

# SAFETY DATA SHEET

# ExxonMobil

EM-8110

## Section 1. Identification

**Product name** : EM-8110

**Product description** : Metal Catalyst

### Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : catalyst

**Uses advised against** : This product is not recommended for any industrial, professional or consumer use other than the identified uses above.

**Supplier** : ExxonMobil Catalysts and Licensing LLC  
22777 Springwoods Village Parkway  
Spring, TX 77389 USA

**24-Hour emergency telephone number** : 1-800-424-9300 / +1 703-741-5970 / +1-703-527-3887 (CHEMTREC)

**Product Technical Information** : 832-624-8500

**SDS Internet Address** : [www.sds.exxonmobil.com](http://www.sds.exxonmobil.com)

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : COMBUSTIBLE DUSTS  
SKIN CORROSION - Category 1A  
SERIOUS EYE DAMAGE - Category 1  
SKIN SENSITIZATION - Category 1  
CARCINOGENICITY - Category 1A  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

### GHS label elements

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : H314 - Causes severe skin burns and eye damage.  
H317 - May cause an allergic skin reaction.  
H335 - May cause respiratory irritation.  
H350 - May cause cancer.  
H372 - Causes damage to organs through prolonged or repeated exposure. (respiratory tract)  
May form combustible dust concentrations in air.

### Precautionary statements

**Prevention** : P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P260 - Do not breathe dust.  
P264 - Wash thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P271 - Use only outdoors or in a well-ventilated area.  
P272 - Contaminated work clothing must not be allowed out of the workplace.  
P280 - Wear protective gloves, protective clothing and eye or face protection.

## Section 2. Hazards identification

<b>Response</b>	: P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. P302 + P352 - IF ON SKIN: Wash with plenty of water. P303 + P310, P361, P353 - IF ON SKIN (or hair): Immediately call a POISON CENTER or doctor. Take off immediately all contaminated clothing. Rinse skin with water or shower. P304 + P310, P340 - IF INHALED: Immediately call a POISON CENTER or doctor. Remove person to fresh air and keep comfortable for breathing. P305 + P310, P351, P338 - IF IN EYES: Immediately call a POISON CENTER or doctor. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313 - IF exposed or concerned: Get medical advice or attention. P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention. P363 - Wash contaminated clothing before reuse.
<b>Storage</b>	: P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up.
<b>Disposal</b>	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	: Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
<b>Contains</b>	: molybdenum oxide; phosphorus pentoxide and nickel oxide
<b>Hazards not otherwise classified</b>	: None known.
<b>Note</b>	: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

<b>Ingredient name</b>	<b>% by weight</b>	<b>Identifiers</b>
molybdenum oxide	≥10 - ≤25	CAS: 1313-27-5
phosphorus pentoxide	≤10	CAS: 1314-56-3
nickel oxide	≤5	CAS: 1313-99-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

<b>Eye contact</b>	: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention immediately. Chemical burns must be treated promptly by a physician.
<b>Inhalation</b>	: Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

## Section 4. First aid measures

- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Continue to rinse for at least 10 minutes. Get medical attention immediately. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Chemical burns must be treated promptly by a physician. Call a poison center or physician. Wash with plenty of soap and water. In the event of any complaints or symptoms, avoid further exposure.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : May cause respiratory irritation.
- Skin contact** : Causes severe burns. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Ingestion** : Adverse symptoms may include the following:  
stomach pains

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

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

## Section 5. Fire-fighting measures

<b>Specific hazards arising from the chemical</b>	: Adsorption of water will generate heat and possibly steam; closed containers may get very hot and build up pressure. If contact with water occurs, large quantities of heat and steam may be generated. Avoid contact with eyes. Avoid contact with skin. Avoid conditions which create dust. Avoid inhalation of dusts.
<b>Hazardous combustion products</b>	: Metal Oxides, nickel carbonyl
<b>Special protective actions for fire-fighters</b>	: Use standard firefighting procedures and consider the hazards of other involved materials. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Assure an extended cooling down period to prevent re-ignition. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. No action shall be taken involving any personal risk or without suitable training.
<b>Special protective equipment for fire-fighters</b>	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate.
<b>For emergency responders</b>	: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

<b>Environmental precautions</b>	: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
----------------------------------	---

### Methods and materials for containment and cleaning up

<b>Small spill</b>	: Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
<b>Large spill</b>	: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

## Section 7. Handling and storage

### Precautions for safe handling

#### Protective measures

: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

#### Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

#### Static Accumulator

: This material is a static accumulator.

#### Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
aluminum oxide, non fibrous	<b>CAL OSHA PEL (United States, 5/2018)</b> TWA 8 hours: 5 mg/m <sup>3</sup> . Form: respirable fraction. TWA 8 hours: 10 mg/m <sup>3</sup> . Form: total dust. <b>OSHA PEL (United States, 5/2018)</b> TWA 8 hours: 15 mg/m <sup>3</sup> . Form: Total dust. TWA 8 hours: 5 mg/m <sup>3</sup> . Form: Respirable fraction. <b>OSHA PEL 1989 (United States, 3/1989)</b> TWA 8 hours: 10 mg/m <sup>3</sup> . Form: Dust. TWA 8 hours: 5 mg/m <sup>3</sup> . Form: Respirable fraction. <b>ACGIH TLV (United States, 1/2024) [Aluminum, metal and insoluble compounds]</b> TWA 8 hours: 1 mg/m <sup>3</sup> . Form: Respirable fraction.
molybdenum oxide	<b>CAL OSHA PEL (United States, 5/2018) [molybdenum, insoluble compounds as Mo]</b> TWA 8 hours: 3 mg/m <sup>3</sup> (as Mo). Form: respirable fraction. TWA 8 hours: 10 mg/m <sup>3</sup> (as Mo). Form: total dust. <b>OSHA PEL (United States, 5/2018) [Molybdenum Insoluble Compounds (as Mo)]</b> TWA 8 hours: 15 mg/m <sup>3</sup> (as Mo). Form: Total dust. <b>OSHA PEL 1989 (United States, 3/1989) [Molybdenum (as Mo) insoluble compounds]</b> TWA 8 hours: 10 mg/m <sup>3</sup> (as Mo). Form: Total dust. <b>ACGIH TLV (United States, 1/2022) [Molybdenum, Metal and insoluble compounds Inhalable fraction / Respirable fraction, as Mo]</b> TWA 8 hours: 10 mg/m <sup>3</sup> (as Mo). Form: Inhalable fraction. TWA 8 hours: 3 mg/m <sup>3</sup> (as Mo). Form: Respirable fraction.
molybdenum	<b>CAL OSHA PEL (United States, 5/2018) [molybdenum, insoluble</b>

<p>phosphorus pentoxide nickel oxide</p>	<p><b>compounds as MO]</b> TWA 8 hours: 3 mg/m<sup>3</sup> (as Mo). Form: respirable fraction. TWA 8 hours: 10 mg/m<sup>3</sup> (as Mo). Form: total dust. <b>OSHA PEL 1989 (United States, 3/1989) [Molybdenum (as Mo) insoluble compounds]</b> TWA 8 hours: 10 mg/m<sup>3</sup> (as Mo). Form: Total dust. <b>ACGIH TLV (United States, 1/2022) [Molybdenum, Metal and insoluble compounds Inhalable fraction / Respirable fraction, as Mo]</b> TWA 8 hours: 10 mg/m<sup>3</sup> (as Mo). Form: Inhalable fraction. TWA 8 hours: 3 mg/m<sup>3</sup> (as Mo). Form: Respirable fraction. None. <b>NIOSH REL (United States, 10/2020) [nickel metal and other compounds]</b> TWA 10 hours: 0.015 mg/m<sup>3</sup> (as Ni). <b>CAL OSHA PEL (United States, 5/2018) [nickel, insoluble compounds]</b> TWA 8 hours: 0.1 mg/m<sup>3</sup> (as Ni). <b>OSHA PEL (United States, 5/2018) [Nickel, metal and insoluble compounds]</b> TWA 8 hours: 1 mg/m<sup>3</sup> (as Ni). <b>OSHA PEL 1989 (United States, 3/1989) [Nickel, metal and insoluble compounds (as Ni)]</b> TWA 8 hours: 1 mg/m<sup>3</sup> (as Ni). <b>ACGIH TLV (United States, 1/2024) [Nickel, insoluble inorganic compounds]</b> TWA 8 hours: 0.2 mg/m<sup>3</sup> (as Ni). Form: Inhalable fraction.</p>
<p>aluminum phosphate</p>	<p><b>ACGIH TLV (United States, 1/2024) [Aluminum, metal and insoluble compounds]</b> TWA 8 hours: 1 mg/m<sup>3</sup>. Form: Respirable fraction.</p>

