

CAX5

MATERIAL SAFETY DATA SHEET

Product Name: ClorAm-X™ (liquid & powder)

Manufacturer: AquaScience Research Group, Inc.
1100 Gentry Street
North Kansas City, MO 64116

Distributor(s) *List available upon request*

Emergency Telephone Numbers: 816/842-5936
816/891-6671

Effective Date: 05/08/96 (revised 07/11/01)

SECTION I: PRODUCT IDENTIFICATION:

Synonyms: (1) formaldehyde sodium bisulfite;
(2) sodium formaldehydebisulfite;
(3) methylolsulfonic acid sodium salt

Chemical Family: reducing agent

SECTION II: PRODUCT COMPOSITION:

Formula CAS No.: water (present in liquid product only): 7732-18-5
sodium hydroxymethanesulfonate: 870-72-4

Molecular Weight: dry (pure): 134.09; solution: not applicable

Hazardous Ingredients: none

Other Ingredients: none

Chemical Formula: dry (pure): $\text{HOCH}_2\text{SO}_3\text{Na}$

MATERIAL SAFETY DATA SHEET

SECTION III: PHYSICAL PROPERTIES:

Boiling Range:	greater than 100°C (>212°F)
Specific Gravity:	1.1476 (for liquid product only)
Vapor Pressure at 20°C (in mm of Hg):	not determined
Vapor Density (air = 1):	not determined
Solubility in Water:	100% miscible
Evaporation Rate (n-butanol = 1):	not determined
% Volatiles:	approximately 78% (by weight for liquid product only)
Appearance and Odor:	liquid product: odorless, colorless liquid dry (pure): white powder with a mild (slight) odor

SECTION IV: FIRE AND EXPLOSION DATA:

Lower Flammability Limits (% in air):	not flammable
Flash Point (and methods):	not flammable
Flammability Classification:	none

MATERIAL SAFETY DATA SHEET

Recommended

Extinguishing

Media: none required

Special Fire Fighting

Procedures: no special procedures required

Unusual Fire/

Explosion Hazards: none

SECTION V:

HEALTH

INFORMATION:

Threshold Limit

Value: liquid product: non-toxic (by acute oral mammalian toxicity tests) at 5,000 mg/Kg

Effects of

Overexposure: no reported inhalation danger; prolonged exposure to the skin may result in a rash

Emergency First Aid

Procedures: Eye contact: Flush with water for at least 15 minutes
Skin contact: Wash exposed areas with soap and water. If irritation occurs, get medical attention.
Inhalation: Not an inhalation hazard.
Ingestion: Treat symptomatically. For sour or salty taste give sweetened drink.

CALIFORNIA

WARNING: This product not known to contain any detectable amounts of any chemical or chemicals known to the State of California to cause cancer/birth defects or other reproductive harm.

MATERIAL SAFETY DATA SHEET

SECTION VI: REACTIVITY DATA:

Stability: stable

Conditions to Avoid: none

Incompatibility : inactivated by strong oxidizing substances (e.g. chlorine bleaches, permanganates, free iodine) and strong acids and bases (e.g. hydrochloric acid, sodium hydroxide)

**Hazardous
Decomposition
Products:**

fully evaporated liquid product and dry (pure) powder may produce sulfur dioxide under conditions of exposure to fire

**Hazardous
Polymerization:**

will not occur

SECTION VII: FIRE AND SPILL/LEAK PROCEDURES:

In Case of Fire: no special extinguishing media nor equipment are needed

**In Case of Spill or
Accidental Release
or Leak:**

spills and accidental release may be rinsed to sanitary sewers

**Waste Disposal
Procedures:**

dispose of per local, state and federal regulations for non-hazardous household chemicals

MATERIAL SAFETY DATA SHEET

SECTION VIII: SPECIAL PROTECTION INFORMATION:

Respiratory Protection: non-specific (general) dust protection when handling the powder.

Local Exhaust: none required

Protective Gloves: none required

Eye Protection: none required

Other Protective Equipment: none required

SECTION IX: ADDITIONAL PRECAUTIONS:

(1) persons with pre-existing skin disorders or eye irritations should avoid contact with eyes and skin

(2) keep container upright and tightly closed when not in use

(3) do not add any other materials to the container (including unused material originally removed from the container)

SECTION X: TRANSPORTATION:

D.O.T. Hazard Classification: none

D.O.T. Label/Placards: none required

UN or NA Number: none

MATERIAL SAFETY DATA SHEET

Reportable Quantity: none

Shipping Description: for powder: "Cleaning compound", #59370, supplement NMF100C, Class 55
for solutions (liquid): "Saline solution", #59370, supplement NMF100C, Class 55

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PRODUCT: Calcium chloride**PRODUCT INFORMATION:**

Product Identifier:	Calcium chloride	
	Calcium chloride pellets	
Chemical Name:	Calcium chloride	
Synonym(s):	Calcium chloride high test fines; calcium chloride high test powder; calcium chloride 77%; Ice Melt	
Chemical Family:	Inorganic salt	
Molecular Formula:	CaCl ₂	
Product Use:	Industrial uses; drilling mud additives; workover fluids; completion fluids; ice melt; refrigeration.	
Supplier/Manufacturer:	Address:	Emergency Tel:
Panther Industries Inc.	255 Robin Crescent, Saskatoon, SK S7L 6M8	(306) 664-2522

