

# MATERIAL SAFETY DATA SHEET

## SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Mitsubishi SLM - A C Activator

**FORMULA NUMBER:**

**GENERAL USE:** Activator Concentrate for SLM/SDP

**PRODUCT DESCRIPTION:** Colorless corrosive liquid, amine odor



**MANUFACTURER'S NAME**

Mitsubishi Imaging (MPM), Inc.

**DATE PREPARED:** January 13, 2008

**SUPERSEDES:** November 18, 2007

Page 1 of 4

**ADDRESS (NUMBER, STREET, P.O. BOX)**

555 Theodore Fremd Avenue

**TELEPHONE NUMBER FOR INFORMATION**

(914) 925-3200

(CITY, STATE AND ZIP CODE)

Rye, NY 10580

**COUNTRY**

USA

**EMERGENCY TELEPHONE NUMBER**

Chemtrec (800) 424-9300 Outside USA (703) 527-3887

**DISTRIBUTOR'S NAME**

Same

**ADDRESS (NUMBER, STREET, P.O. BOX)**

**TELEPHONE NUMBER FOR INFORMATION**

(CITY, STATE AND ZIP CODE)

**COUNTRY**

**EMERGENCY TELEPHONE NUMBER**

## SECTION 2 - HAZARDOUS INGREDIENTS

| HAZARDOUS COMPONENTS       | %<br>(by weight) | CAS #     | EINECS #  | Hazard<br>Symbol | RISK PHRASES<br>Full Text Section 16 |
|----------------------------|------------------|-----------|-----------|------------------|--------------------------------------|
| Sodium hydroxide ( a,b)    | 1 - 5            | 1310-73-2 | 215-185-5 | C                | R-35                                 |
| Potassium hydroxide ( a,b) | 1 - 5            | 1310-58-3 | 215-181-3 | C                | R-35                                 |
| n-Aminoethyl ethanolamine  | 1 - 5            | 111-41-1  | 203-867-5 | C                | R-21/22, 34, 43                      |

(a) See Section 15

(b) A "C" in the OSHA PEL or ACGIH TWA column indicates ceiling limits, the concentration that should not be exceeded during any part of the working exposure.

## SECTION 3 - HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

Corrosive alkaline liquid, moderately toxic, contact with eyes may cause severe irritation or chemical burns, contact with skin may cause irritation. Ingestion may cause gastric distress and chemical burns to the digestive tract. Hazard symbols for this product - C. Risk Phrases - R 34, 36/37/38

