



# Safety Data Sheet

DAMTITE Concentrated Concrete Cleaner

Revision 1.1

Date: June 4, 2020

US/English

## Section 1 - Chemical Product and Company Identification

**Product/Chemical Name:** Sulfamic Acid  
**Chemical Formula:**  $\text{H}_3\text{NO}_3\text{S}$   
**CAS Number:** 5329-14-6  
**Other Designations:** amidosulfonic acid, amidosulfuric acid, aminosulfonic acid, sulphamic acid. Produced from chlorosulfonic acid and ammonia or by heating urea with sulfuric acid.  
**Derivation:**  
**General Use:** In alkalimetry, in acid cleaning, nitrite removal, chlorine stabilization

**Name of Supplier of Safety Data Sheet:** Wall Firma, Inc.

733 E. Main Street, Monongahela, Pennsylvania 15063 USA

Telephone: +1 (724) 258-7175

**Emergency Telephone:** (ChemTel) Contract MIS0000335;  
800 255-3924; INTL 813 248-0585

## Section 2 - Hazards Identification

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### Emergency Overview

Warning: Sulfamic acid exists as odorless, white crystals. It is a strong acid and causes severe irritation or burns upon contact with the eyes, skin, or mucous membranes of the respiratory tract. Inhalation of high levels can cause pulmonary edema (fluid in the lungs) which may be life-threatening. Be sure to wear safety glasses and gloves when handling this material.

#### HMIS

H 2

F 0

R 0

PPE<sup>†</sup>

<sup>†</sup>Sec. 8

### Potential Health Effects

**Primary Entry Routes:** Inhalation, skin and eye contact, ingestion.

**Target Organs:** Eyes, skin, respiratory tract, gastrointestinal tract. Central nervous system, liver, kidneys, and cardiovascular system (secondary to burns and circulatory collapse).

### HAZARDS IDENTIFICATION

#### Classification of the substance or mixture

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)** Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Acute aquatic toxicity (Category 3), H402

Chronic aquatic toxicity (Category 3), H412

#### GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

#### **Hazard statement(s)**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H412 Harmful to aquatic life with long lasting effects.

#### **Precautionary statement(s)**

P264 Wash skin thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves/ eye protection/ face protection.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (see supplemental first aid instructions on this label).

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P362 Take off contaminated clothing and wash before reuse.

P501 Dispose of contents/ container to an approved waste disposal plant.

**Hazards not otherwise classified (HNO) or not covered by GHS - none**

#### Acute Effects

**Inhalation:** Inhalation of particulates can cause severe irritation and burns of the nose and respiratory tract.

Inhalation of high levels can cause pulmonary edema (fluid in the lungs) which may be delayed up to 48 hrs.

**Eye:** Severe irritation and burns. Scarring may be permanent.

**Skin:** Severe irritation and burns. Scarring may be permanent.

**Ingestion:** The mouth and esophagus may appear grayish-white progressing to black with a shrunken and wrinkled texture. Esophageal or stomach perforation may occur. Circulatory collapse occurs in extreme cases with clammy skin, weak and rapid pulse, shallow respiration, and scanty urine. Uncorrected circulatory collapse can cause kidney failure and schematic (localized to anemia due to decreased inflow of arterial blood) lesions of the heart and liver. Death is generally due to circulatory collapse or asphyxiation due to glottal edema (fluid and swelling in the epiglottis which causes insufficient oxygen to reach the windpipe). The estimated human lethal dose is 0.5 to 5 g/kg (1 oz to 1 pint for a 70 kg/150 lb person).

**Carcinogenicity:** IARC, NTP, and OSHA do not list sulfamic acid as a carcinogen.

**Medical Conditions Aggravated by Long-Term Exposure:** None reported.

**Chronic Effects:** None reported

### Section 3. Composition/Information on Ingredients

Ingredient Name	CAS Number	EINECS/ELINCS	% wt or % vol
Sulfamic Acid	5329-14-6	266-218-8	100

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH
	TWA	STEL	TWA	STEL	TWA	STEL	IDLH
Sulfamic Acid	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.

