



Nuline R-5 SA

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Nuline R-5 SA
CAS-No. : Mixture
Product code : 3746 - Mix3343
Other means of identification : Resin Bonded Magnesia-Carbon Brick

1.2. Recommended use and restrictions on use

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

1.3. Supplier

Resco Products, Inc.
One Robinson Plaza, Suite 300
6600 Steubenville Pike
Pittsburgh, PA 15205 - United States
412-494-4491

SDS@RescoProducts.com - WWW.RescoProducts.com

1.4. Emergency telephone number

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

SECTION 2: Hazard(s) 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. GHS Label elements, including precautionary statements

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.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

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 | 75 – 95 | Not classified |
| graphite | (CAS-No.) 7782-42-5 | 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 |
| Si | (CAS-No.) 7440-21-3 | 1 – 5 | Not classified |

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

SECTION 4: First-aid measures

4.1. Description of 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.

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4.2. Most important symptoms and effects (acute and delayed)

Most Important Symptoms/Effects : No additional information available.

4.3. Immediate medical attention and special treatment, 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.

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 contaminants. The specific chemical compounds which 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

6.1.1. For non-emergency personnel

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

Emergency procedures : Avoid contact with skin and eyes.

6.1.2. 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. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Mechanically recover the product.

6.4. Reference to other sections

No additional information available

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 any 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

Nuline R-5 SA (Mixture)

No additional information available

Magnesium Oxide (1309-48-4)

USA - ACGIH - Occupational Exposure Limits

ACGIH TWA (mg/m³) : 10 mg/m³ inhalable dust

USA - OSHA - Occupational Exposure Limits

OSHA PEL (TWA) (mg/m³) : 10 mg/m³ respirable dust

graphite (7782-42-5)

USA - ACGIH - Occupational Exposure Limits

ACGIH TWA (mg/m³) : 2 mg/m³ (Respirable fraction)

Phenolic Resin (108-95-2)

No additional information available

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Aluminum - metal powder (7429-90-5)

USA - ACGIH - Occupational Exposure Limits

| | |
|--------------------------------|---|
| ACGIH TWA (mg/m ³) | 1 mg/m ³ (Respirable fraction) |
|--------------------------------|---|

Si (7440-21-3)

No additional information available

8.2. Appropriate engineering controls

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

8.3. Individual protection measures/Personal protective equipment

Hand protection:

protective gloves

Eye protection:

Safety glasses

Respiratory protection:

Use care during processing (cutting, sawing, etc.) to minimize generation of dust. Wear appropriate mask

SECTION 9: Physical and chemical properties

9.1. Information on 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 |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Flammability (solid, gas) | : Non 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 |
| Viscosity, dynamic | : No data available |
| Explosion limits | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |

9.2. Other information

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 contaminants. The specific chemical compounds which may be produced include but are not limited to: carbon monoxide, formaldehyde, phenol, alcohols, glycols, and other solvents.

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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/m ³ air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (dust)) |

| Si (7440-21-3) | |
|-----------------------|---|
| LD50 oral rat | > 5000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Read-across, Oral) |
| LD50 dermal rabbit | > 5000 mg/kg body weight (24 h, Rabbit, Weight of evidence, Dermal) |

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes eye irritation.
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
Viscosity, kinematic : No data available
Most Important Symptoms/Effects : No additional information available.

SECTION 12: Ecological information

12.1. Toxicity

| 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 Daphnia 1 | > 100 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Behaviour) |

| Si (7440-21-3) | |
|-----------------------|---|
| ErC50 (algae) | 250 mg/l (Equivalent or similar to OECD 201, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Weight of evidence) |

12.2. Persistence and degradability

| 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. |
| Biochemical oxygen demand (BOD) | Not applicable |
| Chemical oxygen demand (COD) | Not applicable |
| ThOD | Not applicable |
| BOD (% of ThOD) | Not applicable |

| 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 |

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| Si (7440-21-3) | |
|-------------------------------|-----------------------------------|
| Persistence and degradability | Biodegradability: not applicable. |
| Chemical oxygen demand (COD) | Not applicable (inorganic) |
| ThOD | Not applicable (inorganic) |

12.3. Bioaccumulative potential

| Magnesium Oxide (1309-48-4) | |
|--|---|
| Bioaccumulative potential | No bioaccumulation data available. |
| graphite (7782-42-5) | |
| Bioaccumulative potential | No bioaccumulation data available. |
| Aluminum - metal powder (7429-90-5) | |
| Bioaccumulative potential | No test data of component(s) available. |
| Si (7440-21-3) | |
| Bioaccumulative potential | Not bioaccumulative. |

12.4. Mobility in soil

| Magnesium Oxide (1309-48-4) | |
|--|--|
| Ecology - soil | No data available. |
| Aluminum - metal powder (7429-90-5) | |
| Ecology - soil | Contains component(s) that adsorb(s) into the soil. |
| Si (7440-21-3) | |
| Surface tension | 0.74 N/m (1410 °C) |
| Ecology - soil | No (test) data on mobility of the substance available. |

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

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

SECTION 14: Transport information

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. US Federal regulations

| Nuline R-5 SA (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 listed, or excluded from listing, 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. | |

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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)

Si (7440-21-3)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US 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 |
| Si (7440-21-3) | U.S. - New Jersey - Right to Know Hazardous Substance List |

SECTION 16: Other information

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Revision date : 01/12/2021

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 H-phrases:

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

SDS US (GHS HazCom 2012)

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