



BEGIN MSDS USA50543

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

United States Aluminate Co.
1120 Middle River Rd.
Baltimore, MD 21220

Emergency Telephone Number:
CHEMTREC 800-424-9300
Chemical emergency 24 hours a day
Technical Information:
800-882-3883

SUBSTANCE: SODIUM ALUMINATE, SOLUTION

TRADE NAMES/SYNONYMS:
USALCO-38; USALCO 45; LIQUID SODIUM ALUMINATE; UN 1819; Al₂Na₂O₄; USA50543

CHEMICAL FAMILY: inorganic, salt

PRODUCT USE: water treatment, phosphorus removal, alumina source for catalyst, pigments and coatings

CREATION DATE: Nov 03 1997
REVISION DATE: Dec 08 2005

2. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: SODIUM ALUMINATE, SOLUTION
CAS NUMBER: 11138-49-1
EC NUMBER (EINECS): 234-391-6
PERCENTAGE: 100

3. HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=3 FIRE=0 REACTIVITY=1

EMERGENCY OVERVIEW:
COLOR: amber
PHYSICAL FORM: liquid
ODOR: odorless
MAJOR HEALTH HAZARDS: respiratory tract burns, skin burns, eye burns, mucous membrane burns

POTENTIAL HEALTH EFFECTS:
INHALATION:
SHORT TERM EXPOSURE: burns
LONG TERM EXPOSURE: burns
SKIN CONTACT:
SHORT TERM EXPOSURE: burns
LONG TERM EXPOSURE: burns
EYE CONTACT:

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SHORT TERM EXPOSURE: burns
LONG TERM EXPOSURE: burns
INGESTION:
SHORT TERM EXPOSURE: burns
LONG TERM EXPOSURE: burns

CARCINOGEN STATUS:
OSHA: No
NTP: No
IARC: No

4. FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

SKIN CONTACT: Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get immediate medical attention. Thoroughly clean and dry contaminated clothing and shoes before reuse. Destroy contaminated shoes.

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

INGESTION: If swallowed, drink plenty of water, do NOT induce vomiting. Get immediate medical attention.

NOTE TO PHYSICIAN: For inhalation, consider oxygen. Avoid gastric lavage or emesis.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Negligible fire hazard.

EXTINGUISHING MEDIA: regular dry chemical, carbon dioxide, water, regular foam

Large fires: Use regular foam or flood with fine water spray.

FIRE FIGHTING: Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Use extinguishing agents appropriate for surrounding fire. Do not get water directly on material. Large fires: Flood with fine water spray. Reduce vapors with water spray. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

SENSITIVITY TO MECHANICAL IMPACT: Not sensitive

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SENSITIVITY TO STATIC DISCHARGE: Not sensitive

FLASH POINT: not flammable

HAZARDOUS COMBUSTION PRODUCTS:

Thermal decomposition products or combustion: miscellaneous decomposition products

6. ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE:

Do not touch spilled material. Stop leak if possible without personal risk. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Small dry spills: Move containers away from spill to a safe area. Large spills: Dike for later disposal. Keep unnecessary people away, isolate hazard area and deny entry.

7. HANDLING AND STORAGE

STORAGE: Store in a cool, dry place and in tightly sealed containers. Keep separated from incompatible substances.

Sodium aluminate solution is a suspended solids solution of alumina in sodium hydroxide. Under normal conditions, the solution is completely stable, however, there are several factors that may cause the material to precipitate. Do not let the material come into contact with moisture, dust or dirt. Avoid constant agitation or recirculation and do not put it under pressure. Any of the above actions may introduce contaminants to the solution which may cause precipitation.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:

SODIUM ALUMINATE, SOLUTION:

ALUMINUM OXIDE (ALUMINA):

- 5 mg/m³ OSHA TWA (respirable dust fraction)
- 15 mg/m³ OSHA TWA (total dust)
- 10 mg/m³ OSHA TWA (total particulate) (vacated by 58 FR 35338, June 30, 1993)
- 10 mg/m³ ACGIH TWA
- 1.5 mg/m³ DFG MAK (respirable fraction) (peak limitation category - II, with excursion factor of 8) (fume)
- 0.25 fibers/cc AGS TRK (fibrous forms)
- 10 mg/m³ UK WEL TWA (total inhalable dust)
- 4 mg/m³ UK WEL TWA (respirable dust)

