1. Product & Company Identification

Product Name: Activator Concentrate
Item Number(s): ACTCON
Relevant Identified Use:
Restrictions On Use: **For Industrial Use Only**
Manufacturer: Applied Chemistries, Inc.
270 Main St. Unit D
Agawam, MA 01001

For Emergencies Involving A Spill, Leak, Fire, Exposure or Accident, Contact:	
Applied Chemistries, Inc.	(877-847-6236)

2. Hazard(s) Identification

Hazard Classification		**Hazard Statements**	**Hazard Category**
H360	Reproductive toxicity (chapter 3.7)	May damage fertility or the unborn child	1A, 1B
H314	Skin corrosion/irritation (chapter 3.2)	Causes severe skin burns and eye damage	1
H318	Serious eye damage/eye irritation (chapter 3.3)	Causes serious eye damage	1
H317	Sensitization, skin (chapter 3.4)	May cause an allergic skin reaction	1

Signal Word: **Danger**

Hazard Pictograms:

Classification system:

There are no other hazards not otherwise classified that have been identified.

0 percent of the mixture consists of component(s) of unknown toxicity

Hazard-determining components of labelling:

2-(2-aminoethylamino)ethanol

Precautionary Statements:

P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P272	Contaminated work clothing should not be allowed out of the workplace.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P303+P361+P353	IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].
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/physician.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P363	Wash contaminated clothing before reuse.
P333+P313	IF SKIN irritation or rash occurs: Get medical advice/attention.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P405	Store locked up.
P501	Dispose of contents/container to local/regional regulations.

Additional information:

Restricted to professional users

NFPA ratings (scale 0 - 4)

Health = 3
Fire = 0
Reactivity = 0

HMIS ratings (scale 0 - 4)

Health = *3
Fire = 0
Reactivity = 0

* - Indicated a long term health hazard from repeated or prolonged exposures

HMIS Long Term Health Hazard Substances		
2-(2-aminoethylamino)ethanol	**CAS #:**	111-41-1

3. Composition/Information on Ingredients

Chemical Characterization: Mixture

Chemical Name		CAS #	Concentration
Sodium sulphite		7757-83-7	2.5-10%
2-(2-aminoethylamino)ethanol		111-41-1	≤ 2.5%
Sodium hydroxide		1310-73-2	≤ 0.5%
Potassium hydroxide		1310-58-3	≤ 2.5%

Additional information:

For the ingredients listed, the identity and exact percentages are being withheld as a trade secret

4. First Aid Measures

General information: Immediately remove any clothing soiled by the product. Take affected persons out into fresh air.

After Inhalation: Remove victim to fresh air. Seek medical attention if respiratory irritation or distress occurs.

After Skin Contact: Immediately rinse with water. If irritation occurs, seek medical attention. Seek immediate medical help for blistering or open wounds.

After Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Protect unharmed eye from exposure. Continue rinsing. Immediately call a poison center or doctor/physician.

After Swallowing: Do NOT induce vomiting. Rinse mouth and drink plenty of water. Call a POISON CENTER or doctor/physician for help immediately.

Most important symptoms and effects, both acute and delayed:

Breathing difficulty
Coughing
Allergic reactions
Strong caustic effect on skin and mucous membranes
May cause gastro-intestinal irritation if ingested
Nausea in case of ingestion.

Hazards

Danger of impaired breathing
Danger of gastric perforation
Causes serious eye damage
Suspected of damaging fertility or the unborn child

Indication of any immediate medical attention and special treatment needed

Medical supervision for at least 48 hours
If necessary oxygen respiration treatment
Contains 2-(2-aminoethylamino)ethanol, which may produce an allergic reaction.

5. Firefighting Measures

Suitable Extinguishing Media:	Dry chemical, carbon dioxide, foam, water spray. Use fire extinguishing methods suitable to surrounding conditions.
Specific Firefighting Measures:	N/A
Unusual Fire and Explosion Hazards:	During heating, or in case of fire, poisonous gases are produced.
Special Protective Equipment:	Wear self-contained respiratory protective device. Wear fully protective suit.
Special Precautions:	N/A

6. Accidental Release Measures

Personal Precautions/Protective Equipment:	Use respiratory protective device against the effects of fumes/dusts/aerosols. Wear proper protective equipment to minimize exposure. Keep unprotected persons away. Ensure adequate ventilation. Particular danger of slipping on leaked/spilled product.
Emergency Procedures:	Dispose according to State, Federal & Local regulations.
Methods and material for containment and clean-up	Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste. Send for recovery or disposal in suitable receptacles.
Environmental Precautions:	Do not discharge into the environment. Do not allow to enter sewers/ surface or ground water. Retain and dispose of contaminated wash water.

7. Handling & Storage

Precautions For Safe Handling:	Prevent formation of aerosols. Use only in well ventilated areas. Avoid splashes or spray in enclosed areas. Wear safety glasses and gloves as appropriate to minimize skin contact. Use product only as intended.
Recommended Storage Conditions:	Protect against physical damage. Store in a cool, dry, well ventilated location away from incompatibles. Do not store in unlabeled or mislabeled containers. Provide ventilation for receptacles. Avoid storage near extreme heat, ignition sources, or open flame. Do not store together with acids.
Unsuitable material for receptacles:	Aluminum, steel, glass, or ceramic.

