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SECTION 1: Identification of the substance/mixture and of the company/undertaking

- · 1.1 Product identifier
- · Trade name: SLM-AC Activator
- · Article number: No other identifiers
- 1.2 Relevant identified uses of the substance or mixture and uses advised against No further relevant information available.
- · Application of the substance / the mixture Industrial uses.
- · 1.3 Details of the supplier of the Safety Data Sheet
- · Manufacturer/Supplier:

Mitsubishi Imaging (MPM), Inc. 555 Theodore Fremd Avenue Rye, NY 10580 USA

Phone: (914)925-3200



· 1.4 Emergency telephone number:

ChemTel Inc.

(800)255-3924, +1 (813)248-0585

SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008

Classifications listed also are applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200).

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H360Df.

The following Hazard Statements are applicable only according to OSHA regulations within the United States. These Statements are not applicable for the CLP regulation (1272/2008/EC) in the EU: H360. Repr. 1 H360: May damage fertility or the unborn child



health hazard

Repr. 1B H360Df May damage the unborn child. Suspected of damaging fertility.



corrosion

Met. Corr.1 H290 May be corrosive to metals.

Skin Corr. 1A H314 Causes severe skin burns and eye damage.



Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

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· Classification according to Directive 67/548/EEC or Directive 1999/45/EC

T; Toxic

May cause harm to the unborn child.

C; Corrosive

Causes severe burns. R35:

Xn; Harmful

Possible risk of impaired fertility.

Xi; Irritant

R37: Irritating to respiratory system.

Xi; Sensitising

R43: May cause sensitisation by skin contact.

Contact with acids liberates toxic gas.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

· Additional information:

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

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

· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008

The product is additionally classified and labelled according to the Globally Harmonized System within the United States (GHS).

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms







GHS05 GHS07 GHS08

· Signal word Danger

· Hazard-determining components of labelling:

2-(2-aminoethylamino)ethanol Potassium hydroxide sodium hydroxide

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· Hazard statements

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H30Df.

The following Hazard Statements are applicable only to the general GHS regulations and not the specific CLP regulation: H360.

H360: May damage fertility or the unborn child.

May be corrosive to metals. H290

Causes severe skin burns and eve damage. H314

May cause an allergic skin reaction. H317

H360Df May damage the unborn child. Suspected of damaging fertility.

May cause respiratory irritation.

· Precautionary statements

P261 Avoid breathing mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse

skin with water/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.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

· Additional information:

EUH031 Contact with acids liberates toxic gas.

Restricted to professional users.

Hazard description:

· WHMIS-symbols:

D2A - Very toxic material causing other toxic effects

E - Corrosive material



· NFPA ratings (scale 0 - 4)



Health = 3Fire = 0

Reactivity = 0

· HMIS-ratings (scale 0 - 4)

Fire = 0

*3 Health = *3

REACTIVITY Reactivity = 0

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

· HMIS Long Term Health Hazard Substances

111-41-1 2-(2-aminoethylamino)ethanol

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- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- PBT: Not applicable.vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- · 3.2 Mixtures
- · Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:		
CAS: 7757-83-7 EINECS: 231-821-4	sodium sulphite R31	2,5-10%
CAS: 1310-58-3 EINECS: 215-181-3 Index number: 019-002-00-8	Potassium hydroxide C R35; Xn R22 Skin Corr. 1A, H314 Acute Tox. 4, H302	2,5-10%
CAS: 1310-73-2 EINECS: 215-185-5 Index number: 011-002-00-6	sodium hydroxide C R35 → Met. Corr.1, H290; Skin Corr. 1A, H314	2,5-10%
CAS: 111-41-1 EINECS: 203-867-5 Index number: 603-194-00-0	2-(2-aminoethylamino)ethanol T Repr. Cat. 2, 3 R61; C R34; Xn R62; Xi R43 Repr. 1B, H360Df Skin Corr. 1B, H314 Skin Sens. 1, H317	2,5-10%

· Additional information:

For the listed ingredients, the identity and exact percentages are being withheld as a trade secret. For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

- · 4.1 Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

Take affected persons out into the fresh air.

- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact:

Immediately rinse with water.

If skin irritation continues, consult a doctor.

Seek immediate medical help for blistering or open wounds.

· After eye contact:

Protect unharmed eye.

