



# SAFETY DATA SHEET

SDS No. 940

Revision Date: 1/3/2020 Version: 3.0

GHS Compliant

## Section 1 - Identification of the substance/mixture and of the company/undertaking

### 1.1 Product Identifier

Trade Name: Forton® Hardener (Ammonium Chloride); Matrix®-G C-3 Hardener

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

General Use: Concrete Additive

Restrictions on Use: None known

### 1.3 Details of the supplier of the safety data sheet:

Company: Smooth-On, Inc.,  
5600 Lower Macungie Rd., Macungie, PA 18062

Telephone: Phone (610) 252-5800 FAX (610) 252-6200

E-mail address: Visit our website at [www.smooth-on.com](http://www.smooth-on.com) or email  
[www.sds@smooth-on.com](mailto:www.sds@smooth-on.com)

1.4 Emergency Contact: Chem-Tel Domestic: 800-255-3924 International: 813-248-0585

## Section 2 – Hazard(s) Identification

### 2.1 Classification of the substance or mixture:

GHS Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)

H302 Acute Toxicity, oral – Category 4

H319 Eye Irritant – Category 2A

### 2.2 GHS Label elements, including precautionary statements



Pictogram(s):

Signal word: Warning

#### Health Hazards

H302 Harmful if swallowed

H319 Causes serious eye irritation

#### Prevention Precautions

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

#### Response Precautions

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

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

P330 Rinse mouth.

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

**Disposal Precautions**

P501 Dispose of contents/container according to local, state and federal laws.

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS – none known****Section 3 - Composition / Information on Ingredients****3.1 Substances/Mixtures**

The following ingredients are hazardous according to Regulation 2012 OSHA Hazard Communication Standard: 29 CFR 1910.1200:

Chemical name	CAS-No.	Concentration
Ammonium chloride	12125-02-9	>99.5%

**Section 4 - First Aid Measures****4.1 Description of first aid measures****Inhalation**

Remove source(s) of contamination and move victim to fresh air. If breathing has stopped, give artificial respiration, then oxygen if needed. Contact physician immediately.

**Eye Contact**

Flush eyes with plenty of water occasionally lifting the upper and lower eyelids. Check and remove any contact lenses if safe to do so. Continue to rinse for at least 15 minutes. If irritation develops, seek medical attention.

**Skin Contact**

In case of skin contact, wash thoroughly with soap and water. Continue to rinse for at least 15 minutes. Chemical burns must be treated promptly by a physician.

**Ingestion**

Do not induce vomiting unless instructed by a physician. Never give anything by mouth to an unconscious person. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.

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

In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**4.3 Indication of any immediate medical attention and specific treatment needed, if necessary.****Section 5 - Fire-Fighting Measures****5.1 Extinguishing Media**

Water Fog, Dry Chemical, and Carbon Dioxide Foam

**5.2 Special hazards arising from the substance or mixture**

In a fire or if heated, a pressure increase will occur, and the container may burst.

**5.3 Advice for firefighters**

Use water spray to cool fire-exposed surfaces and to protect personnel. Shut off “fuel” to fire. If a leak or spill has not ignited, use water spray to disperse the vapors. Either allow fire to burn under controlled conditions or extinguish with foam or dry chemical. Try to cover liquid spills with foam. Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full-face piece operated in pressure demand or positive-pressure mode.

**Section 6 - Accidental Release Measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Only properly protected personnel should remain in the spill area; dike and contain spill. Stop or reduce discharge if it can be done safely.

**6.2 Environmental precautions**

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains or unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers. No special environmental precautions required.

**6.3 Methods and material for containment and cleaning up**

Put on appropriate protective gear including NIOSH/MSHA approved self-contained breathing apparatus, rubber boots and heavy rubber gloves. Dike and contain spill; absorb or scrape up excess into suitable container for disposal; wash area with dilute ammonia solution. Stop or reduce discharge if it can be done safely. Follow applicable OSHA regulations (29 CFR 1910.120) for disposal.

**6.4 Reference to other sections**

See Section 3 for list of Hazardous Ingredients; Sections 8 for Exposure Controls; and Section 13 for Disposal.

**Section 7 - Handling and Storage**

**7.1 Precautions for safe handling**

Use good general housekeeping procedures. Wash hands after use. Do not get in eyes, on skin or on clothing. Do not breathe vapors or mists. Use good personal hygiene practices.

