

## Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.16.2020

Page 1 of 17

Revision date: 05.20.2020

### Aluminate HD

#### SECTION 1: Identification

##### Product identifier

**Product name:** Aluminate HD

**Product code:** QW-8100

##### Recommended use of the product and restriction on use

**Relevant identified uses:** Aluminum Brightener - Heavy Duty Acid Cleaner

**Uses advised against:** Not determined or not applicable.

**Reasons why uses advised against:** Not determined or not applicable.

##### Manufacturer or supplier details

###### Manufacturer:

###### United States

Quest Car Care Products

3333 Production Ct.

Zeeland, Michigan 49464

616-772-5100

www.questcarcare.com

##### Emergency telephone number:

###### United States

CHEMTREC

1-800-424-9300 (24 hrs)

1-800-262-8200 (24 hrs)

1-703-527-3887 (24 hrs (international))

#### SECTION 2: Hazard(s) identification

##### GHS classification:

Skin corrosion, category 1A

Serious eye damage, category 1

Corrosive to metals, category 1

Acute toxicity (oral), category 2

Acute toxicity (dermal), category 2

Acute toxicity (inhalation), category 2

Carcinogenicity, category 1A

##### Label elements

###### Hazard pictograms:



# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.16.2020

Page 2 of 17

Revision date: 05.20.2020

## Aluminate HD

**Signal word:** Danger

**Hazard statements:**

- H290 May be corrosive to metals
- H314 Causes severe skin burns and eye damage
- H318 Causes serious eye damage
- H300 Fatal if swallowed
- H310 Fatal in contact with skin
- H330 Fatal if inhaled
- H350 May cause cancer (inhalation)

**Precautionary statements:**

- P260 Do not breathe dust/fume/gas/mist/vapors/spray
- P264 Wash hands/skin thoroughly after contact with or handling.
- P280 Wear protective gloves/protective clothing/eye protection/face protection
- P234 Keep only in original container
- P270 Do not eat, drink or smoke when using this product
- P262 Do not get in eyes, on skin, or on clothing
- P271 Use only outdoors or in a well-ventilated area
- P284 [In case of inadequate ventilation] Wear appropriate respiratory protection
- P201 Obtain special instructions before use
- P202 Do not handle until all safety precautions have been read and understood
- 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
- P363 Wash contaminated clothing before reuse
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- P310 Immediately call a POISON CENTER/911/PHYSICIAN IF: swallowed, eye contact, skin burns/rash or breathing difficulties.
- P321 Specific treatment (see first aid procedures on the product label in section 4 of this SDS)
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P390 Absorb spillage to prevent material-damage
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/911 and follow first aid procedures on this SDS.
- P330 Rinse mouth
- P302+P352 IF ON SKIN: WASH WITH PLENTY OF SOAP AND WATER.
- P361+P364 Take off immediately all contaminated clothing and wash it before reuse
- P320 Specific treatment is urgent (see first aid procedures on the label or section 4 of this SDS)
- P308+P313 IF exposed or concerned: Get medical advice/attention
- P405 Store locked up
- P406 Store in corrosive resistant/or heavy duty plastic container using a chemical resistant inner liner.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed
- P501 Dispose of contents/container in accordance with local, state and federal regulations.

**Hazards not otherwise classified:** None

## SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
----------------	------	----------

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.16.2020

Page 3 of 17

Revision date: 05.20.2020

## Aluminate HD

CAS number: 7664-93-9	Sulfuric acid	30-40
CAS number: 111-76-2	2-Butoxyethanol	1-5
CAS number: 7664-39-3	Hydrogen fluoride	5-10
CAS number: Proprietary	Alcohols, branched and linear, ethoxylated	1-5

**Additional Information:** None

## SECTION 4: First aid measures

### Description of first aid measures

#### General notes:

Show this Safety Data Sheet to the doctor in attendance.

Show this Safety Data Sheet to the doctor in attendance. This product is toxic by one or more routes of exposure (inhalation, ingestion, skin contact). Take precautions to ensure your own safety before attempting rescue. Wear appropriate safety eyewear, gloves, protective clothing and respiratory protection to prevent exposure. See Section 8 of this SDS for personal protective equipment recommendations. Do not use the mouth to mouth method if victim has ingested or inhaled the product. Give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper device.

#### After inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention.

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If symptoms develop or persist, seek medical advice/attention.

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. Seek medical advice/attention.

Treatment is urgent. Seek emergency medical treatment. If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration.

