

Safety Data Sheet

RS-590-Binder

SDS Revision Date:

06/27/2017



1. Identification

1.1. Product identifier

Product Identity RS-590-Binder
Alternate Names RS-590-Binder

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use Road Base Stabilizer
Application Method See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name Crown Products and Services, Inc
319 So. Gillette Ave. Suite #303
Gillette WY 82716

Emergency

CHEMTREC (USA) (800) 424-9300
Customer Service: Crown Products and Services, Inc 1-307-969-8175

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Skin Irrit. 2;H315	Causes skin irritation.
Eye Dam. 1;H318	Causes serious eye damage.
Carc. 1A;H350	May cause cancer.
STOT RE 2;H373	May cause damage to organs through prolonged or repeated exposure. Specific Target Organs: (Lungs)

2.2. Label elements



Danger

H315 Causes skin irritation.

H318 Causes serious eye damage.

H350 May cause cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

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[Prevention]:

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P260 Do not breathe dust / fume/ mist / vapors / spray.
- P264 Wash thoroughly after handling.
- P280 Wear protective gloves / eye protection / face protection.

[Response]:

- P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.
- P302+352 IF ON SKIN: Wash with plenty of soap and water.
- P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
- P308+313 IF exposed or concerned: Get medical advice / attention.
- P314 Get Medical advice / attention if you feel unwell.
- P321 Specific treatment (see information on this label).
- P332+313 If skin irritation occurs: Get medical advice / attention.
- P362 Take off contaminated clothing and wash before reuse.

[Storage]:

- P405 Store locked up.

[Disposal]:

- P501 Dispose of contents / container in accordance with local / national regulations.

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Calcium oxide CAS Number: 0001305-78-8	10 - 25	Skin Irrit. 2;H315 Eye Dam. 1;H318 STOT SE 3;H335	[1][2]
Aluminum oxide CAS Number: 0001344-28-1	10 - 25	Not Classified	[1][2]
Crystalline Silica - Quartz CAS Number: 0014808-60-7	5 - 10	Acute Tox. 4;H332 STOT RE 2;H373 Carc. 1A;H350	[1][2]
Aluminum calcium oxide (Al ₄ CaO ₇) CAS Number: 0012004-88-5	1 - 5	Not Classified	[1]
Aluminum calcium oxide (Al ₁₄ Ca ₁₂ O ₃₃) CAS Number: 0012005-57-1	1 - 5	Not Classified	[1]
Calcium Aluminate CAS Number: 0012042-68-1	1 - 5	Not Classified	[1]

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Aluminium dicalcium iron pentaoxide CAS Number: 0012068-35-8	1 - 5	Eye Irrit. 2;H319	[1]
Dicalcium [orthosilicato(4-)]trioxodialuminate(4-) CAS Number: 0012068-46-1	1 - 5	Not Classified	[1]
Iron oxide CAS Number: 0001309-37-1	1 - 5	Not Classified	[1][2]
Magnesium CAS Number: 0007439-95-4	1 - 5	WaterReact. 1;H260 Pyr. Sol. 1;H250	[1]

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General

In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

Inhalation

Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

Eyes

Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

Skin

Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

Ingestion

If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Overview

All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Direct skin and eye contact with dust may cause irritation by mechanical abrasion. Possible cancer hazard. Contains an ingredient, which may cause cancer based on animal data (See Section 3 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.

See section 2 for further details.

Eyes

Causes serious eye damage.

Skin

Causes skin irritation.

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5. Fire-fighting measures

5.1. Extinguishing media

LARGE FIRE: Water spray, fog or regular foam.

SMALL FIRES: Dry chemical, CO2, water spray or regular foam.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: No hazardous decomposition data available.

Do not breathe dust / fume/ mist / vapors / spray.

5.3. Advice for fire-fighters

Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection

ERG Guide No. ----

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Avoid generating dust. SMALL DRY SPILLS: With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

LARGE SPILLS: Cover powder spill with plastic sheet or tarp to minimize spreading.

7. Handling and storage

7.1. Precautions for safe handling

Handle containers carefully to prevent damage and spillage.

Handle and open container with care. Use only with adequate ventilation. Minimize dust generation and accumulation. Wear appropriate personal protective equipment, avoid direct contact. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

See section 2 for further details. - [Prevention]:

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7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Store in a cool, dry, well-ventilated place.

Incompatible materials: No data available.