MEASUREMENT METHOD: Particulate filter; Gravimetric; NIOSH IV # 0500, Nuisance Dust (total), # 0600 (respirable)

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VENTILATION: Provide local exhaust or process enclosure ventilation system.
Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles with a faceshield.
Provide an emergency eye wash fountain and quick drench shower in the
immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: While not normally required, respiratory protection may be
required under conditions where extensive misting or fuming may occur due to
insufficient or improper engineering controls.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: liquid
COLOR: amber
ODOR: odorless
MOLECULAR WEIGHT: 81.97
MOLECULAR FORMULA: Na₂-Al₂-O₄
BOILING POINT: 241 F (116 C)
MELTING POINT: 3002-3272 F (1650-1800 C)
VAPOR PRESSURE: Not available
VAPOR DENSITY: Not available
SPECIFIC GRAVITY (water=1): >1.50 @ 49 C
WATER SOLUBILITY: soluble
PH: 14.0
VOLATILITY: Not available
ODOR THRESHOLD: Not available
EVAPORATION RATE: Not available
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available
SOLVENT SOLUBILITY:
Insoluble: alcohol

10. STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: None reported.

INCOMPATIBILITIES: acids

SODIUM ALUMINATE, SOLUTION:
ACIDS: May react violently with strong acids.

HAZARDOUS DECOMPOSITION:



Thermal decomposition products or combustion: miscellaneous decomposition products

POLYMERIZATION: Will not polymerize.

11. TOXICOLOGICAL INFORMATION

SODIUM ALUMINATE, SOLUTION:

LOCAL EFFECTS:

Corrosive: inhalation, skin, eye, ingestion

HEALTH EFFECTS:

INHALATION:

SODIUM ALUMINATE, SOLUTION: See information on corrosive substances.

ACUTE EXPOSURE:

CORROSIVE SUBSTANCES: May cause severe irritation of the respiratory tract with coughing, choking, pain and possibly burns of the mucous membranes. In some cases, pulmonary edema may develop, either immediately or more often within a period of 5-72 hours. The symptoms may include tightness in the chest, dyspnea, frothy sputum, cyanosis, and dizziness. Physical findings may include moist rales, low blood pressure and high pulse pressure. Severe cases may be fatal.

CHRONIC EXPOSURE:

CORROSIVE SUBSTANCES: Depending on the concentration and duration of exposure, repeated or prolonged exposure may cause inflammatory and ulcerative changes in the mouth and possibly bronchial and gastrointestinal disturbances.

SKIN CONTACT:

SODIUM ALUMINATE, SOLUTION: See information on corrosive substances.

ACUTE EXPOSURE:

CORROSIVE SUBSTANCES: Direct contact may cause severe irritation, pain, and possibly burns.

CHRONIC EXPOSURE:

CORROSIVE SUBSTANCES: Effects depend on concentration and duration of exposure. Repeated or prolonged contact may result in dermatitis or effects similar to acute exposure.

EYE CONTACT:

SODIUM ALUMINATE, SOLUTION: See information on corrosive substances.

ACUTE EXPOSURE:

CORROSIVE SUBSTANCES: Direct contact may cause severe irritation, pain and burns, possibly severe. The degree of injury depends on the concentration and duration of contact. The full extent of the injury may not be immediately apparent.

CHRONIC EXPOSURE:



CORROSIVE SUBSTANCES: Effects depend on concentration and duration of exposure. Repeated or prolonged contact may result in conjunctivitis or effects as in acute exposure.

INGESTION:

SODIUM ALUMINATE, SOLUTION: See information on corrosive substances.

ACUTE EXPOSURE:

CORROSIVE SUBSTANCES: May cause immediate pain and severe burns of the mucous membranes. There may be discoloration of the tissues. Swallowing and speech may be difficult at first and then almost impossible. The effects on the esophagus and gastrointestinal tract may range from irritation to severe corrosion. Edema of the epiglottis and shock may occur.