## Biological exposure indices

Ingredient name	Exposure indices
nickel oxide	<p><b>ACGIH BEI (United States, 1/2024) [nickel and inorganic compounds]</b></p> <p>BEI: 30 µg/l, nickel [in urine after exposure to soluble compounds]. Sampling time: post-shift at end of workweek.</p> <p>BEI: 5 µg/l, nickel [in urine after exposure to elemental nickel and poorly soluble compounds]. Sampling time: post-shift at end of workweek.</p>

### Appropriate engineering controls

- Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

## Environmental exposure controls

- Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## Individual protection measures

## Hygiene measures

- Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.



## Section 8. Exposure controls/personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties and safety characteristics

**Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

- Physical state** : Solid. [pellet]
- Color** : Green
- Odor** : Odorless
- Odor threshold** : Not available.
- pH** : Not applicable.
- Melting point/freezing point** : >800°C (>1472°F)
- Boiling point or initial boiling point and boiling range** : Not applicable.
- Flash point** : Closed cup: Not applicable.
- Evaporation rate** : Not applicable.
- Flammability** : Ignitable
- Lower and upper explosion limit/flammability limit** : Not applicable.
- Vapor pressure** : Not applicable.
- Relative vapor density** : Not applicable.
- Relative density** : Not available.
- Bulk density** : 0.65 g/cm<sup>3</sup>
- Solubility in water** : Negligible
- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** : Not applicable.
- Decomposition temperature** : Not available.
- Viscosity** : Not applicable.

## Section 9. Physical and chemical properties and safety characteristics

### Particle characteristics

**Median particle size** : Not available.

## Section 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : High dust concentrations., Moisture., Elevated temperatures., Air.

**Incompatible materials** : Strong oxidizers, carbon monoxide, oxygen, Strong Bases, strong acids

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

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Test	Species	Result	Duration
molybdenum oxide phosphorus pentoxide	LD50 Oral	Rat	2689 mg/kg	-
	LC50 Inhalation Vapor	Mouse	271 mg/m <sup>3</sup>	1 hours
	LC50 Inhalation Vapor	Rabbit	1689 mg/m <sup>3</sup>	1 hours
	LC50 Inhalation Vapor	Rat	1217 mg/m <sup>3</sup>	1 hours

#### Conclusion/Summary

**Inhalation** : Minimally Toxic. No end point data for material. Based on assessment of the components.

**Dermal** : Minimally Toxic. No end point data for material. Based on assessment of the components.

**Oral** : Minimally Toxic. No end point data for material. Based on assessment of the components.

#### Irritation/Corrosion

#### Conclusion/Summary

**Skin** : Corrosive to eyes and skin. May cause permanent damage. No end point data for material. Based on assessment of the components.

**Eyes** : Severely irritating, and may seriously damage eye tissue. No end point data for material. Based on assessment of the components.

**Respiratory** : May be irritating to the respiratory tract. The effects are irreversible. No end point data for material. Based on assessment of the components.

#### Respiratory or skin sensitization

#### Conclusion/Summary

**Skin** : May cause allergic skin reaction. No end point data for material. Based on assessment of the components.

**Respiratory** : Not expected to be a respiratory sensitizer. No end point data for material.

#### Mutagenicity

**Conclusion/Summary** : Not expected to be a germ cell mutagen. No end point data for material. Based on assessment of the components.