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0001305-78-8	Calcium oxide	OSHA	TWA 5 mg/m3
		ACGIH	TWA: 2 mg/m3
		NIOSH	TWA 2 mg/m3
		Supplier	No Established Limit
0001309-37-1	Iron oxide	OSHA	TWA 15 mg/m3 (total) TWA 5 mg/m3 (resp)
		ACGIH	TWA: 5 mg/m3 (dust or fume) STEL 10 mg/m3 (as fume)
		NIOSH	TWA 5 mg/m3
		Supplier	No Established Limit
0001344-28-1	Aluminum oxide	OSHA	TWA 15 mg/m3 (total) TWA 5 mg/m3 (resp)
		ACGIH	No Established Limit
		NIOSH	no established RELs
		Supplier	No Established Limit
0007439-95-4	Magnesium	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0012004-88-5	Aluminum calcium oxide (Al4CaO7)	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0012005-57-1	Aluminum calcium oxide (Al14Ca12O33)	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

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0012042-68-1	Calcium Aluminate	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0012068-35-8	Aluminium dicalcium iron pentaoxide	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0012068-46-1	Dicalcium [orthosilicato(4-)]trioxodialuminate(4-)	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0014808-60-7	Crystalline Silica - Quartz	OSHA	PEL 50 µg/m3
		ACGIH	TWA: 0.025 mg/m3 A1, 1
		NIOSH	0.05 mg/m3 TWA (respirable)
		Supplier	No Established Limit

The exposure limits for nuisance dust are: OSHA PEL: 15 mg/m3 (50 mppcf*) TWA, ACGIH 10 mg/m3.

8.2. Exposure controls

Respiratory

For limited exposure, use an N95 dust mask. For prolonged exposure, use an airpurifying respirator with high efficiency particulate air (HEPA) filters. Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or symptoms are experienced.

Eyes

Wear safety glasses with side shields to protect the eyes. An eye wash station is suggested as a good workplace practice.

Skin

Wear PVC or rubber gloves to keep skin contact to a minimum. Refer to the manufacturer's recommendations regarding the suitability of any gloves used.

Engineering Controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Other Work Practices

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details.

9. Physical and chemical properties

Appearance

Dry, Course Granular Product Solid

Odor

Not Provided.

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Odor threshold	Not determined
pH	Not Measured
Melting point / freezing point	Not Measured
Initial boiling point and boiling range	Not Measured
Flash Point	Not Measured
Evaporation rate (Ether = 1)	Not Measured
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: Not Measured Upper Explosive Limit: Not Measured
Vapor pressure (Pa)	Not Measured
Vapor Density	Not Measured
Specific Gravity	Not Measured
Solubility in Water	Not Measured
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	Not Measured
Decomposition temperature	Not Measured
Viscosity (cSt)	Not Measured
9.2. Other information	
No other relevant information.	

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Avoid generating dust. Reacts with water/liquid & gives off heat (Exothermic)

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

No hazardous decomposition data available.

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11. Toxicological information

Acute toxicity

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Calcium oxide - (1305-78-8)	No data available	No data available	No data available	No data available	No data available
Aluminum oxide - (1344-28-1)	5,000.00, Rat - Category: 5	No data available	No data available	No data available	No data available
Crystalline Silica - Quartz - (14808-60-7)	No data available	No data available	No data available	No data available	No data available
Aluminum calcium oxide (Al4CaO7) - (12004-88-5)	No data available	No data available	No data available	No data available	No data available
Aluminum calcium oxide (Al14Ca12O33) - (12005-57-1)	No data available	No data available	No data available	No data available	No data available
Calcium Aluminate - (12042-68-1)	No data available	No data available	No data available	No data available	No data available
Aluminium dicalcium iron pentaoxide - (12068-35-8)	No data available	No data available	No data available	No data available	No data available
Dicalcium [orthosilicato(4-)]trioxodialuminate(4-) - (12068-46-1)	No data available	No data available	No data available	No data available	No data available
Iron oxide - (1309-37-1)	10,000.00, Rat - Category: NA	No data available	No data available	No data available	No data available
Magnesium - (7439-95-4)	No data available	No data available	No data available	No data available	No data available

Carcinogen Data

CAS No.	Ingredient	Source	Value
0001305-78-8	Calcium oxide	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0001309-37-1	Iron oxide	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No;
0001344-28-1	Aluminum oxide	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0007439-95-4	Magnesium	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

