CLAY-OUT 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date: 6/2/2026 Version: 1.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : CLAY-OUT 1
Product code : 1394

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Spotter
Restrictions on use : For professional use only

1.4. Supplier's details

Christeyns North America, LLC
311 Staton Road
Greenville, NC 27834
USA
T 252-756-8616 / 800.869.6171
info@christeyns.us - www.christeyns.com

1.5. Emergency phone number

Emergency number : VELOCITY EHS (800) 255-3924 (24 HOURS)
(For use only in the event of emergencies involving a spill, leak, fire, exposure, or accident involving chemicals)

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Acute toxicity (oral), Category 4	H302	Harmful if swallowed.
Skin corrosion/irritation, Category 1A	H314	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation, Category 1	H318	Causes serious eye damage.

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) : H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
Precautionary statements (GHS US) : P260 - Do not breathe fumes, mists, vapors, or spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P280 - Wear protective gloves, protective clothing, eye protection, and face protection.

P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - If inhaled: Remove person to fresh air and keep 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.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P363 - Take off immediately all contaminated clothing and wash it before reuse.
P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Sulfuric acid	CAS-No.: 7664-93-9	5 - 10
Ammonium bifluoride	CAS-No.: 1341-49-7	1 - 5
Citric acid	CAS-No.: 77-92-9	1 - 5

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 after inhalation : Remove person to fresh air and keep comfortable for breathing. Treat symptomatically. Get medical attention immediately.

First-aid measures after skin contact : Remove contaminated clothing and wash before reuse. Rinse skin with plenty of water for at least 15 minutes. If exposed to small amounts, get medical attention if symptoms occur or irritation persists. If exposed to large amounts, get medical attention immediately.

First-aid measures after eye contact : Rinse immediately with water for 15 minutes, occasionally lifting upper and lower eyelids. Remove contact lenses, if present, and easy to do. Continue rinsing. Get medical attention immediately.

First-aid measures after ingestion : Rinse mouth with water if the person is conscious. Do not induce vomiting unless directed by medical personnel. Get medical attention immediately.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/injuries after skin contact : Highly corrosive to skin. Causes severe burns.

Symptoms/injuries after eye contact : Liquid and vapor corrosive to eyes; will cause permanent damage if not rinsed promptly.

Symptoms/injuries after ingestion : Harmful if swallowed. Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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 : Do not use a water jet as this can spread the fire and may cause the splattering of corrosive liquid.

5.2. Specific hazards arising from the chemical

Fire hazard : Decomposition products may include carbon oxides.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. In case of fire, do not breathe fumes. Move containers from the fire area if you can do so without risk. Prevent firefighting water from entering the environment.
Protection during firefighting : Wear a self-contained breathing apparatus. Do not attempt to take action without suitable protective equipment.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment : For spills or leaks, contact a supervisor and/or emergency responder. Avoid contact with spilled material and keep unnecessary personnel away.

For emergency responders

Protective equipment : See Section 8 for recommended personal protective equipment. Ventilate the area and restrict access to the spill or leak zone. Have emergency procedures in place for treating exposures or incidents. Only trained and authorized personnel equipped with proper protective equipment should perform cleanup.

Environmental precautions : Avoid release onto the ground, into storm sewers, or bodies of water.

6.2. Methods and materials for containment and cleaning up

Methods for cleaning up : Stop leak if safe to do so. Contain spillage, soak up with non-combustile absorbent material (e.g. sand, earth, diatomaceous earth, vermiculite) and collect all waste in suitable, labeled, and closed containers. Dispose according to local legislation (See Section 13).

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Handle in accordance with good industrial hygiene and safety practices. Use only with adequate ventilation. Avoid contact with skin, eyes, and clothing. Use appropriate personal protection equipment (PPE). Wash thoroughly after handling.

7.2. Conditions for safe storage, including incompatibilities

Storage conditions : Store upright in a tightly closed, suitably labeled container. Store in a dry, cool, well-ventilated area with appropriate designated containment measures. Keep out of reach of children. Have readily available spill kits with appropriate absorbent materials. Protect from sunlight. Store in original labeled containers.

Incompatible products : Keep away from strong acids, strong bases, flammables/combustibles, oxidizers, and reactive metals (aluminum, zinc, magnesium, iron filings).

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Sulfuric acid (7664-93-9)	
USA - ACGIH® - Threshold Limit Values	
Local name	Sulfuric acid
ACGIH® TLV® TWA	0.2 mg/m³ (T - Thoracic particulate matter)
Remark (ACGIH®)	TLV® Basis: Mucostasis; Pulm func. Notations: A2 (Suspected Human Carcinogen)
Regulatory reference	ACGIH 2025
USA - OSHA - Occupational Exposure Limits	
Local name	Sulfuric acid
OSHA PEL TWA	1 mg/m³
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - NIOSH - Occupational Exposure Limits	
Local name	Sulfuric acid
NIOSH REL 10h TWA	1 mg/m³
Regulatory reference (US-NIOSH)	OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG))

Ammonium bifluoride (1341-49-7)	
USA - ACGIH® - Threshold Limit Values	
ACGIH® TLV® TWA	2.5 mg/m³
USA - OSHA - Occupational Exposure Limits	
OSHA PEL TWA	2.5 mg/m³
USA - IDLH - Occupational Exposure Limits	
IDLH	250 mg/m³
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA)	2.5 mg/m³

8.2. Appropriate engineering controls

Appropriate engineering controls : Maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable guidelines, use only with adequate ventilation. Eye wash facilities and emergency showers must be available when handling this product.

8.3. Individual protection measures, such as personal protective equipment

Materials for protective clothing:
Wear suitable protective clothing. Long sleeved protective clothing.