8. Exposure Controls / Personal Protection

Control Parameters

Ingredients with limit values that require monitoring at the workplace

Sodium hydroxide (CAS# 1310-73-2)	
OSHA Permissible Exposure Limits (PELs):	Long-term value: 2mg/m^3
NIOSH Recommended Exposure Limits (RELs):	2mg/m^3
ACGIH Threshold Limit Value (TLVs):	2mg/m^3
Potassium hydroxide (CAS# 1310-58-3)	
OSHA Permissible Exposure Limits (PELs):	Long-term value: 2mg/m^3
NIOSH Recommended Exposure Limits (RELs):	2mg/m^3
ACGIH Threshold Limit Value (TLVs):	2mg/m^3

Exposure controls

General Protective and Hygienic Measures:		The usual precautionary measures are to be ashered to when handling chemicals. Keep away from foodstuffs, beverages, and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Store protective clothing separately. Do not inhale gases/fumes/aerosols. Avoid contact with eyes and skin.
Respiratory Protection:		Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. For large spills, respiratory protection may be advisable.
Personal Protective Equipment:	Gloves:	Protective gloves made from rubber are required. Nitrile rubber, NBR, or neoprene gloves. Selection of gloves depends not only on material, but on the quality, which varies from manufacturer to manufacturer. Exact break through time of has to be found out by the manufacturer and has to be observed. PVA gloves are not suitable.
	Eyes:	Contact lenses should not be worn. Safety glasses are required.
	Body:	Alkaline resistant protective clothing should be worn.

9. Physical & Chemical Properties

Appearance:	Colorless Liquid		Odor:	Amine-like		Odor Threshold:	N/A
pH:	13.0-14.0		Melting Point:	N/A		Freezing Point:	0° C
Initial Boiling Point:		Unknown	Boiling Range:	>100° C		Flash Point:	N/A
Evaporation Rate:		Unknown	Flammability (Solid):	N/A		Flammability (Gas):	N/A
Lower Explosive Limit:		Unknown	Upper Explosive Limit:	Unknown		Vapor Pressure:	17 mmHG
Vapor Density:		Unknown	Relative Density:	1.106 g/cm^3		Solubility:	100%
Log Kow:		Unknown	Auto-Ignition Temp:	Unknown		Decomposition Temp:	Unknown
Viscosity:		Unknown	VOC Content:	N/A			

10. Stability & Reactivity

Reactivity:	Exothermic reaction with acids. Reacts with oxidizing agents. Reacts with fats and oils. Corrosive action on metals. Attacks materials containing glass and silicate. Toxic fumes may be released if heated above the decomposition point.
Chemical Stability:	No decomposition if used and stored according to specifications
Hazardous decomposition products:	Carbon monoxide and carbon dioxide. Sulphur oxides (SOx). Nitrogen oxides (NOx). Ammonia.
Other Information:	No information available.

11. Toxicological Information

Routes of Harmful Exposure:	Eye contact. Skin contact
Delayed, Immediate or Chronic Effects:	Causes severe skin burns and eye damage.
Repeated dose toxicity:	May cause damage to organs through prolonged or repeated exposure. Suspected of damaging fertility or the unborn child. Repeated exposure

may result in skin sensitivity.

Sensitization: Sensitization through skin contact.

Subacute to chronic toxicity: No further information available.

Acute Toxicity Estimates:

LD/LC50 values relevant for classification:

Sodium hydroxide (CAS# 1310-73-2)		
Oral	LD50	2000 mg/kg (rat)
Potassium hydroxide (CAS# 1310-58-3)		
Oral	LD50	273 mg/kg (rat)
2-(2-aminoethylamino)ethanol (CAS# 111-41-1)		
Oral	LD50	3000 mg/kg (rat)
Dermal	LD50	2250 mg/kg (rat)

Additional toxicological information: The product shows the following dangers: Corrosive. Irritant. Danger through skin adsorption. Swallowing will lead to a strong caustic effect on mouth and throat, and to the danger of perforation of esophagus and stomach. Toxic and/or corrosive effects may be delayed up to 24

CMR effects (carcinogenicity, mutagenicity, and toxicity for reproduction): Repr. 1B: Presumed human toxicant based on animal studies. Suspected of damaging fertility or the unborn child.

Known or Suspected Carcinogens: None (NTP, IARC, OSHA)

12. Ecological Information

Aquatic Toxicity Data: No further relevant information available.

Persistence & Degradability: No further relevant information available.

Bioaccumulation Potential: No further relevant information available.

Adsorption or Leaching Concerns: None known

General notes: Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach sewage water or drainage ditch undiluted or unneutralised. Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. If the dilution of the use-level pH-value is considerably reduced, the aqueous waste, emptied into drains, is only low water-dangerous.

Results of PBT and vPvB assessment: Not applicable

Other adverse effects: No further relevant information available.

13. Disposal Considerations

Waste Disposal Recommendations: Dispose according to local/regional regulations. Can be disposed of with household garbage with prior chemical-physical or biological treatment following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

Ecology - Waste Material: Avoid release to the environment.

EPA Hazardous Waste: No

14. Transport Information

US Department of Transportation: **Regulated**

UN Number: UN1760

Proper Shipping Name: Corrosive liquid, n.o.s. (potassium hydroxide, 2-(2-aminoethylamino)ethanol)

Hazard Class: 8

Packing Group: III

Exceptions: § 173.154: For corrosive materials in Packing Group III, inner packagings not over 5.0 L (1.3 gallons) net capacity each for liquids.

15. Regulatory Information

Inventory Status: All components included on TSCA, DSL, EINECS/ELINCS, AICS, MITI, KECL Inventory Lists.

Federal Regulations: All functional components of this product are listed on the TSCA inventory.

16. Other Information

California "Prop 65": This product contains no chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

This information is furnished without warranty, expressed or implied, and is believed to be accurate to the best knowledge of Applied Chemistries, Inc. The data on this SDS relates only to the specific material design herein. Applied Chemistries Inc. assumes no legal responsibility for use or reliance upon this data. This product has been classified according to the hazard criteria of the CPR and this SDS contains all the information required by the CPR.