#### After skin contact:

Treatment is urgent. Seek emergency medical treatment. Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse.

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention.

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. Seek medical advice/attention.

Treatment is urgent. Call a poison center and seek emergency medical treatment. Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder or

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.16.2020

Page 4 of 17

Revision date: 05.20.2020

## Aluminate HD

destroy contaminated clothing.

### After eye contact:

Immediately rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. Seek immediate medical attention, preferably from an ophthalmologist.

Rinse eyes with plenty of water for several minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention.

Immediately rinse eyes with plenty of water for several minutes. Remove contact lenses, if present and easy to do so. Protect unexposed eye. Seek medical advice/attention.

Immediately rinse eyes with plenty of water for several minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. Seek medical advice/attention.

### After swallowing:

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. Seek immediate medical attention.

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. If symptoms develop or persist, seek medical advice/attention.

Treatment is urgent. Seek emergency medical treatment. If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs.

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. Seek medical advice/attention.

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

### Acute symptoms and effects:

Exposure to skin may result in redness, pain, burning, inflammation and tissue damage. Exposure to eyes may result in irritation, redness, pain, inflammation, itching, burning, tearing, corneal damage and loss of vision. Exposure via inhalation may result in cough, sore throat, burning sensation and shortness of breath. Exposure via ingestion may result in burns of the mouth and throat, abdominal pain, burning sensation in the throat and chest, nausea, vomiting, shock or collapse.

Eye contact may result in irritation, redness, pain, inflammation, itching, burning, tearing, corneal damage and loss of vision.

Products that are corrosive to metals are often corrosive to the skin, eyes and the respiratory tract.

Acute oral exposure may lead to depression of the central nervous system. Symptoms include dizziness, drowsiness, headache, breathing difficulties, nausea, vomiting, abdominal pain, and lowering of consciousness. Exposure far above any stated OELs may result in respiratory depression, unconsciousness and death. Adverse effects are dependent on exposure (dose, concentration, contact time).

Acute dermal exposure may lead to depression of the central nervous system. Symptoms include dizziness, drowsiness, headache, breathing difficulties, nausea, vomiting, abdominal pain, and lowering of consciousness. Exposure far above any stated OELs may result in respiratory depression, unconsciousness and death. Adverse effects are dependent on exposure (dose, concentration, contact

## Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.16.2020

Page 5 of 17

Revision date: 05.20.2020

### Aluminate HD

time).

Acute inhalation exposure may lead to depression of the central nervous system. Symptoms include dizziness, drowsiness, headache, breathing difficulties, nausea, vomiting, abdominal pain, and lowering of consciousness. Exposure far above any stated OELs may result in respiratory depression, unconsciousness and death. Adverse effects are dependent on exposure (dose, concentration, contact time).

#### Delayed symptoms and effects:

Effects are dependent on exposure (dose, concentration, contact time).

Symptoms of exposure may be delayed.

Exposure may cause cancer.

#### Immediate medical attention and special treatment

##### Specific treatment:

In case of eye contact, seek prompt medical attention while rinsing is continued.

Exposure to this product via ingestion requires emergency medical treatment.

Exposure to this product via skin contact or dermal absorption requires emergency medical treatment.

Exposure to this product via inhalation contact requires emergency medical treatment.

##### Notes for the doctor:

Treat symptomatically.

### SECTION 5: Firefighting measures

#### Extinguishing media

##### Suitable extinguishing media:

Water mist/fog, carbon dioxide, dry chemical or alcohol resistant foam.

##### Unsuitable extinguishing media:

Do not use water jet.

#### Specific hazards during fire-fighting:

Thermal decomposition may produce irritating/toxic fumes/gases.

Contact with metals may evolve flammable hydrogen gas. Thermal decomposition may produce irritating/toxic fumes/gases.

#### Special protective equipment for firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA with a full-face piece operated in positive pressure mode).

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

#### Special precautions:

Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts.

Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers.

Avoid unnecessary run-off of extinguishing media which may cause pollution.

DO NOT GET WATER INSIDE CONTAINERS. Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

### SECTION 6: Accidental release measures

#### Personal precautions, protective equipment and emergency procedures:

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.16.2020

Page 6 of 17

Revision date: 05.20.2020

## Aluminate HD

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Avoid contact with skin, eyes and clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling.

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Avoid contact with skin, eyes and clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling.

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Do not get on skin, eyes or on clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling. Remove contaminated clothing with proper techniques in order to prevent contact with skin or eyes. Place contaminated clothing in a sealed container for future disposal.

