Nuline 13AF TI

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Issue date: 7/2/2015 Revision date: 4/15/2026 Supersedes: 6/19/2023

SECTION 1 Identification

1.1. Product identifier

Product form	:	Mixture
Product name	:	Nuline 13AF TI
CAS-No.	:	Mixture
Product code	:	8959 = Mix7189 + TI

1.2. Other means of identification

Other means of identification	:	Resin Bonded 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

Skin corrosion/irritation, Category 2	H315	Causes skin irritation.
Serious eye damage/eye irritation, Category 2B	H320	Causes eye irritation.
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation.

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US)	:	Warning
Hazard statements (GHS US)	:	H315 - Causes skin irritation H320 - Causes eye irritation H335 - May cause respiratory irritation
Precautionary statements (GHS US)	:	P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.

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	10 – 30	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
Petroleum Pitch	CAS-No.: 8052-42-4	1 – 5	Not classified

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.

First-aid measures after inhalation : Dust when sawing or tear out. Remove the victim into fresh air.

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 with water. Do not induce vomiting.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : Dust when sawing or tear out. Cough.

Most Important Symptoms/Effects : No additional information available.

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 : No unsuitable extinguishing media known.

5.2. Specific hazards arising from the chemical

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

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 : Exercise caution when fighting any chemical fire.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus.

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 glasses. Protective gloves. Safety shoes.

Emergency procedures : Avoid contact with skin and eyes.

For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Collect spillage. On land, sweep or shovel into suitable containers.

6.2. Methods and materials for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : 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 : Avoid contact with skin and eyes.

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.

Incompatible materials : Oxidizing agents and strong acids.

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)

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

Petroleum Pitch (8052-42-4)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH® TLV® TWA	0.5 mg/m³ (Inhalable fraction)

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:

Safety shoes. Wear suitable protective clothing

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. 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.

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

No additional information available

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

Strong acids.

10.6. Hazardous decomposition products

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 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))

Petroleum Pitch (8052-42-4)	
LD50 oral rat	> 5000 mg/kg (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 2000 mg/kg (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 0.094 mg/l (OECD 403: Acute Inhalation Toxicity, 4.5 h, Rat, Male / female, Experimental value, No effect, Inhalation (mixture of vapour and aerosol), 14 day(s))

Skin corrosion/irritation : Causes skin irritation.

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

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

Serious eye damage/irritation : Causes eye irritation.

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

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

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

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

Reproductive toxicity : Not classified
STOT-single exposure : May cause respiratory irritation.
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

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

Symptoms/effects after inhalation : Dust when sawing or tear out. Cough.
Most Important Symptoms/Effects : No additional information available.

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)

12.2. Persistence and degradability

Nuline 13AF TI (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

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

Petroleum Pitch (8052-42-4)	
Persistence and degradability	Not readily biodegradable in water.

12.3. Bioaccumulative potential

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

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

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

Petroleum Pitch (8052-42-4)	
Bioaccumulative potential	No bioaccumulation 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.

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

Petroleum Pitch (8052-42-4)	
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 13AF TI (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.

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)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. State regulations

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
Petroleum Pitch(8052-42-4)	U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16 Other information

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

Revision date : 4/15/2026

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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	
H315	Causes skin irritation
H320	Causes eye irritation
H335	May cause respiratory irritation

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.