SIEMENS

Siemens Industry, Inc.
Water Technologies Business Unit

Material Safety Data Sheet

SECTION 1 – CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: AE 25 Plus

Chemical Family: Alkaline Earth Hydroxide /Inorganic Salt Solution

Manufacturer's Name: Siemens Industry, Inc. - Water Technologies Business Unit
Address: 2650 Tallevast Road, Sarasota, FL 34243
Product/Technical Information Phone Number: 1.941.355.2971
Medical/Handling Emergency Phone Number: CHEMTREC 1.800.424.9300
24 hours a day
Transportation Emergency Phone Number: CHEMTREC 1.800.424.9300
24 hours a day

Issue Date: April 2010
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SECTION 2 – COMPOSITION INFORMATION

Chemical Name	Percent by Weight	CAS#
Calcium Hydroxide	15 - 30	1305-62-0
Proprietary Component	0.1 - 5	
Silica, Crystalline	<2	14808-60-7
Inert Substances	<4	
Water	Balance	7732-18-5

SECTION 3 – HAZARDS IDENTIFICATION
Appearance & Odor: Milky white, odorless liquid.

Emergency Overview: This material is an irritant and may burn the skin and eyes. Spills of this material will make the floor slippery. Do not allow this material to evaporate to dryness because the residue contains small quantities of crystalline silica, a respiratory cancer hazard if airborne.

Fire & Explosion Hazards: This material is not flammable.

Primary Route(s) of Exposure: Skin and eye contact, ingestion, and mist inhalation.

Inhalation – Acute Effects: Spray, mist, or dust may irritate respiratory tract. Excessive concentrations or prolonged exposure may damage respiratory tract.

Skin Contact – Acute Effects: This product may irritate the skin and prolonged contact may cause dermatitis.

Eye Contact – Acute Effects: This product may irritate the eyes and prolonged contact may permanently damage the eyes.

Ingestion – Acute Effects: Ingestion may cause burning and irritation to the mouth, throat, and other tissues of the digestive tract. Ingestion of large amounts may be fatal.

SECTION 4 – FIRST AID MEASURES

Inhalation First Aid: Remove affected person to fresh air. Give artificial respiration ONLY if breathing has stopped. Obtain medical attention if individual shows symptoms of exposure.

Skin Contact First Aid: Immediately remove clothing from affected area and wash skin with flowing water for 15 minutes. Clothing must be washed before reuse. Obtain medical attention if irritation occurs.

Eye Contact First Aid: Immediately irrigate eyes with flowing water for 15-20 minutes while holding eye lids open. Contacts should be removed before or during flushing. Obtain immediate medical attention.

Ingestion First Aid: If victim is alert and not convulsing rinse mouth with water and give water to drink. DO NOT induce vomiting. If spontaneous vomiting occurs, have affected person lean forward with head down to maintain an open breathing passage. Obtain medical attention immediately.

Medical Conditions Aggravated: Skin disorders may be aggravated by over-exposure to this product. Inhalation of product mists may aggravate respiratory conditions.

Note to Physician: Treat symptomatically.

SECTION 5 – FIRE FIGHTING MEASURES

Flash Point/Method: Not applicable.

Auto Ignition Temperature: Not applicable.

Upper/Lower Explosion Limits: Not applicable.

Extinguishing Media: Use extinguishing media suitable for surrounding fire. Use water spray to keep fire-exposed containers cool.

Fire Fighting Procedures: As with any fire, fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Use water spray to keep fire-exposed containers cool.

Fire & Explosion Hazards: This product becomes a fire or explosion hazard if allowed to dry. May support combustion at high temperatures or if the liquid is allowed to evaporate. Contact with acids may generate enough heat to ignite nearby combustible materials. Contact with metals such as aluminum, tin, or zinc will generate heat and liberate flammable hydrogen gas.

Hazardous Products of Decomposition and/or Combustion: Decomposition may produce gaseous nitrogen and sodium oxides, ammonia, or metallic oxides. If allowed to evaporate, the residual material may explode when heated to over 1000˚ F. If this product evaporates to dryness, the residue will contain small quantities of crystalline silica, when respirable is classified by IARC as a Group I carcinogen.

NFPA Ratings: HEALTH - 1 FLAMMABILITY - 0 REACTIVITY - 0

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Wear appropriate personal protective equipment (see Section 8). Stop leak if safe to do so without risk. Ventilate area. If safe to do so absorb spill with inert materials (dry sand or earth). Do not clean up with compressed air. Do not use organic materials. Store collected materials in plastic or non-aluminum metal containers. Residue on surfaces may be washed with water.

If this material evaporates to dryness, minimize dust generation during clean up and prevent bulk release to sewers or waterways. Residual amounts of material can be flushed with large amounts of water. Equipment can be washed with either a mild vinegar and water solution or detergent and water.

All disposal methods must be in compliance with all Federal, State, Local and Provincial laws, and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

SECTION 7 – HANDLING AND STORAGE

Handling: Keep in plastic or non-aluminum metal containers. Protect containers from physical damage. Avoid direct skin contact with the material. Wash thoroughly after handling, immediately remove and dispose of any spillage. Immediately rinse contaminated clothing thoroughly with water. Rinse containers with water only.