Evacuate unnecessary personnel and prevent entry. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Do not get on skin, eyes or on clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling. Remove contaminated clothing with proper techniques in order to prevent contact with skin or eyes. Place contaminated clothing in a sealed container for future disposal.

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Do not get on skin, eyes or on clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling. Remove contaminated clothing and launder before reuse.

### Environmental precautions:

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

### Methods and material for containment and cleaning up:

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable corrosive resistant containers for future disposal. Do not get water in containers as reaction with water or moist air may release toxic, corrosive or flammable gases. Dispose of in accordance with all applicable regulations (see Section 13).

Fatal if swallowed. Do not touch mouth or face with contaminated gloves or clothing. Do not ingest. Avoid breathing dust, mist, fumes, vapors or spray. Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Fatal in contact with skin. Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Avoid breathing dust, mist, fumes, vapors or spray. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Fatal if inhaled. Put on appropriate personal protective equipment, including a self-contained breathing apparatus (see Section 8) before entering area of spill or leak. Avoid breathing dust, mist, fumes, vapors or spray. Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Avoid breathing dust, mist, fumes, vapors or spray. Stop leak if you can do it without risk. Contain

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.16.2020

Page 7 of 17

Revision date: 05.20.2020

## Aluminate HD

and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

### Reference to other sections:

For personal protective equipment see Section 8. For disposal see Section 13.

## SECTION 7: Handling and storage

### Precautions for safe handling:

Use appropriate personal protective equipment (see Section 8). Prevent skin contact. Do not get in eyes. Use only with adequate ventilation. Do not add water to the corrosive product. If it is necessary to mix a corrosive product with water, do so slowly adding the corrosive to cold water, in small amounts, and stir frequently. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use. Keep only in original packaging. Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Do not get in eyes. Avoid contact with skin and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Fatal if swallowed. Do not handle material unless wearing appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Prevent contact with skin, eyes and clothing. Handle with caution. Do not handle broken or punctured containers. Immediately report spills, leaks or problems with hazard control measures. Wash thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Fatal in contact with skin. Do not handle material unless wearing appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Prevent contact with skin, eyes and clothing. Handle with caution. Do not handle broken or punctured containers. Immediately report spills, leaks or problems with hazard control measures. Wash thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Fatal if inhaled. Do not handle material unless wearing appropriate personal protective equipment, including respiratory protection (see Section 8). Use only with adequate ventilation. Do not breathe mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Open container slowly to prevent dispersal of material into the air. Prevent contact with skin, eyes and clothing. Handle with caution. Do not handle broken or punctured containers. Immediately report spills, leaks or problems with hazard control measures. Wash thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

### Conditions for safe storage, including any incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight and away from exit paths. Store in a corrosion-resistant container with a resistant inner liner. Inspect containers and storage area regularly for signs of leak and damage. Store containers at a convenient height for handling, below eye level if possible. High shelving increases the risk of dropping containers, personal injury and exposure. Ensure that appropriate fire fighting and spill-clean up equipment is readily available. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other

## Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.16.2020

Page 8 of 17

Revision date: 05.20.2020

### Aluminate HD

sources of ignition. Store separately. Keep container tightly sealed. Store away from incompatible materials (See Section 10).

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages.

Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10).

Store in cool, dry, well-ventilated location out of direct sunlight and away from exit paths. Inspect containers and storage area regularly for signs of leak and damage. Store containers at a convenient height for handling, below eye level if possible. High shelving increases the risk of dropping containers, personal injury and exposure. Ensure that appropriate fire fighting and spill-clean up equipment is readily available. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Store separately. Keep container tightly sealed. Store away from incompatible materials (See Section 10).

### SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

#### Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Sulfuric acid	7664-93-9	8-Hour TWA: 0.2 mg/m <sup>3</sup>
	2-Butoxyethanol	111-76-2	8-Hour TWA: 20 ppm
	Hydrogen fluoride	7664-39-3	8-Hour TWA: 0.5 ppm
	Hydrogen fluoride	7664-39-3	Ceiling Limit: 2 ppm
NIOSH	Sulfuric acid	7664-93-9	REL: 1 mg/m <sup>3</sup>
	Sulfuric acid	7664-93-9	IDLH: 15 mg/m <sup>3</sup>
	2-Butoxyethanol	111-76-2	IDLH: 700 ppm
	2-Butoxyethanol	111-76-2	TWA: 5 ppm (REL (for up to a 10 hour work day))
	2-Butoxyethanol	111-76-2	TWA: 24 mg/m <sup>3</sup> (REL (for up to a 10 hour work day))
	Hydrogen fluoride	7664-39-3	REL: 3 ppm (10 Hours)
	Hydrogen fluoride	7664-39-3	REL: 2.5 mg/m <sup>3</sup> (10 Hours)
	Hydrogen fluoride	7664-39-3	Ceiling Limit: 6 ppm (15 minutes)
	Hydrogen fluoride	7664-39-3	Ceiling Limit: 5 mg/m <sup>3</sup> (15 minutes)
	Hydrogen fluoride	7664-39-3	IDLH: 30 ppm
OSHA	Sulfuric acid	7664-93-9	TWA: 1 mg/m <sup>3</sup>
	2-Butoxyethanol	111-76-2	8-Hour TWA-PEL: 25 ppm
	2-Butoxyethanol	111-76-2	8-Hour TWA-PEL: 240 mg/m <sup>3</sup>
	Hydrogen fluoride	7664-39-3	TWA: 3 ppm
	Hydrogen fluoride	7664-39-3	STEL: 6 ppm
United States(California)	2-Butoxyethanol	111-76-2	8-Hour TWA-PEL: 20 ppm (OSHA (California))
	2-Butoxyethanol	111-76-2	8-Hour TWA-PEL: 97 mg/m <sup>3</sup> (OSHA (California))

#### Biological limit values:



# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.16.2020

Page 9 of 17

Revision date: 05.20.2020

## Aluminate HD

Country (Legal Basis)	Substance	Identifier	Determinant	Specimen	Sampling time	Permissible limits
ACGIH	2-Butoxyethanol	111-76-2	Butoxyacetic acid (BAA) in urine (with hydrolysis) - (creatinine)	Creatinine in Urine	End of shift	200 mg/g

### Information on monitoring procedures:

Not determined or not applicable.

### Appropriate engineering controls:

Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Contact with material may cause severe injury or death. Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

### Personal protection equipment

#### Eye and face protection:

Use safety glasses with side shields or goggles. Consider the use of a face shield for splash protection.

Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Use safety glasses with side shields or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Contact with material may cause severe injury or death. Use safety glasses with side shields or goggles.

Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Safety glasses or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

#### Skin and body protection:

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Full body protection should be worn. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.16.2020

Page 10 of 17

Revision date: 05.20.2020

## Aluminate HD

contaminated clothing. Full body protection should be worn. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Skin contact with material may cause severe injury or death. Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Full body protection should be worn. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

### Respiratory protection:

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn.

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn.

Inhalation of material may cause severe injury or death. If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

### General hygienic measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

Appearance	Orange
------------	--------

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.16.2020

Page 11 of 17

Revision date: 05.20.2020

## Aluminate HD

Odor	Sharp-Pungent / Acrid
Odor threshold	Not determined or not available.
pH	<1.0
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	>93 c
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	Not determined or not available.
Relative density	1.30-1.35
Solubilities	Water
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

### Other information

#### SECTION 10: Stability and reactivity

##### Reactivity:

Not reactive under recommended handling and storage conditions.

##### Chemical stability:

Stable under recommended handling and storage conditions.

##### Possibility of hazardous reactions:

Hazardous reactions are not anticipated under recommended conditions of handling and storage.

##### Conditions to avoid:

Avoid generation of aerosols and mists, extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

Avoid confined spaces, extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

##### Incompatible materials:

None known.

##### Hazardous decomposition products:

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

#### SECTION 11: Toxicological information

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.16.2020

Page 12 of 17

Revision date: 05.20.2020

## Aluminate HD

### Acute toxicity

#### Assessment:

Fatal if swallowed.  
Fatal in contact with skin.  
Fatal if inhaled.

**Product data:** No data available.

#### Substance data:

Name	Route	Result
Sulfuric acid	inhalation	LC50 Rat: 510 mg/m <sup>3</sup> (2 hr)
	oral	LD50 Rat: 2140 mg/kg
2-Butoxyethanol	oral	LD50 Rat: 470 mg/kg
	dermal	LD50 Rabbit: 220 mg/kg
	inhalation	LC50 Rat: 450 ppmV (4H)
Alcohols, branched and linear, ethoxylated	oral	LD50 Rat: 1378 mg/kg
	dermal	LD50 Rat: > 2000 mg/kg

### Skin corrosion/irritation

#### Assessment:

Causes severe skin burns and eye damage.

#### Product data:

No data available.