**7.2 Conditions for safe storage, including any incompatibilities**

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well ventilated place away from heat, direct sunlight, strong oxidizers and any incompatibles. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet local standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty containers retain residue and may be dangerous. Avoid water contamination.

**7.3 Specific end use(s)**

These precautions are for room temperature handling. Other uses including elevated temperatures or aerosol/spray applications may require added precautions.

**Section 8 - Exposure Controls / Personal Protection**

**8.1 Control parameters**

**Ammonium chloride:**

USA ACGIH	ACGIH TWA	10 mg/m <sup>3</sup>
USA ACGIH	ACGIH STEL	20 mg/m <sup>3</sup>

## 8.2 Exposure controls

### Respiratory Protection

Respiratory protection is not normally required when using this product with adequate local exhaust ventilation. Where risk assessment shows air-purifying respirators are appropriate, follow OSHA respirator regulations 29 CFR 1910.134 and European Standards EN 141, 143 and 371; wear an MSHA/NIOSH or European Standards EN 141, 143 and 371 approved respirators equipped with appropriate filter cartridges as a backup to engineering controls.

### Hand Protection

Wear any liquid-tight gloves such as butyl rubber, neoprene or PVC.

### Eye Protection

Safety glasses with side shields per OSHA eye- and face-protection regulations 29 CFR 1910.133 and European Standard EN166. Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

### Other Protective Clothing/Equipment

Additional protective clothing or equipment is not normally required. Provide eye bath and safety shower.

### Comments

Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics. Wash thoroughly after handling.

## Section 9 - Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

<b>Appearance:</b>	granular nuggets	<b>Vapor pressure:</b>	No data
<b>Odor:</b>	odorless	<b>Vapor density (Air=1):</b>	No data
<b>pH:</b>	4.0 – 6.0	<b>Evaporation rate:</b>	No data
<b>Flash Point:</b>	No data	<b>Solubility in water:</b>	100%
<b>Melting / freezing point:</b>	No data	<b>Specific Gravity (H<sub>2</sub>O=1, at 4 °C):</b>	1.07
<b>Low / high boiling point:</b>	No data	<b>Relative density:</b>	No data
<b>Upper flammability limits:</b>	f.p. at or above 200 °F	<b>Decomposition temperature:</b>	No data
<b>Lower flammability limits:</b>	No data	<b>Viscosity:</b>	No data

## Section 10 - Stability and Reactivity

### 10.1 Reactivity

No hazardous reactions if stored and handled as prescribed/indicated., No corrosive effect on metal. Not fire propagating.

### 10.2 Chemical stability

These products are stable at room temperature in closed containers under normal storage and handling conditions.

### 10.3 Possibility of hazardous reactions

Hazardous polymerization cannot occur

**10.4 Conditions to avoid**

None known

**10.5 Incompatible materials**

Strong bases and acids

**10.6 Hazardous decomposition products**

Thermal oxidative decomposition can produce carbon oxides, gasses/vapors, and traces of incompletely burned carbon compounds.

**Section 11- Toxicological Information****11.1 Information on toxicological effects****Acute Toxicity**

LD50, oral: 1410 mg/kg (rat)

**Skin Corrosion/Irritation**

No data available

**Serious Eye Damage/Irritation**

Causes serious eye irritation (pH 4.0 – 6.0)

**Respiratory/Skin Sensitization**

No data available

**Germ Cell Mutagenicity**

No data available

**Carcinogenicity**

No component of these products present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC, ACGIH or NTP.

**Reproductive Toxicity**

No data available

**Specific Target Organ Toxicity – Single Exposure**

No data available

**Specific Target Organ Toxicity – Repeated Exposure**

No data available

**Aspiration Hazard**

No data available

**Potential Health Effects – Miscellaneous**

No data available

**Section 12 - Ecological Information****12.1 Toxicity**

LC50 Cyprinus carpio – 209 mg/l (96 h, static)

**12.2 Persistence and Degradability**

No data available

**12.3 Bioaccumulative Potential**

No data available

**12.4 Mobility in Soil**

No data available

**12.5 Results of PBT and vPvB assessment**

No data available

**12.6 Other Adverse Effects**

No data available

**Section 13 - Disposal Considerations****13.1 Waste treatment methods**

Under Resource Conservation and Recovery Act (RCRA) it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste as defined in 40 CFR Part 261. Waste management should be in full compliance with federal, state and local laws. Regulations may vary in various locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

**Container disposal**

Steel drums must be emptied and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approved landfill. Do not attempt to refill or clean containers since residue is difficult to remove. Under no circumstances should empty drums be burned or cut open with gas or electric torch as toxic decomposition products may be liberated. Do not reuse empty containers.

