Nuline MAX 10

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Issue date: 6/26/2015 Revision date: 4/17/2026 Supersedes: 7/10/2023

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : Nuline MAX 10
CAS-No. : Mixture
Product code : 7224

1.2. Other means of identification

Other means of identification : Resin Bonded Alumina Magnesia-Carbon Brick

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Refractory Brick
Recommended use : Industrial use

1.4. Supplier's details

RHI Magnesita
425 South Salem Church Road
York, PA, 17408
United States
T 717-792-3611
Resco_SDS.TDS@rhimagnesita.com - WWW.RescoProducts.com

1.5. Emergency phone number

Emergency number : EMERGENCY ONLY (CHEMTREC) USA & Canada 1-800-424-9300
Outside USA & Canada +1 703-741-5970

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Germ cell mutagenicity, Category 1B	H340	May cause genetic defects.
Carcinogenicity, Category 1A	H350	May cause cancer.

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger
Hazard statements (GHS US) : H340 - May cause genetic defects.
H350 - May cause cancer.
Precautionary statements (GHS US) : P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear Safety shoes, protective clothing, eye protection, protective gloves.
P261 - Avoid breathing dust.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

Other hazards which do not result in classification : This product contains minor amounts of materials derived from petroleum and/or coal (such as petroleum pitch and/or coal tar pitch). These materials, in turn, contain compounds, which are carcinogenic. Petroleum pitch contains poly-nuclear aromatic compounds, some of which have been identified as carcinogenic. Based on this, NIOSH has identified petroleum pitch as a carcinogenic material. IARC has reported that there is sufficient evidence for the carcinogenicity of “untreated and mildly refined mineral oils” in humans, but no adequate data is available to evaluate the carcinogenicity of “highly refined mineral oils”. Coal tars are by products of the destructive distillation of coal to produce coke and/or gas, and are believed to contain from400-10,000 separate compounds. One important class of compounds present in coal tars is the so-called polycyclic aromatic hydrocarbons (PAHs). While not all PAHs have been determined to be human carcinogens, many have. The NTP Seventh Annual Report on Carcinogens (1994) listed 15 PAH compounds which “may reasonably be anticipated to be carcinogens”.

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Magnesium Oxide	CAS-No.: 1309-48-4	≥ 80	Not classified
graphite	CAS-No.: 7782-42-5	5 – 10	Not classified
aluminium oxide, non-fibrous	CAS-No.: 1344-28-1	1 – 5	Not classified
Phenolic Resin	CAS-No.: 108-95-2	1 – 5	Not classified
Aluminum - metal powder	CAS-No.: 7429-90-5	1 – 5	Not classified
Coal Tar Pitch	CAS-No.: 65996-93-2	0.5 – 1	Muta. 1B, H340 Carc. 1A, H350

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Dust when sawing or tear out. Allow affected person to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Gently wash with plenty of soap and water.

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.

First-aid measures after ingestion : Rinse mouth. Get medical advice/attention if you feel unwell. Do not induce vomiting.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : Danger of serious damage to health by prolonged exposure through inhalation. May cause cancer by inhalation.

Symptoms/effects after skin contact : Causes skin irritation.

Symptoms/effects after eye contact : Causes eye irritation.

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

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media : In case of fire, all extinguishing media allowed.

5.2. Specific hazards arising from the chemical

Fire hazard : Not flammable. Do not breathe fumes from fires or vapors from decomposition.

Hazardous decomposition products in case of fire : Fire conditions may produce carbon dioxide-carbon monoxide.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire with normal precautions from a reasonable distance.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Product will not burn, but does contain small quantities of chemicals which can generate toxic and/or irritating vapors when initially heated. Under fire conditions hazardous combustion products such as carbon monoxide may be generated. The phenolic resin binder may undergo incomplete combustion when temperature is applied to this product. The intent of this note is as follows: (1) to apprise the customer/user of the potential for incomplete combustion, and (2) to advise that the chemical compounds produced by incomplete combustion by poor air handling practices may exceed TLV's for specific air contaminates. The specific chemical compounds witch may be produced include but are not limited to: carbon monoxide, formaldehyde, phenol, alcohols, glycols, and other solvents.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment : Safety shoes. Safety glasses. Protective gloves.

For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

6.2. Methods and materials for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Collect spillage. Mechanically recover the product.

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 : Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Do not breathe Dust when sawing or tear out.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including incompatibilities

Storage conditions : Store this product in a dry location where it can be protected from the elements.