Hand protection:
Chemical resistant PVC gloves

Eye protection:
Safety glasses with face shield

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Color	:	Black
Odor	:	Odorless
Odor threshold	:	No data available
pH	:	1 – 2
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	> 200 °F
Flammability (solid, gas)	:	No data available
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	9.07 lb/gal
Solubility	:	No data available
Log Pow	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Explosion limits	:	No data available
Particle characteristics	:	No data available

Sulfuric acid	
Particle characteristics	No data available

Ammonium bifluoride	
Particle characteristics	No data available

Citric acid	
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

Corrosive product. Reacts with materials of opposite pH; may release heat or hydrogen gas. Contact with metals (e.g, aluminum, zinc, tin) may release hydrogen gas.

10.2. Chemical stability

Stable under recommended storage and handling conditions. Avoid contamination or exposure to extreme temperatures.

10.3. Possibility of hazardous reactions

Mixing with incompatible materials (acids/bases or oxidizers) may cause exothermic reactions or gas release.

10.4. Conditions to avoid

Avoid contact with incompatible materials, heat, and direct sunlight. Avoid mixing with other cleaning products.

10.5. Incompatible materials

Incompatible with strong acids/bases, oxidizing agents, metals (aluminum, zinc, tin), organic materials, hypochlorites, and ammonia.

10.6. Hazardous decomposition products

Thermal decomposition may release corrosive and/or toxic fumes. Contact with metals can release hydrogen gas.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Sulfuric acid (7664-93-9)	
LD50 oral rat	2140 mg/kg Source: ECHA
LC50 Inhalation - Rat	0.375 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Ammonium bifluoride (1341-49-7)	
LD50 oral rat	130 mg/kg Source: NITE

Citric acid (77-92-9)	
LD50 oral rat	3000 mg/kg Source: OECD Screening Information Data Set
LD50 oral	5400 mg/kg body weight Animal: mouse, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 4500 - 6400
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation : Causes severe skin burns.
pH: 1 – 2

Serious eye damage/irritation : Causes serious eye damage.
pH: 1 – 2

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Sulfuric acid (7664-93-9)	
IARC group	1 - Carcinogenic to humans
National Toxicology Program (NTP) Status	Known Human Carcinogens

Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified

Citric acid (77-92-9)	
LOAEL (oral,rat,90 days)	8000 mg/kg body weight Animal: rat
NOAEL (oral,rat,90 days)	4000 mg/kg body weight Animal: rat

Aspiration hazard : Not classified

CLAY-OUT 1	
Viscosity, kinematic	No data available

Sulfuric acid (7664-93-9)	
Viscosity, kinematic	11.413 mm²/s

Ammonium bifluoride (1341-49-7)	
Viscosity, kinematic	No data available

Citric acid (77-92-9)	
Viscosity, kinematic	No data available

Symptoms/injuries after skin contact : Highly corrosive to skin. Causes severe burns.
Symptoms/injuries after eye contact : Liquid and vapor corrosive to eyes; will cause permanent damage if not rinsed promptly.
Symptoms/injuries after ingestion : Harmful if swallowed. Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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

Sulfuric acid (7664-93-9)	
LC50 - Fish [1]	16 – 28 mg/l Source: ECHA, NCIS
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
NOEC (chronic)	0.15 mg/l Test organisms (species): other:
NOEC chronic fish	0.31 mg/l Test organisms (species): Salvelinus fontinalis Duration: '213 d'

Ammonium bifluoride (1341-49-7)	
LC50 - Fish [1]	422 mg/l Source: ECHA
NOEC chronic fish	1.2 mg/l Test organisms (species): Oncorhynchus gorbuscha Duration: '61 d'

Citric acid (77-92-9)	
LC50 - Fish [1]	48 mg/l Source: ECOTOX
EC50 - Other aquatic organisms [1]	> 50 mg/l Test organisms (species): other aquatic crustacea:

12.2. Persistence and degradability

CLAY-OUT 1	
Persistence and degradability	Not rapidly degradable

Sulfuric acid (7664-93-9)	
Persistence and degradability	Rapidly degradable.

Ammonium bifluoride (1341-49-7)	
Persistence and degradability	Not rapidly degradable

Citric acid (77-92-9)	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

Sulfuric acid (7664-93-9)	
Log Pow	-2.2 Source: HSDB

Citric acid (77-92-9)	
Log Pow	-1.7 Source: ICSC

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13 Disposal considerations

Regional legislation (waste) : Avoid unauthorized disposal. Do not dump into any body of water. Comply with federal, state/provincial and local laws/regulations. Do not reuse empty containers.

Waste treatment methods : Do not allow the product to contaminate any body of water. Refer to Section 8 for personal protection equipment.

SECTION 14 Transport information

In accordance with DOT

DOT
14.1. UN number
UN1760
14.2. Proper Shipping Name
Corrosive liquids, n.o.s. (contains Sulfuric acid)
Transport document description
UN1760 Corrosive liquids, n.o.s. (contains Sulfuric acid), 8, II
14.3. Transport hazard class(es)
8


DOT
14.4. Packing group
II
14.5. Environmental hazards
Dangerous for the environment: No
No supplementary information available

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

UN-No. (DOT) : UN1760
DOT Packaging Exceptions (49 CFR 173.xxx) : 154
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 242

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.		
Sulfuric acid	CAS-No. 7664-93-9	5 - 10%

Sulfuric acid (7664-93-9)	
CERCLA RQ	1000 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb

Ammonium bifluoride (1341-49-7)	
CERCLA RQ	100 lb

15.2. International regulations

No additional information available

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
Sulfuric acid(7664-93-9)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
Ammonium bifluoride(1341-49-7)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16 Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date : 6/2/2026

Full text of hazard classes and H-statements	
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

Safety Data Sheet (SDS), USA ML

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.