#### Carcinogenicity

**Conclusion/Summary** : May cause cancer. No end point data for material. Based on assessment of the components.



## Section 11. Toxicological information

### Classification

Product/ingredient name	OSHA	IARC	NTP
molybdenum oxide	-	2B	-
nickel oxide	-	1	Known to be a human carcinogen.

### Reproductive toxicity

**Conclusion/Summary** : Not expected to be a reproductive toxicant. No end point data for material. Based on assessment of the components.

### Specific target organ toxicity (single exposure)

**Conclusion/Summary** : May cause respiratory irritation. No end point data for material. Based on assessment of the components.

### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Target organs
EM-8110	Category 1	respiratory tract

**Conclusion/Summary** : May cause damage to organs through prolonged or repeated exposure. No end point data for material. Based on assessment of the components.

### Aspiration hazard

**Conclusion/Summary** : Not expected to be an aspiration hazard. Based on physico-chemical properties of the material. No end point data for material.

### Other information

**Contains** : NICKEL COMPOUNDS: Nickel causes sensitization by skin contact. Studies indicate that some forms of nickel are carcinogenic to humans. Molybdenum: High oral dosages have produced weight loss, anorexia, liver and kidney damage in animal studies. Few signs and symptoms in humans have been recorded during occupational exposure.

## Section 12. Ecological information

The information given is based on data for the material, components of the material, or for similar materials, through the application of bridging principals.

### Toxicity

#### Conclusion/Summary

**Acute toxicity** : Not expected to be harmful to aquatic organisms.

**Chronic toxicity** : Not expected to demonstrate chronic toxicity to aquatic organisms.

### Persistence and degradability

**Biodegradability** : Material -- Expected to be persistent.

### Bioaccumulative potential

Not determined.

### Mobility in soil

**Mobility** : Material -- Low water solubility, expected to sink and migrate into the sediment. Expected to partition to sediment and wastewater solids.

### Other ecological information

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations





**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered

## Section 13. Disposal considerations

when recycling is not feasible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

## Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	UN1759	UN1759	UN1759	UN1759
UN proper shipping name	Corrosive solids, n.o.s.	CORROSIVE SOLID, N.O.S.	CORROSIVE SOLID, N.O.S.	Corrosive solid, n.o.s.
Transport hazard class(es)	8	8	8	8
Label(s) / Marks				
Packing group	I	I	I	I
Environmental hazards	No.	No.	No.	No.

### Additional information

#### DOT Classification

: **Limited quantity** No.  
**Packaging instruction** Exceptions: None. Non-bulk: 211. Bulk: 242.  
**Quantity limitation** Passenger aircraft/rail: 1 kg. Cargo aircraft: 25 kg.  
**Special provisions** IB7, IP1, T6, TP33

#### TDG Classification

: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8).  
**Explosive Limit and Limited Quantity Index** 0  
**ERAP Index** 3000  
**Passenger Carrying Road or Rail Index** 1  
**Special provisions** 16

#### IMDG

: **Emergency schedules** F-A, S-B  
**Special provisions** 274

#### IATA

: **Quantity limitation** Passenger and Cargo Aircraft: 1 kg. Packaging instructions: 858. Cargo Aircraft Only: 25 kg. Packaging instructions: 862. Limited Quantities - Passenger Aircraft: Forbidden. Packaging instructions: Forbidden.  
**Special provisions** A3, A803

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments** : Not applicable.

## Section 15. Regulatory information

**U.S. Federal regulations** : TSCA 8(a) CDR Exempt/Partial exemption: Not determined  
Clean Water Act (CWA) 307: nickel oxide

### TSCA 12(b) - Chemical export notification

Not applicable.