### POTENTIAL HEALTH EFFECTS

**INHALATION:** Corrosive and irritating to upper respiratory tract and mucous membranes.

**SKIN:** Corrosive and irritating; chemical burns may result from contact; severe irritant.

**EYES:** CORROSIVE; Contact with eyes is painful and irritating and will cause chemical burns.

**INGESTION:** Corrosive and irritating to digestive tract; may cause gastric distress, stomach pains and vomiting.

**CARCINOGENICITY**

NTP? No

IARC MONOGRAPHS? No

OSHA REGULATED? No

|                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                 |           |          |            |                 |           |             |            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------|-----------|----------|------------|-----------------|-----------|-------------|------------|
| MATERIAL SAFETY DATA SHEET                                                                                                                                                                                                                                                                                                                                                                                                           |  |                 |           |          |            |                 |           |             |            |
| PRODUCT NAME: Mitsubishi SLM - A C Activator<br>January 13, 2008                                                                                                                                                                                                                                                                                                                                                                     |  |                 |           |          |            |                 |           | Page 2 of 4 |            |
| SECTION 4 - FIRST AID MEASURES                                                                                                                                                                                                                                                                                                                                                                                                       |  |                 |           |          |            |                 |           |             |            |
| INHALATION: Remove affected person to fresh air; wash mouth and nasal passages with water repeatedly; if breathing difficulties persist seek medical attention.                                                                                                                                                                                                                                                                      |  |                 |           |          |            |                 |           |             |            |
| SKIN: Wash contacted area with soap and water; DO NOT attempt to neutralize with chemical agents; if irritation persists, seek medical attention.                                                                                                                                                                                                                                                                                    |  |                 |           |          |            |                 |           |             |            |
| EYES: Remove contact lenses. Immediately flush eyes for 15 minutes in clear running water while holding eyelids open; seek medical attention immediately.                                                                                                                                                                                                                                                                            |  |                 |           |          |            |                 |           |             |            |
| INGESTION: Drink large quantities of water or milk; give diluted vinegar or lemon juice to conscious person; DO NOT induce vomiting; seek medical attention immediately.                                                                                                                                                                                                                                                             |  |                 |           |          |            |                 |           |             |            |
| SECTION 5 - FIRE FIGHTING MEASURES                                                                                                                                                                                                                                                                                                                                                                                                   |  |                 |           |          |            |                 |           |             |            |
| GENERAL HAZARDS: Product is corrosive. Products of combustion include compounds of carbon, hydrogen, nitrogen and oxygen, including carbon monoxide.                                                                                                                                                                                                                                                                                 |  |                 |           |          |            |                 |           |             |            |
| EXTINGUISHING MEDIA<br>Carbon dioxide, water, water fog, dry chemical, chemical foam                                                                                                                                                                                                                                                                                                                                                 |  |                 |           |          |            |                 |           |             |            |
| FIRE FIGHTING PROCEDURES<br>Keep containers cool with water spray to prevent container rupture due to steam buildup; CAUTION - material is corrosive.                                                                                                                                                                                                                                                                                |  |                 |           |          |            |                 |           |             |            |
| UNUSUAL FIRE AND EXPLOSION HAZARDS<br>None                                                                                                                                                                                                                                                                                                                                                                                           |  |                 |           |          |            |                 |           |             |            |
| HAZARDOUS COMBUSTION PRODUCTS<br>Smoke, fumes, oxides of carbon, oxides of nitrogen                                                                                                                                                                                                                                                                                                                                                  |  |                 |           |          |            |                 |           |             |            |
| SECTION 6 - ACCIDENTAL RELEASE MEASURES                                                                                                                                                                                                                                                                                                                                                                                              |  |                 |           |          |            |                 |           |             |            |
| STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: CAUTION - CORROSIVE. Wash small spills to sanitary sewer. Large spills - confine spill, soak up with approved absorbent, shovel product into approved container for disposal. For spills in excess of allowable limits (RQ) notify the National Response Center (800) 424 - 8802; refer to CERCLA 40 CFR 302 for detailed instructions concerning reporting requirements. |  |                 |           |          |            |                 |           |             |            |
| SECTION 7 - HANDLING AND STORAGE                                                                                                                                                                                                                                                                                                                                                                                                     |  |                 |           |          |            |                 |           |             |            |
| PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep container closed when not in use; protect containers from abuse; protect from extreme temperatures. Separate from oxidizing materials, metallic powders and other easily oxidized organic materials and reducing agents. CAUTION - material is corrosive. Keep this and other chemicals out of reach of children.                                                              |  |                 |           |          |            |                 |           |             |            |
| SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION                                                                                                                                                                                                                                                                                                                                                                                  |  |                 |           |          |            |                 |           |             |            |
| HAZARDOUS COMPONENTS                                                                                                                                                                                                                                                                                                                                                                                                                 |  | NIOSH           |           |          |            | ACGIH           |           |             |            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | TWA ppm         | TWA mg/m3 | STEL ppm | STEL mg/m3 | TWA ppm         | TWA mg/m3 | STEL ppm    | STEL mg/m3 |
| Sodium hydroxide ( a,b)                                                                                                                                                                                                                                                                                                                                                                                                              |  | 2 C             | --        | --       | --         | 2 C             | --        | --          | --         |