### Section 4: First-Aid Measures:

**Inhalation:** Remove exposed person to fresh air and support breathing as needed.

**Eye Contact:** *Do not* allow victim to rub or keep eyes tightly shut. Gently lift eyelids and flush immediately and continuously with flooding amounts of water until transported to an emergency medical facility. Consult a physician or ophthalmologist immediately.

**Skin Contact:** *Quickly* remove contaminated clothing (if not stuck to skin). Rinse with flooding amounts of water for at least 15 min. For reddened or blistered skin, consult a physician.

**Ingestion:** Never give anything by mouth to an unconscious or convulsing person. Contact a poison control center. Unless the poison control center advises otherwise, have the *conscious and alert* person drink 1 to 2 glasses of water to dilute. *Do not* induce vomiting because of the corrosive nature of sulfamic acid. Vomiting will worsen esophagus.

**After first aid, get appropriate in-plant, paramedic, or community medical support**

**Note to Physicians:** Treatment is symptomatic and supportive. Treat as for thermal burns. Severe inhalation exposure may result in delayed pulmonary edema; in these cases consider close observation for 24 to 48 hr.

### Section 5 - Fire-Fighting Measures

**Flash Point:** Noncombustible

**Flash Point Method:**

**Burning Rate:**

**Autoignition Temperature:** Noncombustible

**LEL:**

**UEL:**



**Flammability Classification:**

**Extinguishing Media:** Use agent suitable for surrounding fire.

**Unusual Fire or Explosion Hazards:** Emits toxic gases when heated.

**Hazardous Combustion Products:** Sulfur oxide(s), nitrogen oxide(s), and ammonia gas.

**Fire-Fighting Instructions:** Do not release runoff from fire control methods to sewers or waterways.

**Fire-Fighting Equipment:** Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face mask operated in pressure-demand or positive-pressure.

## Section 6 - Accidental Release Measures

**Spill /Leak Procedures:** Notify safety personnel, isolate and ventilate area, deny entry, and stay upwind.

**Small Spills:** Do not sweep or otherwise disperse into air. Carefully scoop up or vacuum (with appropriate filter) and place in suitable container for disposal.

**Large Spills**

**Containment:** Flush with plenty of water to containment area for later disposal. Do not release into sewers or waterways.

**Cleanup:** Damp mop with dilute alkaline solution (sodium bicarbonate, sodium hydroxide, lime)

**Regulatory Requirements:** Follow applicable OSHA regulations (29 CFR 1910.120).

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances..

## Section 8 - Exposure Controls / Personal Protection

**Engineering Controls:** To prevent dispersion of dusts into work area, enclose all processes where possible.

**Ventilation :** Provide general local exhaust ventilation systems to maintain airborne concentrations as low as possible. Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source. (103)

**Administrative Controls:** Instruct employees on the proper use of PPE to prevent severe irritation and burns from contact.

**Respiratory Protection:** Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations 29CFR 910.134) and, if necessary, wear a MSHA/NIOSH-approved dust respirator. Select respirator based on its suitability for adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or non-routine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA.

*Warning: air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respirator protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

**Protective Clothing/Equipment:** Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations 29CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

**Safety Stations:** Make emergency eyewash stations, safety/quick-drench showers, and from street clothes. Launder before reuse. Remove sulfamic acid from your shoes and clean personal protective equipment.

**Comments:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using sulfamic acid, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

## Section 9 - Physical and Chemical Properties

**Physical State:** Solid

**Appearance and Odor:** White, orthorhombic crystals

**Odor Threshold:**

**Vapor Pressure:** 0.006 mm Hg at 68 °F (20 °C)

**Vapor Density (Air=1):**

**Formula Weight:** 97.1

**Density:**

**Specific Gravity (H<sub>2</sub>O=1, at 4 °C):** 2.15 glee

**pH:** 1% solution = 1.18 at 77 °F (25 °C)

**Water Solubility:** 6.5 parts water at 32 °F (0 °C); 2 parts water at 176 °F (80 °C)

**Other Solubilities:** Sparingly soluble in ethanol and

methanol; slightly soluble in acetone; soluble in nitrogenous bases (i.e. ammonia) and nitrogen containing organic solvents (i.e. pyridine, formamide, and dimethylformamide); insoluble in ether, carbon disulfide, and carbon tetrachloride.

