:	5/25/2026
Issue date	:	5/25/2026
Other information	:	None.
Prepared by	:	Nexreg Compliance Inc. www.Nexreg.com

Safety Data Sheet (SDS), USA

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