**Section 14 - Transport Information**

Not regulated by DOT / IMDG / IATA

**Section 15 - Regulatory Information****15.1 Safety health and environmental regulations/legislation specific for the substance or mixture:****REACH: Regulation (EC) No 1907/2006 of The European Parliament and of The Council of December 2006 (including amendments and corrigenda as of 16 July 2019)**

This product complies with REACH or is not subject to regulation under REACH. The product does not contain an ingredient listed on either the Candidate List or Authorization List for Substances of Very High Concern (SVHC).

**In the United States (EPA Regulations)****TSCA Inventory Status (40 CFR710)**

All components of this formulation are listed in the TSCA Inventory. No component of this formulation has been determined to be subject to manufacturing or use restrictions under the Significant New Use Rules (SNURs).

**CERCLA Hazardous Substance List (40 CFR 302.4)**

None known.

**SARA 302 Components**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and community Right-to-Know Act of 1986) Sections 311 and 312**

Immediate (Acute)

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**State Right-to-Know**

**Component**

**CAS#**

**State**

ammonium chloride

12125-02-9

MA, MN, NJ, PA

**California Proposition 65**

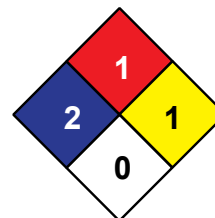
This product does not intentionally contain any chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

**15.2 Chemical safety assessment**

No chemical safety assessment has been carried out for this substance/mixture by the supplier.

**16 - Other Information**

HMIS	
H	2
F	1
R	1



NFPA

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**Abbreviations and acronyms**

ACGIH-American Conference of Governmental Industrial Hygienists; ANSI-American National Standards Institute; Canadian TDG-Canadian Transportation of Dangerous Goods; CAS-Chemical Abstract Service; Chemtrec-Chemical Transportation Emergency Center (US); CHIP-Chemical Hazard Information and Packaging; DSL-Domestic Substances List; EC-Equivalent Concentration; EH40 (UK)-HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA-Emergency Planning and Community Right-To-Know Act; ESL-Effects screening levels; GHS-Globally Harmonized System of Classification and Labelling of Chemicals; HMIS-Hazardous Material Information Service; IATA-International Air Transport Association; IMDG-International Maritime Dangerous Goods Code; LC-Lethal Concentration; LD-Lethal Dose; NFPA-National Fire Protection Association; OEL-Occupational Exposure Limit; OSHA-Occupational Safety and Health Administration, US Dept. of Labor; PEL-Permissible Exposure Limit; SARA (Title III)-Superfund Amendments and Reauthorization Act; SARA 313-Superfund Amendments and Reauthorization Act, Section 313; SCBA-Self-Contained Breathing Apparatus; STEL-Short Term Exposure Limit; TCEQ-Texas Commission on Environmental Quality; TLV-Threshold Limit Value; TSCA-Toxic Substances Control Act Public Law 94-469; TWA-Time Weighted Value; US DOT-US Department of Transportation; WHMIS-Workplace Hazardous Materials Information System.

**Disclaimer**

The information contained in this Safety Data Sheet (SDS) is considered accurate as of the version date. However, no warranty is expressed or implied regarding the accuracy of the data. Since the use of this product is not within the control of Smooth-On Inc., it is the user's obligation to determine the suitability of the product for its intended application and assumes all risk and liability for its safe use.

This SDS is prepared to comply with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) as prescribed by the United States (US) Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200), the Canadian Workplace Hazardous Materials Information System (WHMIS), and European Union Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 (REACH).

Classifications of the chemical in accordance with 29 CFR 1910.1200, signal word, hazard and precautionary statement(s), symbol(s) and other information are based on listed concentration of each hazardous ingredient. Unlisted ingredients are not "hazardous" per the OSHA Hazard Communication Standard (29 CFR 1910.1200), WHMIS and EC No 1907/2006 and are considered trade secrets under US Federal Law (29 CFR and 40 CFR), Canadian Law (Health Canada Legislation), and European Union Directives.