TDG/WHMIS INFORMATION:

Shipping Name: Not a dangerous good

PIN:	Class:	Group:	WHMIS:
-	-	-	D2B

MAIN/HAZARDOUS INGREDIENTS:

Ingredients:	Weight %	CAS #
Calcium chloride	77-94	10043-52-4
Sodium chloride	1-2	7647-14-5
Potassium chloride	2-3	7447-40-7
Strontium chloride	1	10476-85-4

PHYSICAL DATA:

State:	Solid
Odour and Appearance:	White odourless solid pellets
Odour Threshold:	Not applicable
Molecular Weight:	110.99

Boiling Point:	>1600°C
Freeze/Melting Point:	772°C
Specific Gravity (water=1):	2.15
Bulk Density:	Data not available
Vapour Density (air=1):	Not applicable
Vapour Pressure:	0.009 mm Hg at 20°C
Evaporation Rate:	Data not available (Close to 0)
% Volatiles by Volume:	0
pH:	>7 for an aqueous solution
Solubility in Water:	745g/L at 20°C
Water/Oil Distribution Coefficient:	Data not available

FIRE AND EXPLOSION DATA:

Conditions of Flammability

Non-flammable

Explosion Hazards

Only explosive when mixed with Furan 2-peroxycarboxylic acid

Flash Point and its Method of Determination

Not applicable

Auto-ignition Temperature

Not applicable

Upper Flammable Limit (% by vol)

Not applicable

Lower Flammable Limit (% by vol)

Not applicable

Hazardous Combustion Products

None

Means of Extinction

Product does not burn. Use appropriate extinguishing media for material that is supplying the fuel to the fire.

Special Fire Fighting Procedures

No special procedure required.

REACTIVITY DATA:

Stability

Very stable

Incompatibility

Incompatible with sulphuric acid, water-reactive materials such as sodium, methyl vinyl ether, and zinc as in galvanized iron.

Reactions

With sulphuric acid, yields hydrogen chloride gas. With water-reactive materials, causes an exothermic reaction. With methyl vinyl ether, starts runaway polymerization reaction. With zinc, yields explosive hydrogen gas.

Polymerization

Will not occur

HEALTH HAZARD DATA:

Inhalation

Dust or mist inhalation may irritate nose, throat, and lungs.

Skin Contact/Absorption

May cause skin irritation. Under conditions of prolonged contact or when moisture is present, superficial burns may result. Contact with abraded skin or cuts can cause severe necrosis.

Eye Contact

May irritate or burn eyes causing corneal injury which may heal slowly.

Ingestion

May irritate gastrointestinal tract or cause ulcerations.

Chronic/Acute Effects

Overexposure to calcium chloride may cause stomach disturbances.

Exposure Limits

Nuisance particulate level of 10 mg/m³

Irritancy

Mild irritant.

Carcinogenicity

Not considered to be carcinogenic by NTP, IARC, OSHA.

Reproductive Toxicity and Teratogenicity

Data not available

Sensitization

Data not available

Mutagenicity

Data not available

Synergistic Materials

Data not available

Animal Toxicity Data

LD₅₀(oral, rat) = 1400 mg/kg (anhydrous calcium chloride)

LD₅₀(oral, mouse) = 1940 mg/kg (anhydrous calcium chloride)

LD₅₀(dermal, rabbit) > 5000 mg/kg (anhydrous calcium chloride)

LD₅₀(intravenous, rat) = 123 mg/kg (strontium)

PREVENTATIVE MEASURES:

Respiratory Protection

NIOSH-approved respirator for dust should be worn, if needed.

Skin Protection

Impervious gloves, body suits, boots, and other resistant protective clothing (rubber or PVC). Wash contaminated clothing with soap and water and dry before reuse.

Eye/Face Protection

Chemical goggles or safety glasses are to be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.

Special Handling Procedures

Use sensible industrial hygiene and housekeeping practises. Wash thoroughly after handling. Avoid situations that could lead to harmful exposure.

Storage Requirements

Store in a cool, dry, well-ventilated place. Keep container tightly closed, and away from incompatible materials. Prolonged storage may cause product to cake and become wet.

Engineering Controls

Use general or local mechanical exhaust ventilation to control dust and to meet TLV requirements.

FIRST AID MEASURES:

Inhalation

Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek immediate medical attention.

Skin Contact

Remove contaminated clothing. Wash affected area thoroughly with soap and water. Seek medical attention if irritation persists.

Eye Contact

Flush immediately with water for at least 20 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. Seek immediate medical attention.

Ingestion

Give large amounts of water. Do not give anything by mouth to an unconscious or convulsing person. Immediately phone your local poison control center. Vomiting may need to be induced under the direction of medical personnel.

Other Information

None

ENVIRONMENTAL PROTECTION DATA:
