

## SECTION 1: Identification

**Product form:** Dry Powder

**Substance name:** Sulfamic Acid

**CAS No.** 5329-14-6

**EC No.** 226-218-8

**UN No.** 2967

**Synonyms:** Amidosulfonic Acid

**Intended Use Of The Product:** Lost Circulation Material

Turbo-Chem International, INC.

P.O. Box 60383

Lafayette, LA 70596

1.337.235.3098

**Emergency number** :(Chemtrec)1.800.424.9300

## SECTION 2: Hazards identification

### GHS-US classification

Skin Corr. 1C H314

Eye Dam. 1 H318

Aquatic Acute 2 H401

Inhalation H333

Ingested H305



**Signal word (GHS-US)**

: Danger

**Hazard statements (GHS-US)**

H314 - Causes severe skin burns and eye damage

H318- Causes serious eye damage

H401- Toxic to aquatic life

H305- May be harmful if swallowed or enters the airway

H333 - May be harmful if inhaled

**Precautionary statements (GHS-US)**

P233 - Keep container tightly closed.

P250 - Do not subject to grinding, shock, friction or fire

P260- Do not breathe dust, fumes, gas, mist, vapors or spray

P262 - Do not get in eyes or skin or on clothing.

P264 - Wash exposed skin thoroughly after handling

P281 - Use personal protective equipment as required

P284 - Wear respiratory protection

P273 - Avoid release to the environment  
 P280 - Wear protective gloves, eye protection, protective clothing  
 P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting  
 P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 P304+P340 - IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing  
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P310 - Immediately call a POISON CENTER or doctor/physician  
 P363 - Wash contaminated clothing before reuse  
 P405 - Store locked up  
 P501 - Dispose of contents/container to comply with local, state and federal regulations

### SECTION 3: Composition/information on ingredients

Substance Type: Mono-Constituent

Name	Product Identifier	%	GHS-US classification
Sulfamic Acid	CAS No. 5329-14-6	100	Skin Corr. 1C H314 Inhalation H333 Eye Dam. 1 H318 Ingested H305 Aquatic Acute 2 H401

### SECTION 4: First aid measures

**First-aid measures general:** Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital

**First-aid measures after inhalation:** Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Doctor: administration of corticoid spray

**First-aid measures after skin contact:** Wash immediately with lots of water. Do not apply (chemical) neutralizing agents. Take victim to doctor if irritation persists.

**First-aid measures after eye contact:** Rinse immediately with plenty of water. Take victim to an ophthalmologist if irritation persists.

**First-aid measures after ingestion:** Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Call Poison Information Centre ([www.big.be/antigif.htm](http://www.big.be/antigif.htm)). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Do not give chemical antidote.

#### Most important symptoms and effects, both acute and delayed

**Symptoms/injuries:** May cause eye, skin and respiratory tract irritation/damage.

**Symptoms/injuries after inhalation:** Dry/sore throat. Coughing. ON CONTINUOUS EXPOSURE/CONTACT: Respiratory difficulties. Corrosion of the upper respiratory tract

**Symptoms/injuries after eye contact:** Irritation of the eye tissue. ON CONTINUOUS EXPOSURE/CONTACT: Corrosion of the eye tissue .

**Symptoms/injuries after ingestion:** Nausea. Vomiting. Abdominal pain. Diarrhoea.

#### Indication of any immediate medical attention and special treatment needed

If medical advice is needed, have product container or label at hand.

### SECTION 5: Firefighting measures

#### Extinguishing media

**Suitable extinguishing media:** Dry chemical powder, appropriate foam, carbon dioxide.

#### Special hazards arising from the substance or mixture

**Fire hazard:** DIRECT FIRE HAZARD. Non combustible. INDIRECT FIRE HAZARD. Reactions involving a fire hazard see "Reactivity Hazard".

**Hazardous Combustion / Decomposition Products:** Sulfur Oxides

#### Advice for firefighters

**Firefighting instructions / Special Firefighting Equipment:** Wear self contained breathing apparatus. Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray; Heat/fire exposure: compressed air/oxygen apparatus

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### SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures** **General measures:** Stop release. Ventilate area. Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation. Gloves. Face-shield. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Dust cloud production: dust-tight suit.

**For non-emergency personnel**

**Protective equipment:** Equip cleanup crew with proper protection. Do not breathe dust.

**Environmental precautions**

Prevent water and soil pollution. Prevent spreading in sewers.