#### Substance data:

Name	Result
Sulfuric acid	Causes severe skin burns.
2-Butoxyethanol	Causes skin irritation
Hydrogen fluoride	Causes severe skin burns and eye damage.

### Serious eye damage/irritation

#### Assessment:

Causes serious eye damage.

#### Product data:

No data available.

#### Substance data:

Name	Result
Sulfuric acid	Causes serious eye damage.
2-Butoxyethanol	Causes serious eye irritation
Alcohols, branched and linear, ethoxylated	Causes serious eye damage.

### Respiratory or skin sensitization

**Assessment:** Based on available data, the classification criteria are not met.

#### Product data:

No data available.

**Substance data:** No data available.

### Carcinogenicity

#### Assessment:

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.16.2020

Page 13 of 17

Revision date: 05.20.2020

## Aluminate HD

May cause cancer.

**Product data:** No data available.

**Substance data:**

Name	Species	Result
Sulfuric acid		Strong inorganic acid mists, containing sulfuric acid, are classified as IARC - Group 1 (Carcinogen to humans).
		Strong inorganic acid mists, containing sulfuric acid, are classified as NTP - K (Known human carcinogens).

**International Agency for Research on Cancer (IARC):**

Name	Classification
2-Butoxyethanol	Group 3
Alcohols, branched and linear, ethoxylated	Not Applicable

**National Toxicology Program (NTP):**

Name	Classification
Alcohols, branched and linear, ethoxylated	Not Applicable

**OSHA Carcinogens:** Not applicable

**Germ cell mutagenicity**

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:**

No data available.

**Substance data:** No data available.

**Reproductive toxicity**

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:**

No data available.

**Substance data:** No data available.

**Specific target organ toxicity (single exposure)**

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:**

No data available.

**Substance data:** No data available.

**Specific target organ toxicity (repeated exposure)**

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:**

No data available.

**Substance data:**

Name	Result
Sulfuric acid	Repeated or prolonged inhalation may damage the lungs. Risk of tooth erosion upon repeated or prolonged exposure to an aerosol of this substance.

**Aspiration toxicity**

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.16.2020

Page 14 of 17

Revision date: 05.20.2020

## Aluminate HD

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:**

No data available.

**Substance data:** No data available.

**Information on likely routes of exposure:**

No data available.

**Symptoms related to the physical, chemical and toxicological characteristics:**

No data available.

**Other information:**

No data available.

## SECTION 12: Ecological information

### Acute (short-term) toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:**

Name	Result
2-Butoxyethanol	EC50 Daphnia magna (Water flea): 1,550 mg/L (48 h)
Alcohols, branched and linear, ethoxylated	LC50 Oncorhynchus mykiss: 5 mg/L (96 hr)
	EC50 Daphnia magna: 2.5 mg/L (48 hr)
	ErC50 Selenastrum capricornutum: 1.4 mg/L (96 hr)

### Chronic (long-term) toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:**

Name	Result
2-Butoxyethanol	NOEC Brachydanio rerio: 100 mg/L (21 Days)

### Persistence and degradability

**Product data:** No data available.

**Substance data:**

Name	Result
2-Butoxyethanol	Readily biodegradable.
Alcohols, branched and linear, ethoxylated	Readily biodegradable (72% degradation after 28 days).

### Bioaccumulative potential

**Product data:** No data available.

**Substance data:**

Name	Result
Hydrogen fluoride	Fluoride accumulates in aquatic organisms predominantly in the exoskeleton of crustacea and in the skeleton of fish; no accumulation was reported for edible tissue.
Alcohols, branched and linear, ethoxylated	Not expected to bioaccumulate (BCF: 237 L/kg).

### Mobility in soil

**Product data:** No data available.

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.16.2020

Page 15 of 17

Revision date: 05.20.2020

## Aluminate HD

### Substance data:

Name	Result
Alcohols, branched and linear, ethoxylated	Moderately mobile (log Koc: 1.575 - 2.365).

### Results of PBT and vPvB assessment

#### Product data:

**PBT assessment:** This product does not contain any substances that are assessed to be a PBT..

**vPvB assessment:** This product does not contain any substances that are assessed to be a vPvB..

#### Substance data:

##### PBT assessment:

Sulfuric acid	Substance is not PBT.
2-Butoxyethanol	This substance is not PBT.
Hydrogen fluoride	PBT assessment does not apply to inorganic substances.
Alcohols, branched and linear, ethoxylated	The substance is not PBT.

