Ladlelock PB CR5 TR D3.5 - D3

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)
Issue date: 2/17/2016 Revision date: 11/14/2025 Supersedes: 1/13/2023

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : Ladlelock PB CR5 TR D3.5 - D3
CAS-No. : Mixture
Product code : 3676, 4460

1.2. Other means of identification

Other means of identification : Alumina-Silicate Wet Chemically Bonded Mortar-Slurry

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 - 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.
Carcinogenicity, Category 1A	H350	After drying May cause cancer (Inhalation).

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) : H315 - Causes skin irritation
H320 - Causes eye irritation
H350 - After drying May cause cancer (Inhalation).
Precautionary statements (GHS US) : P280 - Wear eye protection, Dust respirator, protective gloves.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313 - If skin irritation occurs: Get medical advice or attention.
P337+P313 - If eye irritation persists: Get medical advice or attention.
P260 - Do not breathe dust.

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
aluminium oxide, non-fibrous	CAS-No.: 1344-28-1	60 – 80	Not classified
phosphoric acid, conc=75%, aqueous solution	CAS-No.: 7664-38-2	5 – 10	Skin Corr. 1B, H314

Name	Product identifier	%	GHS US classification
chromium(III) oxide	CAS-No.: 1308-38-9	1 – 5	Not classified
quartz	CAS-No.: 14808-60-7	1 – 5	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 : 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. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms/effects, acute and delayed

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects after inhalation : After drying or heating. 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 : 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.

Explosion hazard : Prolonged exposure to fire may cause containers to rupture/explode.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire with normal precautions from a reasonable distance. Prevent fire-fighting water from entering environment.

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

Emergency procedures : Avoid contact with skin and eyes. If spilled, may cause the floor to be slippery.

For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

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

Environmental precautions : Prevent entry to sewers and public waters.

6.2. Methods and materials for containment and cleaning up

Methods for cleaning up : Stop the leak. Take up liquid spill into absorbent material.

See Heading 8,Exposure controls and 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. After drying Do not breathe dust.

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 materials : Avoid contact with materials: such as sulfides and sulfites which could release toxic gases, mixing with strong bases because high heat of reaction can generate steam, and metals which could liberate hydrogen, a flammable gas.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

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

chromium(III) oxide (1308-38-9)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH® TLV® TWA	0.003 mg/m³ (Inhalable fraction)

quartz (14808-60-7)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH® TLV® TWA	0.025 mg/m³ (Silica-Crystalline Quartz; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Respirable fraction)
USA - OSHA - Occupational Exposure Limits	
Local name	Silica, crystalline quartz, respirable dust
OSHA PEL TWA	0.05 mg/m³ respirable dust
Remark (OSHA)	(3) See Table Z-3.

8.2. Appropriate engineering controls

Appropriate engineering controls : Emergency eye wash fountain with clean water. After drying or heating. 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

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
After air drying or heating. Dust on tear out. Wear appropriate mask

Other information:
Do not eat, drink or smoke during use.

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Slurry.
Color	:	Green
Odor	:	Acid Odor
Odor threshold	:	No data available
pH	:	< 3
Melting point	:	> 2000 °F
Freezing point	:	≈ 32 °F
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	:	≈ 2.7
Solubility	:	Moderately soluble 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

Fire conditions may produce small amounts of hexavalent chromium and other oxidation products. Air Setting.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Strong bases. Avoid contact with materials: such as sulfides and sulfites which could release toxic gases, mixing with strong bases because high heat of reaction can generate steam, and metals which could liberate hydrogen, a flammable gas.

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))

phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
ATE US (oral)	4400 mg/kg body weight

chromium(III) oxide (1308-38-9)	
LD50 oral rat	> 5000 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
LC50 Inhalation - Rat	> 5.41 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 14 day(s))

Skin corrosion/irritation : Causes skin irritation.
pH: < 3

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

phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
pH	0 – 0.5 (20 °C)

chromium(III) oxide (1308-38-9)	
pH	No data available in the literature

quartz (14808-60-7)	
pH	6 – 7

Serious eye damage/irritation : Causes eye irritation.
pH: < 3

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

phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
pH	0 – 0.5 (20 °C)

chromium(III) oxide (1308-38-9)	
pH	No data available in the literature

quartz (14808-60-7)	
pH	6 – 7

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : After drying May cause cancer (Inhalation).

quartz (14808-60-7)	
IARC group	1 - Carcinogenic to humans

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)

chromium(III) oxide (1308-38-9)	
Viscosity, kinematic	Not applicable (solid)

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.
Symptoms/effects after inhalation : After drying or heating. 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 : 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

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)

chromium(III) oxide (1308-38-9)	
LC50 - Fish [1]	> 10000 mg/l (ISO 7346-1, 96 h, Danio rerio, Static system, Fresh water, Experimental value, GLP)
EC50 - Crustacea [1]	14 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)

12.2. Persistence and degradability

Ladlelock PB CR5 TR D3.5 - D3 (Mixture)	
Persistence and degradability	Not established.

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

phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
Persistence and degradability	Biodegradability: not applicable.

chromium(III) oxide (1308-38-9)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

quartz (14808-60-7)	
Persistence and degradability	Not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

12.3. Bioaccumulative potential

Ladlelock PB CR5 TR D3.5 - D3 (Mixture)	
Bioaccumulative potential	Not established.

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

phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
Bioaccumulative potential	No test data of component(s) available.

chromium(III) oxide (1308-38-9)	
Bioaccumulative potential	Not bioaccumulative.

quartz (14808-60-7)	
Bioaccumulative potential	No data available.

12.4. Mobility in soil

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

phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
Ecology - soil	Highly mobile in soil.

chromium(III) oxide (1308-38-9)	
Surface tension	No data available in the literature
Ecology - soil	Adsorbs into the soil.

12.5. Other adverse effects

Ozone : Not classified
Effect on the global warming : None known
Fluorinated greenhouse gases : No
Other information : No other effects known.

SECTION 13 Disposal considerations

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Chromite (Cr*+3) may in normal use be converted chemically to a chromate (Cr*+6). Hexavalent chromium (Cr*+6) is considered a hazardous material.

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

Ladlelock PB CR5 TR D3.5 - D3 (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

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.

phosphoric acid, conc=75%, aqueous solution (7664-38-2)

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

CERCLA RQ	5000 lb

chromium(III) oxide (1308-38-9)

Subject to reporting requirements of United States SARA Section 313

15.2. International regulations

CANADA

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

Listed on the Canadian DSL (Domestic Substances List)

phosphoric acid, conc=75%, aqueous solution (7664-38-2)

Listed on the Canadian DSL (Domestic Substances List)

chromium(III) oxide (1308-38-9)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations
No additional information available
National regulations

quartz (14808-60-7)

Listed on IARC (International Agency for Research on Cancer)

15.3. State regulations

Ladlelock PB CR5 TR D3.5 - D3 (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

quartz (14808-60-7)

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
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
phosphoric acid, conc=75%, aqueous solution(7664-38-2)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
chromium(III) oxide(1308-38-9)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List
quartz(14808-60-7)	U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16 Other information

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

Revision date : 11/14/2025

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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	
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H320	Causes eye irritation
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.