**Methods and material for containment and cleaning up: Methods for cleaning up:** Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the solid spill. Hazardous reaction: measure explosive gas-air mixture. Reaction: dilute combustible gas/vapour with water curtain. Knock down/dilute dust cloud with water spray. Prevent dust cloud formation. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Spill must not return in its original container. See "Material-handling" for suitable container materials. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling

**Reference to other sections**

See heading 13 for disposal information.

### SECTION 7: Handling and storage

**Precautions for safe handling:** Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Avoid raising dust. Keep away from naked flames/heat. Observe normal hygiene standards. Keep container tightly closed. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

**Hygiene measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

**Storage conditions:** Store in a dry location that meets the legal requirements

**Incompatible products:** Strong bases. Strong oxidizers. Strong reducing agents.

**Incompatible materials:** KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. (strong) bases. halogens, water/moisture

### SECTION 8: Exposure controls/personal protection

**Control parameters**

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Hand protection	Gloves
Eye protection	Chemical Safety Goggles
Skin and body protection	Protective clothing incase of dust exposure, head neck protection, dust proof clothing

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### Exposure controls

Appropriate engineering controls

Emergency eye wash fountains and showers should be made available in the immediate vicinity of any exposure. Provide adequate ventilation

Personal protective equipment

: Insufficient ventilation: wear respiratory protection. Protective goggles.



Hand protection

: Chemical Resistant Gloves

Eye protection

: Face Shield / Protective Goggles

Skin and body protection

: Protective clothing in case of dust exposure. Head and neck protection

Respiratory protection

: Dust mask with filter type P2

Other information

: None

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Crystalline Powder
Colour	: White
Odour	: None
Odour threshold	: No data available :
pH	: 1.18(1% solution @20C)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 205 C
Freezing point	: No data available
Boiling point	: No data available
Flash Point	: Not known
Auto-ignition temperature	: No data available
Decomposition Temperature	: 205 C (408.2 F)
Flammability (solid, gas)	: No data available : :
Vapour pressure	: No data available :
Relative vapour density at 20 °C	: No data available
Relative density	
Density	: 2.151 (SG)
Solubility	: In water - Decomposes (18g/100 mL water)
Log Pow	: .10
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: Not applicable

## SECTION 10: Stability and reactivity

**Chemical Stability** Unstable on exposure to moisture

**Conditions to Avoid** Incompatible materials.

**Reactivity** Decomposes slowly on exposure to water (moisture): release of corrosive products. This reaction is accelerated on exposure to temperature rise. Reacts on exposure to water (moisture) with (some) metals: release of highly flammable gases/vapours (hydrogen). On burning: release of toxic and corrosive gases/vapours (nitrous vapours, sulphur oxides). Reacts violently with (strong) oxidizers. Reacts exothermically with (some) bases.

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**Incompatible Materials** Strong oxidizers.

**Hazardous Decomposition Products** Carbon oxides (CO, CO<sub>2</sub>), nitrogen .

### SECTION 11: Toxicological information

Acute toxicity: Inhalation may result in SPESIT, inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. Material is extremely destructive to tissue of mucous membranes. The chemical, physical and toxicological properties have not been thoroughly investigated.

<b>RTECS #:</b> W05950000	<b>Irritation Data:</b> Skin (Human 4% 5D, mild irritation); (Rabbit 500mg 24H, severe irritation)
<b>Ora-Rat:</b> 3,160 mg/kg (LD50)	<b>Eyes</b> (Rabbit 20mg, moderate irritation); (Rabbit 0.25 24H, severe irritation)
<b>Ora-Mouse:</b> 1,312 mg/kg (LD50)	Behavior: Altered sleep time, excitement, rigidity (catalepsy)
<b>Ora-Guinea Pig:</b> 1,050 mg/kg (LD50)	Behavior: Altered sleep time, excitement, rigidity (catalepsy)