| Potassium hydroxide ( a,b)                                                                                                                                                                                                                                                                                                                                                                                                           |  | 2 C             | --        | --       | --         | 2 C             | --        | --          | --         |
| n-Aminoethyl ethanolamine                                                                                                                                                                                                                                                                                                                                                                                                            |  | Not established |           |          |            | Not established |           |             |            |
| PERSONAL PROTECTION:                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                 |           |          |            |                 |           |             |            |
| RESPIRATORY PROTECTION (SPECIFY TYPE): None required while threshold limits (Section 2) are kept below maximum allowable concentrations; if TWA exceeds limits, NIOSH approved respirator must be worn. Refer to 29 CFR 1910.134 or European Standard EN 149 for complete regulations.                                                                                                                                               |  |                 |           |          |            |                 |           |             |            |
| PROTECTIVE GLOVES: Neoprene or rubber gloves with cuffs.                                                                                                                                                                                                                                                                                                                                                                             |  |                 |           |          |            |                 |           |             |            |
| EYE PROTECTION: Protective eyeglasses or chemical safety goggles. Refer to 29 CFR 1910.133 or European Standard EN166.                                                                                                                                                                                                                                                                                                               |  |                 |           |          |            |                 |           |             |            |
| OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls, apron, or other equipment should be worn to minimize skin contact.                                                                                                                                                                                                                                                                                                                |  |                 |           |          |            |                 |           |             |            |
| WORK / HYGIENIC PRACTICES: Practice safe workplace habits. Minimize body contact with this, as well as all chemicals in general.                                                                                                                                                                                                                                                                                                     |  |                 |           |          |            |                 |           |             |            |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        |                                                   |                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------|-----------------------------------------|
| <b>MATERIAL SAFETY DATA SHEET</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                        |                                                   |                                         |
| PRODUCT NAME: Mitsubishi SLM - A C Activator<br>January 13, 2008                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                                                   | Page 3 of 4                             |
| <b>SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        |                                                   |                                         |
| APPEARANCE AND ODOR<br>Colorless liquid, amine odor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        | VAPOR PRESSURE<br>17 mm Hg @ 20° C                |                                         |
| pH<br>14.0 ± 0.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        | SPECIFIC GRAVITY (WATER = 1)<br>1.106 ± 0.005     |                                         |
| BOILING POINT / BOILING RANGE<br>212° F (100° C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        | SOLUBILITY IN WATER<br>Complete                   |                                         |
| FLASH POINT<br>Non-flammable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                        | VISCOSITY<br>Not specified                        |                                         |
| FLAMMABLE LIMITS<br>LEL: Not applicable      UEL: Not applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        | VAPOR DENSITY (AIR = 1)<br>> 1                    |                                         |
| AUTOIGNITION TEMPERATURE<br>Not determined                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        | EVAPORATION RATE (WATER = 1)<br>< 1               |                                         |
| <b>SECTION 10 - STABILITY AND REACTIVITY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                        |                                                   |                                         |
| STABILITY<br>UNSTABLE:<br>STABLE: X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        | CONDITIONS TO AVOID: Extreme temperatures         |                                         |
| INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers, strong acids, strong alkalies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        |                                                   |                                         |
| HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon, hydrocarbons, fumes, and smoke may be produced.                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        |                                                   |                                         |
| HAZARDOUS POLYMERIZATION<br>MAY OCCUR:<br>WILL NOT OCCUR: X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                        | CONDITIONS TO AVOID: None                         |                                         |
| <b>SECTION 11 - TOXICOLOGICAL INFORMATION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                        |                                                   |                                         |
| Hazardous Components                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | CAS #<br>EINECS #      | LD50 of Ingredient<br>(Specify Species and Route) | LC50 of Ingredient<br>(Specify Species) |
| Sodium hydroxide ( a,b)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1310-73-2<br>215-185-5 | 40 mg / kg<br>IPR - Mouse                         | Not established                         |
| Potassium hydroxide ( a,b)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1310-58-3<br>215-181-3 | 273 mg / kg<br>Oral - rat                         | Not established                         |
| n-Aminoethyl ethanolamine                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 111-41-1<br>203-867-5  | 3000 mg / kg<br>Oral - rat                        | Not established                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        |                                                   |                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        |                                                   |                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        |                                                   |                                         |
| <b>SECTION 12 - ECOLOGICAL INFORMATION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        |                                                   |                                         |
| No data are available on the adverse effects of this material on the environment. Neither COD nor BOD data are available. Based on the chemical composition of this product it is assumed that the mixture can be treated in an acclimatized biological waste treatment plant system in limited quantities. However, such treatment should be evaluated and approved for each specific biological system. None of the ingredients in this mixture are classified as a Marine Pollutant.                                                                                                                                                        |                        |                                                   |                                         |
| <b>SECTION 13 - DISPOSAL CONSIDERATIONS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                        |                                                   |                                         |
| WASTE DISPOSAL METHOD: According to the European Waste Catalogue, waste codes are application specific and should be assigned by the user based on the application for which the product is used. Dispose of in accordance with Local, State, and Federal Regulations. Refer to "40 CFR Protection of Environment Parts 260 - 299" for complete waste disposal regulations for corrosive materials. Consult your local, state, or Federal Environmental Protection Agency before disposing of any chemicals.                                                                                                                                   |                        |                                                   |                                         |
| <b>SECTION 14 - TRANSPORT INFORMATION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        |                                                   |                                         |
| <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>PROPER SHIPPING NAME: Corrosive liquid, n.o.s. (potassium hydroxide, sodium hydroxide )</p> <p>DOT HAZARD CLASS / Pack Group: 8 / III</p> <p>REFERENCE: 49 CFR 173.154, .203, .241</p> <p>UN / NA IDENTIFICATION NUMBER: UN 1760</p> <p>LABEL: CORROSIVE</p> <p>HAZARD SYMBOLS: C</p> </div> <div style="width: 45%;"> <p>IATA HAZARD CLASS / Pack Group: 8 / III</p> <p>IMDG HAZARD CLASS: 8 / III</p> <p>RID/ADR Dangerous Goods Code: 8</p> <p>UN TDG Class / Pack Group: 8 / III</p> <p>Hazard Identification Number (HIN): 80</p> </div> </div> |                        |                                                   |                                         |
| Note: Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EU, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.                                                                                                                                                                                                                                                                                                                     |                        |                                                   |                                         |