Remove contact lenses if worn, if possible.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing:

Rinse out mouth and then drink plenty of water.

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Do not induce vomiting; call for medical help immediately.

· 4.2 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.

May cause respiratory irritation.

· Hazards

Danger of impaired breathing.

Danger of gastric perforation.

Causes serious eye damage.

Suspected of damaging fertility or the unborn child.

· 4.3 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. May produce an allergic reaction.

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- · Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- · For safety reasons unsuitable extinguishing agents: None.
- 5.2 Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

- 5.3 Advice for firefighters
- · Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

· Additional information No further relevant information available.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Use respiratory protective device against the effects of fumes/dust/aerosol.

Ensure adequate ventilation

Particular danger of slipping on leaked/spilled product.

- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Send for recovery or disposal in suitable receptacles.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

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See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Prevent formation of aerosols.

Use only in well ventilated areas.

Avoid splashes or spray in enclosed areas.

- · Information about fire and explosion protection: Keep respiratory protective device available.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles:

Unsuitable material for receptacle: aluminium.

Unsuitable material for receptacle: steel.

Unsuitable material for receptacle: glass or ceramic.

Provide ventilation for receptacles.

Avoid storage near extreme heat, ignition sources or open flame.

· Information about storage in one common storage facility:

Store away from foodstuffs.

Do not store together with acids.

- · Further information about storage conditions: Keep container tightly sealed.
- · 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:		
1310-58-3 Potassium hydroxide		
REL (USA)	Ceiling limit: 2 mg/m³	
TLV (USA)	Ceiling limit: 2 mg/m³	
EL (Canada)	Ceiling limit: 2 mg/m³	
EV (Canada)	Ceiling limit: 2 mg/m³	
1310-73-2 sodium hydroxide		
PEL (USA)	Long-term value: 2 mg/m³	
REL (USA)	Ceiling limit: 2 mg/m³	
TLV (USA)	Ceiling limit: 2 mg/m³	
EL (Canada)	Ceiling limit: 2 mg/m³	
EV (Canada)	Ceiling limit: 2 mg/m³	

- **DNELs** No further relevant information available.
- · PNECs No further relevant information available.

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- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

The usual precautionary measures are to be adhered 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 the 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.

· Protection of hands:



Protective gloves

Rubber gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· Material of gloves

Nitrile rubber, NBR

Neoprene gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- · Not suitable are gloves made of the following materials: PVA gloves
- · Eye protection:



Safety glasses

- · Body protection: Alkaline resistant protective clothing
- · Limitation and supervision of exposure into the environment Avoid release to the environment.
- Risk management measures See Section 7 for additional information.

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SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:
Colour:
Odour:
Odour:
Odour threshold:

PH-value at 20 °C (68 °F):
Liquid
Light brown
Amine-like
Not determined.

· Change in condition

Melting point/Melting range: $-4.0 \, ^{\circ}\text{C} \, (25 \, ^{\circ}\text{F})$ Boiling point/Boiling range: $> 100 \, ^{\circ}\text{C} \, (> 212 \, ^{\circ}\text{F})$

Flash point: Not applicable.
 Flammability (solid, gaseous): Not applicable.
 Auto/Self-ignition temperature: Not determined.
 Decomposition temperature: Not determined.

• **Self-igniting:** Product is not self-igniting.

• Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:

Lower: Not determined.
Upper: Not determined.

• Vapour pressure: Not determined.

• **Density at 20 °C (68 °F):** 1,05-1,15 g/cm³ (8,762-9,597 lbs/gal)

Relative density
Vapour density
Evaporation rate
Not determined.
Not determined.
Not determined.

· Solubility in / Miscibility with

water: Fully miscible.Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic: Not determined. **Kinematic:** Not determined.

• 9.2 Other information No further relevant information available.

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SECTION 10: Stability and reactivity

- · 10.1 Reactivity
- 10.2 Chemical stability
- · Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

· 10.3 Possibility of hazardous reactions

Exothermic reaction with acids.

Reacts with oxidising agents.

Reacts with fats and oils.

Corrosive action on metals.

Attacks materials containing glass and silicate.