Incompatible products : Strong acids. Oxidizing agent.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Magnesium Oxide (1309-48-4)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH® TLV® TWA	10 mg/m³ inhalable dust
USA - OSHA - Occupational Exposure Limits	
OSHA PEL TWA	10 mg/m³ respirable dust

graphite (7782-42-5)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH® TLV® TWA	2 mg/m³ (Respirable fraction)

Coal Tar Pitch (65996-93-2)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH® TLV® TWA	0.2 mg/m³ (Coal tar pitch volatiles, as benzene soluble aerosol; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)

Aluminum - metal powder (7429-90-5)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH® TLV® TWA	1 mg/m³ (Respirable fraction)

aluminium oxide, non-fibrous (1344-28-1)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH® TLV® TWA	1 mg/m³ respirable dust

8.2. Appropriate engineering controls

Appropriate engineering controls : Dust when sawing or tear out. Provide adequate ventilation to minimize dust concentrations.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:
Wear protective gloves.

Eye protection:
Chemical goggles or safety glasses

Skin and body protection:
Wear suitable protective clothing. Safety shoes

Respiratory protection:
Dust when sawing or tear out. Wear appropriate mask

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state : Solid

Appearance : Solid in various shapes.

Color : Black

Odor : Resin Odor

Odor threshold : No data available

pH : No data available

Melting point : > 2800 °F

Freezing point : No data available

Boiling point : No data available

Flash point : No data available

Flammability (solid, gas) : Not flammable.

Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	≈ 2.9
Solubility	:	Insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	:	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

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

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

May release smoke when heated. Combustion products include carbon monoxide, carbon dioxide, and hydrocarbon vapors.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

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

Magnesium Oxide (1309-48-4)	
LD50 oral rat	> 5000 mg/kg (Rat, Literature study, Oral)
LD50 dermal rabbit	> 2000 mg/kg body weight (Rabbit, Literature study, Dermal)

graphite (7782-42-5)	
LD50 oral rat	> 2000 mg/kg (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Experimental value, Oral)
LC50 Inhalation - Rat	> 2000 mg/m³ air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (dust))

Coal Tar Pitch (65996-93-2)	
LD50 oral rat	> 15000 mg/kg body weight (Rat; OECD 401: Acute Oral Toxicity; Experimental value)
LD50 dermal rat	> 2000 mg/kg body weight (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)

aluminium oxide, non-fibrous (1344-28-1)	
LD50 oral rat	> 15900 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
LC50 Inhalation - Rat	> 2.3 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))

Skin corrosion/irritation : Not classified

Magnesium Oxide (1309-48-4)	
pH	11 (10 %)

graphite (7782-42-5)	
pH	7 (1.3 %)

aluminium oxide, non-fibrous (1344-28-1)	
pH	9 – 10.5 (aqueous suspension, 33 %)

Serious eye damage/irritation : Not classified

Magnesium Oxide (1309-48-4)	
pH	11 (10 %)

graphite (7782-42-5)	
pH	7 (1.3 %)

aluminium oxide, non-fibrous (1344-28-1)	
pH	9 – 10.5 (aqueous suspension, 33 %)

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : May cause genetic defects.

Carcinogenicity : May cause cancer.

Phenolic Resin (108-95-2)	
IARC group	3 - Not classifiable

Coal Tar Pitch (65996-93-2)	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Magnesium Oxide (1309-48-4)	
Viscosity, kinematic	Not applicable (solid)

aluminium oxide, non-fibrous (1344-28-1)	
Viscosity, kinematic	Not applicable (solid)

Symptoms/effects after inhalation : Danger of serious damage to health by prolonged exposure through inhalation. May cause cancer by inhalation.

Symptoms/effects after skin contact : Causes skin irritation.

Symptoms/effects after eye contact : Causes eye irritation.

SECTION 12 Ecological information

12.1. Ecotoxicity

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

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

graphite (7782-42-5)	
LC50 - Fish [1]	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	> 100 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Behaviour)
EC50 72h - Algae [1]	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Growth rate)
EC50 72h - Algae [2]	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Cell numbers)

Coal Tar Pitch (65996-93-2)	
LC50 - Fish [1]	128 mg/l (LL50; OECD 203: Fish, Acute Toxicity Test; 96 h; Pagrus major; Semi-static system; Salt water; Experimental value)

Coal Tar Pitch (65996-93-2)	
EC50 - Crustacea [1]	> 100 mg/l (EL50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
LC50 - Fish [2]	100-1000,LL50; OECD 203: Fish, Acute Toxicity Test; 96 h; Oryzias latipes; Semi-static system; Fresh water; Experimental value
Threshold limit - Algae [1]	220 mg/l (EL50; OECD 201: Alga, Growth Inhibition Test; 72 h; Desmodesmus subspicatus; Static system; Fresh water; Experimental value)

aluminium oxide, non-fibrous (1344-28-1)	
LC50 - Fish [1]	> 100 mg/l (96 h, Salmo trutta, Literature study)
EC50 - Crustacea [1]	> 100 mg/l (48 h, Daphnia magna, Literature study)

12.2. Persistence and degradability

Nuline MAX 10 (Mixture)	
Persistence and degradability	Not established.