# MATERIAL SAFETY DATA SHEET

PRODUCT NAME: Mitsubishi SLM - A C Activator  
January 13, 2008

Page 4 of 4

## SECTION 15 - REGULATORY INFORMATION

### TSCA (USA - Toxic Substance Control Act)

All components of this product are listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory) or are exempted from listing because a Low Volume Exemption has been granted in accordance with 40 CFR 723.50.

### SARA TITLE III (USA - Superfund Amendments and Reauthorization Act)

311/312 Hazard Categories  
Immediate health

313 Reportable Ingredients:  
None

### CERCLA (USA - Comprehensive Response Compensation and Liability Act)

c) The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) has notification requirements for releases or spills to the environment of the Reportable Quantity (RQ for this mixture > 24000 lbs) or greater amounts, according to 40 CFR 302.

### California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986

There are no chemicals present known to the state of California to cause cancer or reproductive toxicity.

### CPR (Canadian Controlled Products Regulations)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. WHMIS Classification: E, D2B

### IDL (Canadian Ingredient Disclosure List)

Components of this product identified by CAS number and listed on the Canadian Ingredient Disclosure List are shown in Section 2.

### DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List)

Components of this product identified by CAS number are listed on the DSL or NDSL, or are otherwise in compliance with the New Substances Notification (NSN) regulations. Only ingredients classified as "hazardous" are listed in Section 2 unless otherwise indicated.

### EINECS (European Inventory of Existing Commercial Chemical Substances)

Components of this product identified by CAS numbers are on the European Inventory of Existing Commercial Chemical Substances.

WGK Water Quality Index: 1

VbK Index: Not applicable

### RISK PHRASES:

R34 Causes burns.  
R36/37/38 Irritating to eyes, respiratory system and skin

### SYMBOL(S) REQUIRED FOR EU LABEL

Corrosive



### SAFETY PHRASES:

S2 Keep out of the reach of children.  
S24/25 Avoid contact with skin and eyes  
S28 After contact with skin, wash immediately with plenty of soap and water.

## SECTION 16 - OTHER INFORMATION

### Notes & full R-Phrase text

R21/22 Harmful in contact with skin and if swallowed  
R34 Causes burns.  
R35 Causes severe burns.  
R36/37/38 Irritating to eyes, respiratory system and skin  
R43 May cause sensitization by skin contact.

### HMIS HAZARD RATINGS

|                               |   |                               |              |
|-------------------------------|---|-------------------------------|--------------|
| HEALTH                        | 2 | * = Chronic Health Hazard     | 2 = MODERATE |
| FLAMMABILITY                  | 0 | 0 = INSIGNIFICANT             | 3 = HIGH     |
| PHYSICAL HAZARD               | 0 | 1 = SLIGHT                    | 4 = EXTREME  |
| PERSONAL PROTECTIVE EQUIPMENT | C | Safety Glasses, Gloves, Apron |              |

### REVISION SUMMARY:

This MSDS has been revised in the following sections: Section 14: Text Updated

MSDS Prepared by: ChemTel Inc.  
1305 N. Florida Ave.  
Tampa, Florida USA 33602  
(888) 255-3924 Intl. 01+ (813) 248-0573 www.chemtelinc.com



The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.