Storage: Store at ambient temperatures apart from combustible and other readily oxidizable materials, food, beverages, and excessive heat. Do not store near acids or other incompatible materials. Do not store or ship in aluminum containers.

White particulates may settle out after extended storage times. In this event, re-suspend the particulates before use by agitating the material.

SECTION 8 –PERSONAL PROTECTION/ EXPOSURE CONTROL

Respiratory Protection: None required under normal use conditions. If use conditions generate mists, wear a NIOSH approved respirator with ammonia gas cartridges.

Skin Protection: Wear protective gloves and other protective clothing as appropriate to prevent skin contact.

Eye Protection: Wear safety glasses with side shields under normal use conditions. Wear chemical goggles if splashing is likely.

Ventilation Protection: General exhaust ventilation is usually adequate under normal operating conditions. However, if use conditions generate mists or sprays, use local exhaust ventilation.

Other Protection: Recommend means of washing the eyes with a gentle flow of cool to tepid water be readily available in all areas where this material is handled or stored. Water should be supplied through insulated and heat-traced lines to prevent freeze-ups in cold weather. Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees on the safe use and handling of this product.

Exposure Limits: No occupational exposure limits have been established for this product.

However, for calcium hydroxide and crystalline silica, two components of this product:

Component	OSHA PEL (8 hr)	ACGIH TLV (8 hr)
Calcium Hydroxide	5	5
Crystalline Silica	10 mg/m3 /(%SiO2+2)	0.025 mg/m3

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES
Appearance & Odor: Milky white, odorless liquid.

Boiling Point: > 212 °F (100 °C) **pH:** 12.4

Specific Gravity: 1.10 – 1.25

SECTION 10 – STABILITY AND REACTIVITY
Stability: Stable

Incompatibilities: This material should not be mixed or stored with the following materials due to the potential for vigorous reaction and release of heat: acids, reactive fluorinated or brominated compounds, powdered metals, reactive metals such as aluminum, tin, and zinc, acid anhydrides, nitro-organic compounds, reactive phosphorous compounds, and halogenated compounds.

Hazardous Polymerization: Will not occur.

Hazardous Decomposition Products: If this material evaporates to dryness, the residue will contain small quantities of crystalline silica, when respirable is classified by IARC as a Group I carcinogen.

Conditions to Avoid: Avoid evaporation to dryness. If allowed to dry, product residue is incompatible with flammable organic materials, reducing agents, and chlorine or hypochlorite products. Additionally, dried product residue may liberate respirable crystalline silica which is classified by IARC as a Group I carcinogen.

SECTION 11 – TOXICOLOGICAL INFORMATION
Toxicological Data: No data are available for the finished product. However, for two components of this product:

Proprietary Component: Oral LD 50 (rat) = 1267 mg / kg.

Oral LD50 (man) = 114 mg/kg

Calcium Hydroxide (solid): Oral LD 50 (rat) = 7340 mg / kg

Eye contact (rabbit) = severe irritation at 500 mg dose for 24 hr

Carcinogenicity/Mutagenicity: No carcinogenic or mutagenic properties of this product are known. However, crystalline silica, a minor component of this product, is classified by IARC as a Group I carcinogen when respirable.

Reproductive Effects: No reproductive effects of this product are known.

Neurotoxicity: No neurotoxic effects of this product are known.

Other Effects: None known.

SECTION 12 – ECOLOGICAL INFORMATION

Toxicological Data: This product may raise the pH if released into the environment and may be harmful to terrestrial or aquatic life.

For a derivative component of this product:

Fish LC 50 (96 hr) > 100 mg / L

SECTION 13 – DISPOSAL CONSIDERATIONS

Contains no hazardous substances as listed in 40 CFR 302
Material that cannot be used, or reprocessed for use, and empty containers should be disposed of in accordance with all applicable regulations. Product containers should be thoroughly emptied before disposal. Generators of waste material are required to evaluate all waste for compliance with RCRA and any local disposal procedures and regulations. NOTE: State and local regulations may be more stringent than federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Domestic Transportation: This material is not a hazardous material for transportation purposes and is not regulated by US DOT when shipped domestically.

International Transportation: This material is not a dangerous good for transportation purposes and is not regulated when shipped according to ICAO, IATA, or IMDG requirements.

SECTION 15 – REGULATORY INFORMATION

OSHA Hazard Communication: Health hazard

OSHA Process Safety Management: no

U.S. Federal Regulations:
SARA 302/304 Emergency Planning And Notification: Not listed.
SARA 311/312 Hazardous Chemicals
Acute: Yes
Chronic: No
Fire: No
Reactive: No
Pressure Release: No

SARA 313 – Not Listed

Clean Air Act 112 Accidental Release Prevention: Not listed.

State Regulations
California Proposition 65: Crystalline silica, a trace component of this product, is listed.

SECTION 16 – OTHER INFORMATION

Disclaimer: The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the user thereof. It is the buyer's responsibility to ensure that its activities comply with federal, state, provincial, and local laws.

Revision Indicator: Legal Entity name change 04/01/11