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Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Issue date: 6/4/2015 Revision date: 3/10/2026 Supersedes: 5/17/2023

SECTION 1 Identification

1.1. Product identifier

Product form : Article
Product name : N-1
CAS-No. : Mixture
Product code : 4924

1.2. Other means of identification

Other means of identification : Clay Graphite Fired Shape

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Refractory
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](mailto: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

Not classified

2.2. Label elements

This product meets the definition and criteria for an article according to OSHA 29 CFR 1910.1200 and the EU REACH 1907/2006 Article 3(3) regulations. No labeling obligation.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

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 |
|------------------------------|---------------------|---------|-----------------------|
| graphite | CAS-No.: 7782-42-5 | 10 – 30 | Not classified |
| cristobalite | CAS-No.: 14464-46-1 | 10 – 30 | Carc. 1A, H350 |
| aluminium oxide, non-fibrous | CAS-No.: 1344-28-1 | 5 – 10 | 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.
First-aid measures after inhalation : Allow affected person to breathe 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. Do not induce vomiting.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : Dust on tear out. Danger of serious damage to health by prolonged exposure through inhalation. May cause cancer by inhalation.
Symptoms/effects after skin contact : Irritation.
Symptoms/effects after eye contact : Dust from this product may cause eye irritation.

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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.
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.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

No additional information available

For emergency responders

Protective equipment : Use personal protective equipment as required.

6.2. Methods and materials for containment and cleaning up

Methods for cleaning up : Collect spillage.
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 : Wear Safety shoes, Gloves. Do not handle until all safety precautions have been read and understood.
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.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

crystalite (14464-46-1)

USA - ACGIH - Occupational Exposure Limits

ACGIH® TLV® TWA | 0.025 mg/m³ respirable dust

USA - OSHA - Occupational Exposure Limits

OSHA PEL TWA | 0.05 mg/m³ respirable dust

aluminium oxide, non-fibrous (1344-28-1)

USA - ACGIH - Occupational Exposure Limits

ACGIH® TLV® TWA | 1 mg/m³ respirable dust

graphite (7782-42-5)

USA - ACGIH - Occupational Exposure Limits

ACGIH® TLV® TWA | 2 mg/m³ (Respirable fraction)

8.2. Appropriate engineering controls

Appropriate engineering controls : Dust on 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

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| Skin and body protection: | |
| Wear suitable protective clothing | |
| Respiratory protection: | |
| Dust on tear out. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended | |
| SECTION 9 Physical and chemical properties | |
| 9.1. Basic physical and chemical properties | |
| Physical state | : Solid |
| Appearance | : Solid in various shapes. |
| Color | : Black |
| Odor | : None |
| Odor threshold | : No data available |
| pH | : No data available |
| Melting point | : > 3000 °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 |
| 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 | |
| On heating/burning: release of carbon monoxide - carbon dioxide. | |
| 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 |
| 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)) |

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|---|---|
| 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)) |
| Skin corrosion/irritation | : Not classified |
| crystalite (14464-46-1) | |
| pH | 6 – 7 |
| aluminium oxide, non-fibrous (1344-28-1) | |
| pH | 9 – 10.5 (aqueous suspension, 33 %) |
| graphite (7782-42-5) | |
| pH | 7 (1.3 %) |
| Serious eye damage/irritation | : Not classified |
| crystalite (14464-46-1) | |
| pH | 6 – 7 |
| aluminium oxide, non-fibrous (1344-28-1) | |
| pH | 9 – 10.5 (aqueous suspension, 33 %) |
| graphite (7782-42-5) | |
| pH | 7 (1.3 %) |
| Respiratory or skin sensitization | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |
| aluminium oxide, non-fibrous (1344-28-1) | |
| Viscosity, kinematic | Not applicable (solid) |
| Symptoms/effects after inhalation | : Dust on tear out. Danger of serious damage to health by prolonged exposure through inhalation. May cause cancer by inhalation. |
| Symptoms/effects after skin contact | : Irritation. |
| Symptoms/effects after eye contact | : Dust from this product may cause 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 |
| 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) |
| 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) |

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| graphite (7782-42-5) | |
| 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 | |
| N-1 (Mixture) | |
| Persistence and degradability | Not established. |
| crystalobalite (14464-46-1) | |
| Persistence and degradability | Mineral, 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 |
| graphite (7782-42-5) | |
| Persistence and degradability | Biodegradability: not applicable. |
| Chemical oxygen demand (COD) | Not applicable |
| ThOD | Not applicable |
| BOD (% of ThOD) | Not applicable |
| 12.3. Bioaccumulative potential | |
| crystalobalite (14464-46-1) | |
| Bioaccumulative potential | No data available. |
| aluminium oxide, non-fibrous (1344-28-1) | |
| Bioaccumulative potential | No data available. |
| graphite (7782-42-5) | |
| Bioaccumulative potential | Not bioaccumulative. |
| 12.4. Mobility in soil | |
| crystalobalite (14464-46-1) | |
| Ecology - soil | No data available. |
| 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 | |

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Transportation of Dangerous Goods

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

aluminium oxide, non-fibrous (1344-28-1)

Not subject to reporting requirements of the United States SARA Section 313

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

crystalite (14464-46-1)

Listed on the Canadian DSL (Domestic Substances List)

aluminium oxide, non-fibrous (1344-28-1)

Listed on the Canadian DSL (Domestic Substances List)

graphite (7782-42-5)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. State regulations

N-1 (Mixture)

U.S. - California - Proposition 65 - Other information: This product contains crystalline silica, a chemical known to the State of California to cause cancer. For more information go to WWW.P65Warnings.ca.gov

crystalite (14464-46-1)

| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No significant risk level (NSRL) | Maximum allowable dose level (MADL) |
|---|---|---|---|----------------------------------|-------------------------------------|
| Yes | No | No | No | | |

Component

State or local regulations

| | |
|---|---|
| crystalite(14464-46-1) | 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 |
| 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 |
| 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 |

SECTION 16 Other information

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

Revision date : 3/10/2026

Issue date : 6/4/2015

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

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.