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0012004-88-5	Aluminum calcium oxide (Al4CaO7)	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0012005-57-1	Aluminum calcium oxide (Al14Ca12O33)	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0012042-68-1	Calcium Aluminate	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0012068-35-8	Aluminium dicalcium iron pentaoxide	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0012068-46-1	Dicalcium [orthosilicato(4-)]trioxodialuminate(4-)	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0014808-60-7	Crystalline Silica - Quartz	OSHA	Regulated Carcinogen: No
		NTP	Known: Yes; Suspected: No
		IARC	Group 1: Yes; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	2	Causes skin irritation.
Serious eye damage/irritation	1	Causes serious eye damage.
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	1A	May cause cancer.
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	2	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	---	Not Applicable

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12. Ecological information

12.1. Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Calcium oxide - (1305-78-8)	Not Available	Not Available	Not Available
Aluminum oxide - (1344-28-1)	Not Available	Not Available	Not Available
Crystalline Silica - Quartz - (14808-60-7)	Not Available	Not Available	Not Available
Aluminum calcium oxide (Al4CaO7) - (12004-88-5)	Not Available	Not Available	Not Available
Aluminum calcium oxide (Al14Ca12O33) - (12005-57-1)	Not Available	Not Available	Not Available
Calcium Aluminate - (12042-68-1)	Not Available	Not Available	Not Available
Aluminium dicalcium iron pentaoxide - (12068-35-8)	Not Available	Not Available	Not Available
Dicalcium [orthosilicato(4-)]trioxodialuminate(4-) - (12068-46-1)	Not Available	Not Available	Not Available
Iron oxide - (1309-37-1)	Not Available	Not Available	Not Available
Magnesium - (7439-95-4)	Not Available	Not Available	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

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14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	Not Applicable	Not Regulated	Not Regulated
14.2. UN proper shipping name	Not Regulated	Not Regulated	Not Regulated
14.3. Transport hazard class(es)	DOT Hazard Class: Not Applicable	IMDG: Not Applicable Sub Class: Not Applicable	Air Class: Not Applicable
14.4. Packing group	Not Applicable	Not Applicable	Not Applicable
14.5. Environmental hazards			
IMDG	Marine Pollutant: No;		
14.6. Special precautions for user	No further information		

15. Regulatory information

Regulatory Overview	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
Toxic Substance Control Act (TSCA)	All components of this material are either listed or exempt from listing on the TSCA Inventory.
WHMIS 1988 Classification	D2A E
US EPA Tier II Hazards	Fire: No Sudden Release of Pressure: No Reactive: No Immediate (Acute): Yes Delayed (Chronic): Yes

Note: Strong inorganic acid mists containing sulfuric acid are listed on the California Proposition 65 Carcinogen List. [Sulfuric acid, in and of itself, is not listed under Proposition 65. However, if one has sulfuric acid, which through its intended use generates an acid mist that in turn contains sulfuric acid that would meet the listing. The term "strong" does not refer to the concentration of the acid, but rather the strength of the acid. The basis for the listing of strong inorganic acid mists containing sulfuric acid was the formal identification by the National Toxicology Program (NTP), in its Ninth Report on Carcinogens, that this chemical mixture is "known to be a human carcinogen." (Public notice available at http://www.oehha.ca.gov/prop65/CRNR_notices/admin_listing/intent_to_list/noil19b4.html.)]

EPCRA 302 Extremely Hazardous:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

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EPCRA 313 Toxic Chemicals:

Aluminum oxide

Crystalline Silica - Quartz

Proposition 65 - Carcinogens (>0.0%):

ARSENIC AND SOLUBLE COMPOUNDS,as AS

Crystalline Silica - Quartz

Lead

Nickel

Proposition 65 - Developmental Toxins (>0.0%):

Lead

Proposition 65 - Female Repro Toxins (>0.0%):

Lead

Proposition 65 - Male Repro Toxins (>0.0%):

Lead

16. Other information

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The full text of the phrases appearing in section 3 is:

H250 Catches fire spontaneously if exposed to air.

H260 In contact with water releases flammable gases which may ignite spontaneously.

H261 In contact with water releases flammable gases.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H350 May cause cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

The product information contained herein is believed to be accurate as of the date of the Safety Data Sheet, and is provided without warranty, expressed or implied, as to the results of use of this information or the product to which it relates. Recipient assumes all responsibility for the use of this information and the use (alone or in combination with any other product), storage or disposal of the product, including any resultant personal injury or property damage

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