**Clean Air Act Section 112** : Listed  
(b) Hazardous Air Pollutants (HAPs)

**Clean Air Act Section 602** : Not listed  
Class I Substances

**Clean Air Act Section 602** : Not listed  
Class II Substances

**DEA List I Chemicals** : Not listed  
(Precursor Chemicals)

**DEA List II Chemicals** : Not listed  
(Essential Chemicals)

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** : COMBUSTIBLE DUSTS  
SKIN CORROSION - Category 1A  
SERIOUS EYE DAMAGE - Category 1  
SKIN SENSITIZATION - Category 1  
CARCINOGENICITY - Category 1A  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	molybdenum oxide	1313-27-5	≥10 - ≤25
	nickel oxide	1313-99-1	≤5
<b>Supplier notification</b>	molybdenum oxide	1313-27-5	≥10 - ≤25
	nickel oxide	1313-99-1	≤5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### State regulations

**Massachusetts** : The following components are listed: ALUMINUM OXIDE; MOLYBDENUM TRIOXIDE; MOLYBDENUM; PHOSPHORUS PENTOXIDE; NICKEL OXIDE

**New York** : The following components are listed: Phosphorus pentoxide

**New Jersey** : The following components are listed: ALUMINUM OXIDE; MOLYBDENUM TRIOXIDE; MOLYBDENUM; PHOSPHORIC ANHYDRIDE; NICKEL OXIDE; ALUMINUM PHOSPHATE

**Pennsylvania** : The following components are listed: ALUMINUM OXIDE; MOLYBDENUM TRIOXIDE; MOLYBDENUM; PHOSPHORUS PENTOXIDE; NICKEL OXIDE

**Illinois** : None of the components are listed.

### California Prop. 65

 **WARNING:** Cancer - www.P65Warnings.ca.gov.

### Inventory list

## Section 15. Regulatory information

Australia inventory (AIIC)	: All components are listed or exempted.
Canada inventory (DSL-NDSL)	: All components are listed or exempted.
China inventory (IECSC)	: All components are listed or exempted.
Japan inventory (CSCL)	: Not determined.
Japan inventory (Industrial Safety and Health Act)	: Not determined.
New Zealand Inventory of Chemicals (NZIoC)	: All components are listed or exempted.
Philippines inventory (PICCS)	: All components are listed or exempted.
Korea inventory (KECI)	: All components are listed or exempted.
Taiwan Chemical Substances Inventory (TCSI)	: All components are listed or exempted.
United States inventory (TSCA 8b)	: All components are active or exempted.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	*	3
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

### National Fire Protection Association (U.S.A.)



### Procedure used to derive the classification

Classification	Justification
COMBUSTIBLE DUSTS	Expert judgment
SKIN CORROSION - Category 1A	Calculation method
SERIOUS EYE DAMAGE - Category 1	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
CARCINOGENICITY - Category 1A	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1	Calculation method

### New Jersey Right to Know Disclosure

## Section 16. Other information

Name	CAS #
aluminum oxide, non fibrous	1344-28-1
molybdenum oxide	1313-27-5
molybdenum	7439-98-7
phosphorus pentoxide	1314-56-3
nickel oxide	1313-99-1
aluminum phosphate	7784-30-7
silica	7631-86-9

### History

**Date of issue/Date of revision** : 24 July 2024

**Date of previous issue** : 24 June 2024

**Version** : 1.01

**Key to abbreviations** : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
N/A = Not available  
SGG = Segregation Group  
UN = United Nations

**References** : Not available.

Indicates information that has changed from previously issued version.

**Product code** : 1115724\_13420135

### Notice to reader

The information and recommendations contained herein are, to the best of ExxonMobil's knowledge and belief, accurate and reliable as of the date issued. You can contact ExxonMobil to insure that this document is the most current available from ExxonMobil. The information and recommendations are offered for the user's consideration and examination. It is the user's responsibility to satisfy itself that the product is suitable for the intended use. If buyer repackages this product, it is the user's responsibility to insure proper health, safety and other necessary information is included with and/or on the container. Appropriate warnings and safe-handling procedures should be provided to handlers and users. Alteration of this document is strictly prohibited. Except to the extent required by law, re-publication or retransmission of this document, in whole or in part, is not permitted. The term, "ExxonMobil" is used for convenience, and may include any one or more of ExxonMobil Chemical Company, Exxon Mobil Corporation, or any affiliates in which they directly or indirectly hold any interest.