**Boiling Point:** Decomposes @ 205 °C

**Freezing/Melting Point:** 401 °F (205 °C)

## Section 10 - Stability and Reactivity

**Stability:** Sulfamic acid is stable when dry but it slowly hydrolyzes in solution to form ammonium bisulfate.

**Polymerization:** Hazardous polymerization does not occur.

**Chemical Incompatibilities:** Sulfamic acid undergoes a violent or explosive reaction with chlorine, metal nitrates + heat, metal nitrites + heat, and fuming nitric acid.

**Conditions to Avoid:** Exposure to incompatibles and dispersion of sulfamic acid particulates into air.

**Hazardous Decomposition Products:** Thermal oxidative decomposition of sulfamic acid can produce nitrogen oxide(s), sulfur oxide(s), and ammonia gas.

## Section 11- Toxicological Information

### Toxicity Data:\*

#### Eye Effects:

Rabbit, eye: 20 mg caused moderate irritation.

Rabbit, eye: 250 mg/24 hr caused severe irritation.

#### Skin Effects:

Human, skin: 4% solution applied intermittently for 5 days caused mild irritation.

Rabbit, skin: 500 mg applied 24 hr caused severe irritation.

#### Acute Oral Effects:

Rat, oral, LD 50 : 3160 mg/kg

Mouse, oral, LD 50 : 1312 mg/kg caused altered sleep time (including righting reflex), excitement, and rigidity.

#### Chronic Effects:

#### Carcinogenicity:

#### Mutagenicity:

#### Teratogenicity:

\* See NIOSH, *RTECS* (WO5950000), for additional toxicity data.

## Section 12 - Ecological Information

**Ecotoxicity:** Data not found

**Environmental Fate:**

**Environmental Degradation:**

## Section 13 - Disposal Considerations

**Disposal:** Dilute with water, neutralize with alkaline material (lime, sodium hydroxide, sodium bicarbonate) and flush to sewer with plenty of water. Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state and local regulations.

**Disposal Regulatory Requirements:**

**Container Cleaning and Disposal:**

## Section 14 - Transport Information

### Regulated for transportation

<b>US DOT(49 CFR 172.101):</b> PSN: Sulphamic acid Hazard Class: 8 UN Number: UN2967 Packing Group: III	<b>IATA</b> PSN: Sulphamic acid Hazard Class: 8 UN Number: UN2967 Packing Group: III
<b>TDG</b> PSN: Sulphamic acid Hazard Class: 8 UN Number: UN2967 Packing Group: III	<b>IMDG/IMO</b> PSN: Sulphamic acid Hazard Class: 8 UN Number: UN2967 Packing Group: III

## Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 5329-14-6 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ)

None of the chemicals in this material have an RQ.

Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 5329-14-6: acute.

Section 313

No chemicals are reportable under Section 313.

**Clean Air Act:**

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA: None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**

Sulfamic Acid can be found on the following state right to know lists: New Jersey.

California - No Significant Risk Level:

None of the chemicals in this product are listed.

**European/International Regulations**

European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:

R 36/38 Irritating to eyes and skin.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 28A After contact with skin, wash immediately with plenty of water.

WGK (Water Danger/Protection)

CAS# 5329-14-6: 1

**Canada**

CAS# 5329-14-6 is listed on Canada's DSL/NDSL List.

This product has a WHMIS classification of E.

CAS# 5329-14-6 is not listed on Canada's Ingredient Disclosure List.

**Section 16 - Other Information**

**Indicates information that has changed from previously issued version.**

Date of previous issue:

May 15, 2015

Organization that prepared the SDS:

Wall Firma, Inc.

**Disclaimer**

*The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by Wall Firma, Inc., and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.*

**End of Safety Data Sheet**