Magnesium Oxide (1309-48-4)	
Persistence and degradability	Not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

graphite (7782-42-5)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Phenolic Resin (108-95-2)	
Persistence and degradability	Rapidly degradable

Coal Tar Pitch (65996-93-2)	
Persistence and degradability	No test data available, Adsorbs into the soil.

Aluminum - metal powder (7429-90-5)	
Persistence and degradability	Biodegradability in soil: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

aluminium oxide, non-fibrous (1344-28-1)	
Persistence and degradability	Not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

12.3. Bioaccumulative potential

Magnesium Oxide (1309-48-4)	
Bioaccumulative potential	No bioaccumulation data available.

graphite (7782-42-5)	
Bioaccumulative potential	Not bioaccumulative.

Coal Tar Pitch (65996-93-2)	
Bioaccumulative potential	No test data available.

Aluminum - metal powder (7429-90-5)	
Bioaccumulative potential	No test data of component(s) available.

aluminium oxide, non-fibrous (1344-28-1)	
Bioaccumulative potential	No data available.

12.4. Mobility in soil

Magnesium Oxide (1309-48-4)	
Surface tension	No data available in the literature
Ecology - soil	No data available.

Coal Tar Pitch (65996-93-2)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	Koc,12600-800000; Calculated value; log Koc; 4.1-5.9; Calculated value

Aluminum - metal powder (7429-90-5)	
Ecology - soil	Contains component(s) that adsorb(s) into the soil.

aluminium oxide, non-fibrous (1344-28-1)	
Surface tension	Not applicable (water solubility < 1 mg/l)
Ecology - soil	No data available.

12.5. Other adverse effects

Ozone : Not classified

Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transportation of Dangerous Goods

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

Nuline MAX 10 (Mixture)	
Note	This information must be included in all SDS's that are copied and distributed for this material.

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:		
Aluminum - metal powder	CAS-No. 7429-90-5	1 – 5%

Phenolic Resin (108-95-2)	
Subject to reporting requirements of United States SARA Section 313 Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	1000 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	10000 lb 500lb if the substance is solid in powder form with particle size less than 100 microns, or is in solution or molten form

Aluminum - metal powder (7429-90-5)	
Note	This information must be included in all SDS's that are copied and distributed for this material.

aluminium oxide, non-fibrous (1344-28-1)	
Not subject to reporting requirements of the United States SARA Section 313	
Note	Note: The section 313 chemical list contains "CAS # 1344-28-1 Aluminum Oxide (Fibrous forms)"; the Aluminum oxide contained in this product is non-fibrous, and thus is not a section 313 material. Only manufacturing, processing, or otherwise use of aluminum oxide in the fibrous form triggers reporting.

15.2. International regulations

CANADA

Magnesium Oxide (1309-48-4)
Listed on the Canadian DSL (Domestic Substances List)

graphite (7782-42-5)
Listed on the Canadian DSL (Domestic Substances List)

Phenolic Resin (108-95-2)
Listed on the Canadian DSL (Domestic Substances List)

Coal Tar Pitch (65996-93-2)
Listed on the Canadian DSL (Domestic Substances List)

aluminium oxide, non-fibrous (1344-28-1)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Coal Tar Pitch (65996-93-2)
Listed on IARC (International Agency for Research on Cancer)

15.3. State regulations

Nuline MAX 10 (Mixture)	
U.S. - California - Proposition 65 - Other information	This product contains coal tar pitch, a chemical known to the State of California to cause cancer. For more information go to WWW.P65Warnings.ca.gov

Component	State or local regulations
Magnesium Oxide(1309-48-4)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
graphite(7782-42-5)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
Phenolic Resin(108-95-2)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
Coal Tar Pitch(65996-93-2)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List
aluminium oxide, non-fibrous(1344-28-1)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

Revision date : 4/17/2026

Issue date : 6/26/2015

Other information : Report language name. English. In the event of any conflict between English and other language versions, the English version shall prevail.

Full text of hazard classes and H-statements	
H340	May cause genetic defects.
H350	May cause cancer.

Safety Data Sheet (SDS), USA

This information and recommendations set forth herein are taken from sources believed to be accurate as of the date herein, however, RHI Magnesita makes no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assumes no liability to any user thereof.