- · 10.4 Conditions to avoid Avoid acids.
- 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products:

Carbon monoxide and carbon dioxide

Sulphur oxides (SOx)

Nitrogen oxides (NOx)

Ammonia

SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity:

· · · · · · · · · · · · · · · · · · ·		
· LD/LC50 values relevant for classification:		
1310-58-3 Potassium hydroxide		
LD50	273 mg/kg (rat)	
1310-73-2 sodium hydroxide		
LD50	2000 mg/kg (rat)	
111-41-1 2-(2-aminoethylamino)ethanol		
LD50	3000 mg/kg (rat)	
LD50	2250 mg/kg (rat)	
	3 Pot _D50 2 sod _D50 2-(2-	

- · Primary irritant effect:
- · on the skin: Strong caustic effect on skin and mucous membranes.
- · on the eye: Strong caustic effect.
- · Sensitisation: Sensitisation possible through skin contact.
- · Subacute to chronic toxicity: No further relevant information available.
- · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Corrosive

Irritant

Danger through skin adsorption.

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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 hours.

May damage fertility or the unborn child.

· Acute effects (acute toxicity, irritation and corrosivity):

Irritating to respiratory system.

Causes severe skin burns and eye damage.

- · Sensitisation: May cause an allergic skin reaction.
- · Repeated dose toxicity:

May cause damage to organs through prolonged or repeated exposure.

Suspected of damaging fertility or the unborn child.

Repeated exposures may result in skin and/or respiratory sensitivity.

· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):

Repr. 1B

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

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.

- · 12.5 Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- Recommendation

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.

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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.

- · Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

- · 14.1 UN-Number
- · DOT, ADR, IMDG, IATA

UN1719

· 14.2 UN proper shipping name



Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 1 L (0.3 gal).

· DOT, IATA Caustic alkali liquids, n.o.s. (Sodium hydroxide,

potassium hydroxide)

· ADR, IMDG 1719 CAUSTIC ALKALI LIQUID, N.O.S. (SODIUM

HYDROXIDE, POTASSIUM HYDROXIDE)

- · 14.3 Transport hazard class(es)
- · DOT



· Class 8 Corrosive substances.

· Label

· ADR



· Class 8 (C5) Corrosive substances.

· Label

· IMDG, IATA



· Class 8 Corrosive substances.

· Label

· 14.4 Packing group

· DOT, ADR, IMDG, IATA

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· 14.5 Environmental hazards:

· Marine pollutant: No

• 14.6 Special precautions for user Warning: Corrosive substances.

Danger code (Kemler):
 EMS Number:
 Segregation groups
 Alkalis

· 14.7 Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ) 1L

• Excepted quantities (EQ) Code: E2

Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

· Transport category 2 · Tunnel restriction code E

· IMDG

Limited quantities (LQ)Excepted quantities (EQ)Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml UN1719, CAUSTIC ALKALI LIQUID, N.O.S. (SODIUM

• UN "Model Regulation":

UN1719, CAUSTIC ALKALI LIQUID, N.O.S. (SODIU HYDROXIDE, POTASSIUM HYDROXIDE), 8, II

SECTION 15: Regulatory information

- \cdot 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · United States (USA)
- · SARA
- · Section 355 (extremely hazardous substances):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

- · Proposition 65 (California):
- · Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

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· Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

- · Carcinogenic Categories
- · EPA (Environmental Protection Agency)

None of the ingredients are listed.

· IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients are listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

- · Canada
- · Canadian Domestic Substances List (DSL)

All ingredients are listed.

· Canadian Ingredient Disclosure list (limit 0.1%)

111-41-1 2-(2-aminoethylamino)ethanol

· Canadian Ingredient Disclosure list (limit 1%)

1310-58-3 Potassium hydroxide

1310-73-2 sodium hydroxide

· Other regulations, limitations and prohibitive regulations

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

· Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients are listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

- H290 May be corrosive to metals.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.

H360Df May damage the unborn child. Suspected of damaging fertility.

- R22 Harmful if swallowed.
- R31 Contact with acids liberates toxic gas.
- R34 Causes burns.
- R35 Causes severe burns.

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R43 May cause sensitisation by skin contact.
R61 May cause harm to the unborn child.
R62 Possible risk of impaired fertility.

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Met. Corr.1: Corrosive to metals, Hazard Category 1 Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Repr. 1B: Reproductive toxicity, Hazard Category 1B

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

· Sources

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