**Skin corrosion/irritation:** Causes Burns

**Serious eye damage/irritation:** Causes Burns.

**Respiratory or skin sensitisation:** May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract

**Germ cell mutagenicity:** Not classified

**Carcinogenicity:** No

**Reproductive toxicity:** No

**Specific target organ toxicity (single exposure):** None

**Specific target organ toxicity (repeated exposure):** None

**Aspiration hazard:** Not classified

**Symptoms/injuries after inhalation:** May cause respiratory irritation.

**Symptoms/injuries after eye contact:** May cause eye irritation.

**Symptoms/injuries after ingestion:** Not known.

### SECTION 12: Ecological information

**Toxicity** Ecology - air : TA-Luft Klasse 5.2.1.

<b>SwellCM Activator</b>	Ecology - water Harmful to fishes. Harmful to invertebrates (Daphnia). Harmful to algae. pH shift.
LC50 fishes 1	> 14.2 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 1	1.6 mg/l (48 h; Daphnia magna; GLP)
EC50 other aquatic organisms 1	>= 1000 mg/l (16 h; Pseudomonas putida)
LC50 fish 2	70.3 mg/l (96 h; Pimephales promelas)

### Bioaccumulative potential

<b>SwellCM Activator</b>	
Log Pow	0.10 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

**Mobility in soil** Toxic to flora.

Biodegradability: not applicable. Biodegradability in soil: not applicable. No (test) data on mobility of the substance available

### SECTION 13: Disposal considerations

**Waste disposal recommendations:** Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse. Remove for physico-chemical/biological treatment. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery.

Additional information : LWCA (the Netherlands): KGA category 06. Hazardous waste according to Directive 2008/98/EC.

# SwellLCM Activator

## Safety Data Sheet

### SECTION 14: Transport information

In accordance with DOT,TDG,IMDG,ICAO/IATA : Not regulated for transportation

In accordance with DOT

Transport document description : UN2967 Sulfamic acid, 8, III

UN-No.(DOT) : 2967

DOT NA no. : UN2967

DOT Proper Shipping Name : Sulfamic acid

Department of Transportation (DOT) Hazard : 8 - Class 8 - Corrosive material 49 CFR 173.136

Classes

Hazard labels (DOT) : 8 - Corrosive substances

Packing group (DOT) : III - Minor Danger

DOT Special Provisions (49 CFR 172.102) : IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).  
IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner.

TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.

DOT Packaging Exceptions (49 CFR 173.xxx) : 154

DOT Packaging Non Bulk (49 CFR 173.xxx) : 213

DOT Packaging Bulk (49 CFR 173.xxx) : 240

DOT Quantity Limitations Passenger aircraft/rail : 25 kg  
(49 CFR 173.27)

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

State during transport (ADR-RID) : as solid. Substance assigned to class 8 for its corrosion in water.



#### ADR

Transport document description : UN 2967 Sulphamic acid, 8, III, (E)

Packing group (ADR) : III

Class (ADR) : 8 - Corrosive substances

Hazard identification number (Kemler No.) : 80

Classification code (ADR) : C2

Danger labels (ADR) : 8 - Corrosive substances

#### Transport by sea

UN-No. (IMDG) : 2967

Class (IMDG) : 8 - Corrosive substances

EmS-No. (1) : F-A

EmS-No. (2) : S-B

#### Air transport

UN-No.(IATA) : 2967

Class (IATA) : 8 - Corrosives

Packing group (IATA) : III - Minor Danger

### SECTION 15: Regulatory information

#### US Federal regulations

**SwellLCM Activator** Listed on the United States TSCA (Toxic Substances Control Act) inventory

Sara 311/312 Hazard Category: Immediate acute health hazard

WHMIS Classification Class E - Corrosive Material

#### EU-Regulations

No additional information available

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### SECTION 16: Other information

Indication of changes : 04/22/2014

Other information : Classification according to Regulation (EC) No. 1272/2008 [CLP]

#### GHS Full Text Phrases:

Full text of H-phrases: see section 16:

H319	eye irritation 2	Aquatic Acute 2 Hazardous to the aquatic environment — AcuteHazard, Category 2
H335	skin irritation 2	Eye Dam. 1 Serious eye damage/eye irritation, Category 1
H412	Aquatic Chronic 3	Skin Corr. 1C Skin corrosion/irritation, Category 1C
		H314 Causes severe skin burns and eye damage
		H318 Causes serious eye damage
		H401 Toxic to aquatic life

**NFPA health hazard** : : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

**NFPA fire hazard** : : 0 - Materials will not burn

**NFPA reactivity** : : 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.



#### HMIS III Rating

**Health** : : 3 Serious Hazard - Major injury likely unless prompt action is taken

**Flammability** : : 0 Minimal Hazard

**Physical** : : 0 Slight Hazard

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

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