CHRONIC EXPOSURE:

CORROSIVE SUBSTANCES: Depending on the concentration, repeated ingestion may cause effects as with acute ingestion.

12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

FISH TOXICITY: 5000-40000 ug/L 216 hour(s) ZERO (Mortality) Chinook salmon (Oncorhynchus tshawytscha)

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D002.

14. TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101:

PROPER SHIPPING NAME: Sodium aluminate, solution
ID NUMBER: UN1819
HAZARD CLASS OR DIVISION: 8
PACKING GROUP: II
LABELING REQUIREMENTS: 8

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:

SHIPPING NAME: Sodium aluminate solution
UN NUMBER: UN1819
CLASS: 8
PACKING GROUP/RISK GROUP: II

LAND TRANSPORT ADR:

PROPER SHIPPING NAME: Sodium aluminate solution
UN NUMBER: UN1819

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Product #: 167736 Name: SOD ALUMINATE 38% Desc:
From: BRENNTAG MID-SOUTH INC. To: Wednesday, September 14, 2011



CLASS: 8
CLASSIFICATION CODE: C5
PACKING GROUP: II
LABELS: 8

LAND TRANSPORT RID:
PROPER SHIPPING NAME: Sodium aluminate solution
UN NUMBER: UN1819
CLASS: 8
CLASSIFICATION CODE: C5
PACKING GROUP: II
LABELS: 8

ATR TRANSPORT IATA:
PROPER SHIPPING NAME: Sodium aluminate solution
UN/ID NUMBER: UN1819
CLASS OR DIVISION: 8
HAZARD LABELS: 8
PACKING GROUP: II

ATR TRANSPORT ICAO:
PROPER SHIPPING NAME: Sodium aluminate solution
UN NUMBER: UN1819
CLASS OR DIVISION: 8
LABELS: 8
UN PACKING GROUP: II

MARITIME TRANSPORT IMDG:
PROPER SHIPPING NAME: Sodium aluminate solution
UN NUMBER: UN1819
CLASS OR DIVISION: 8
PACKING GROUP: II

15. REGULATORY INFORMATION

U.S. REGULATIONS:
CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4): Not regulated.
SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30):
Not regulated.
SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.40):
Not regulated.
SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):
ACUTE: Yes
CHRONIC: No
FIRE: No
REACTIVE: No
SUDDEN RELEASE: No
SARA TITLE III SECTION 313 (40 CFR 372.65): Not regulated.

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OSHA PROCESS SAFETY (29CFR1910.119): Not regulated.

STATE REGULATIONS:

California Proposition 65: Not regulated.

CANADIAN REGULATIONS:

CONTROLLED PRODUCTS REGULATIONS (CPR): This product has been classified in accordance with the criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

WHMIS CLASSIFICATION: E.

EUROPEAN REGULATIONS:

EC CLASSIFICATION (CALCULATED):
C Corrosive

DANGER/HAZARD SYMBOL:

C Corrosive

EC RISK AND SAFETY PHRASES:

- R 34 Causes burns.
- S 2 Keep out of the reach of children.
- S 20 When using do not eat or drink.
- S 24 Avoid contact with skin.
- S 25 Avoid contact with eyes.
- S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S 27 Take off immediately all contaminated clothing.
- S 39 Wear eye/face protection.
- S 46 If swallowed, seek medical advice immediately and show this container or label.

NATIONAL INVENTORY STATUS:

U.S. INVENTORY (TSCA): Not listed on inventory.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CANADA INVENTORY (DSL/NDSL): Listed on DSL.

16. OTHER INFORMATION

MSDS SUMMARY OF CHANGES

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION
3. HAZARDS IDENTIFICATION
4. FIRST AID MEASURES
5. FIRE FIGHTING MEASURES
6. ACCIDENTAL RELEASE MEASURES
10. STABILITY AND REACTIVITY
11. TOXICOLOGICAL INFORMATION
14. TRANSPORT INFORMATION

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