##### vPvB assessment:

Sulfuric acid	Substance is not vPvB.
2-Butoxyethanol	This substance is not vPvB.
Hydrogen fluoride	vPvB assessment does not apply to inorganic substances.
Alcohols, branched and linear, ethoxylated	The substance is not vPvB.

**Other adverse effects:** No data available.

## SECTION 13: Disposal considerations

### Disposal methods:

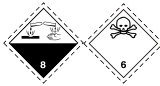
It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

### Contaminated packages:

Not determined or not applicable.

## SECTION 14: Transport information

### United States Transportation of dangerous goods (49 CFR DOT)

UN number	2922
UN proper shipping name	Corrosive Liquids, Toxic, N.O.S. (Sulfuric Acid, Hydrofluoric Acid)
UN transport hazard class(es)	8 (6.1) 
Packing group	II
Environmental hazards	None
Special precautions for user	None

### International Maritime Dangerous Goods (IMDG)

UN number	2922
UN proper shipping name	Corrosive Liquids, Toxic, N.O.S. (Sulfuric Acid, Hydrofluoric Acid)

# Safety Data Sheet


According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.16.2020

Page 16 of 17

Revision date: 05.20.2020

**Aluminate HD**

<b>UN transport hazard class(es)</b>	8 (6.1)	
<b>Packing group</b>	II	
<b>Environmental hazards</b>	None	
<b>Special precautions for user</b>	None	

**International Air Transport Association Dangerous Goods Regulations (IATA-DGR)**

<b>UN number</b>	Not regulated
<b>UN proper shipping name</b>	Not regulated
<b>UN transport hazard class(es)</b>	None
<b>Packing group</b>	None
<b>Environmental hazards</b>	None
<b>Special precautions for user</b>	None

**SECTION 15: Regulatory information**

**United States regulations**

**Inventory listing (TSCA):**

7664-93-9	Sulfuric acid	Listed
111-76-2	2-Butoxyethanol	Listed
7664-39-3	Hydrogen fluoride	Listed
Proprietary	Alcohols, branched and linear, ethoxylated	Listed

**Significant New Use Rule (TSCA Section 5):** None of the ingredients are listed.

**Export notification under TSCA Section 12(b):** None of the ingredients are listed.

**SARA Section 302 extremely hazardous substances:**

7664-93-9	Sulfuric acid	Listed
7664-39-3	Hydrogen fluoride	Listed

**SARA Section 313 toxic chemicals:**

7664-93-9	Sulfuric acid	Listed
111-76-2	2-Butoxyethanol	Not Listed
7664-39-3	Hydrogen fluoride	Listed
Proprietary	Alcohols, branched and linear, ethoxylated	Not Listed

**CERCLA:**

7664-93-9	Sulfuric acid	Listed	1000 Lbs
7664-39-3	Hydrogen fluoride	Listed	100 Lbs

**RCRA:**

7664-39-3	Hydrogen fluoride	Listed	U134
-----------	-------------------	--------	------

**Section 112(r) of the Clean Air Act (CAA):** None of the ingredients are listed.

**Massachusetts Right to Know:**

7664-93-9	Sulfuric acid	Listed
-----------	---------------	--------



# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.16.2020

Page 17 of 17

Revision date: 05.20.2020

## Aluminate HD

111-76-2	2-Butoxyethanol	Listed
7664-39-3	Hydrogen fluoride	Listed
Proprietary	Alcohols, branched and linear, ethoxylated	Not Listed

### New Jersey Right to Know:

7664-93-9	Sulfuric acid	Listed
111-76-2	2-Butoxyethanol	Listed
7664-39-3	Hydrogen fluoride	Listed
Proprietary	Alcohols, branched and linear, ethoxylated	Not Listed


### New York Right to Know:

7664-93-9	Sulfuric acid	Listed
111-76-2	2-Butoxyethanol	Listed
7664-39-3	Hydrogen fluoride	Listed
Proprietary	Alcohols, branched and linear, ethoxylated	Not Listed

### Pennsylvania Right to Know:

7664-93-9	Sulfuric acid	Listed
111-76-2	2-Butoxyethanol	Listed
7664-39-3	Hydrogen fluoride	Listed
Proprietary	Alcohols, branched and linear, ethoxylated	Not Listed

### California Proposition 65:

 **WARNING:** This product can expose you to Sulfuric acid; which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## SECTION 16: Other information

**Abbreviations and Acronyms:** None

### Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

**NFPA:** 0-0-0

**HMIS:** 3-0-2-j

**Initial preparation date:** 04.16.2020

**Revision date:** 05.20.2020

**End of Safety Data Sheet**