


MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Mitsubishi SLM - O E III Deletion Pen		DATE: December 16, 2008	
PRODUCT NUMBER:		DATE: December 16, 2008	
TRADE NAME: Mitsubishi SLM - O E III Deletion Pen GENERAL USE: Deletion pen for SLM/SDP PRODUCT DESCRIPTION: Yellowish brown solution, odorless.			
MANUFACTURER Mitsubishi Paper Mills Ltd.		DATE PREPARED: December 16, 2008 SUPERSEDES: August 14, 2007	
ADDRESS (NUMBER, STREET, P.O. BOX) 4-2 Marunouchi 3-Chome (CITY, STATE AND ZIP CODE) COUNTRY Chiyoda-ku, Tokyo 100-005 Japan		TELEPHONE NUMBER FOR INFORMATION / Customer Service 03-3213-3641 Chemtrec 24-HOUR EMERGENCY TELEPHONE NUMBER 1-800-424-9300 01-703-527-3887 North America Toll Free International	
DISTRIBUTOR Mitsubishi Imaging (MPM), Inc. ADDRESS (NUMBER, STREET, P.O. BOX) 555 Theodore Fremd Avenue (CITY, STATE AND ZIP CODE) COUNTRY Rye, NY 10580 USA		TELEPHONE NUMBER FOR INFORMATION / Customer Service (914) 925-3200 Chemtrec 24-HOUR EMERGENCY TELEPHONE NUMBER 1-800-424-9300 01-703-527-3887 North America Toll Free International	

SECTION 2 - HAZARDOUS INGREDIENTS

Hazardous Components	% (by Weight)	CAS #	EINECS #	Hazard Symbol	RISK PHRASES (Full Text Section 15)
Diethylenetriamine Pentaacetic Acid mono iron, Diammonium Salt	7 - 13	85959-68-8	289-064-0	NC	Not Classified
Ethylenediamine Tetraacetic Acid (a)	1 - 5	60-00-4	200-449-4	Xi	R-36/37/38
Potassium Bromide	1 - 5	7758-02-3	231-830-3	Xi	R-36/37/38
Ammonium Thiosulfate	10 - 30	7783-18-8	231-982-0	Xn	R-20/21/22
Sodium Thiosulfate Pentahydrate (b)	1 - 5	10102-17-7	Not Found	Xi	R-36/38

(a) See Section 15

(b) Sodium Thiosulfate Pentahydrate (10102-17-7) is not listed on the Canadian DSL or NDSL. All other components of this product identified by CAS number are listed on the DSL or NDSL. Only ingredients classified as "hazardous" are listed in Section 2 unless otherwise indicated.

NOTES: Note: This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200), the Canadian Workplace Hazardous Materials Information System (WHMIS), and European Union Directive 91/155/EEC. Hazard symbols and risk phrases are based on maximum listed concentration of each hazardous ingredient. Unlisted ingredients are not "hazardous" per the OSHA Hazard Communication Standard (29 CFR 1910.1200), the Canadian Workplace Hazardous Materials Information System (WHMIS) or the European (GHS) directive 91/155/EEC and are considered trade secrets under US Federal Law (29CFR and 40CFR), Canadian Law (Health Canada Legislation), and European Union Directive 67/548/EEC.

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Mild liquid, moderately toxic, contact with eyes may cause severe irritation, prolonged contact with skin may cause irritation. Ingestion may cause gastric distress. Hazard symbols for this product - **Xi**, Risk Phrases - **R36/37/38**

POTENTIAL HEALTH EFFECTS

INHALATION:
Irritating to upper respiratory tract and mucous membranes; may cause headache, dizziness, nausea, vomiting and malaise.

SKIN:
Irritation may result from contact; prolonged contact may cause moderate reddening, swelling and possible necrosis.

EYES:
Contact with eyes is painful and irritating and may cause chemical burns, associated with redness and swelling of the conjunctiva.

INGESTION:
Irritating to digestive tract; may cause gastric distress, stomach pains and vomiting; moderately toxic, may result in red blood cell hemolysis.

CARCINOGENICITY:

NTP? NO	IARC MONOGRAPHS? NO	OSHA REGULATED? NO
CALIFORNIA, Prop.65? NO		ESIS NOTATION? NO

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: Mitsubishi SLM - O E III Deletion Pen
PRODUCT NUMBER: _____ **DATE:** December 16, 2008

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.

EYES:

Remove contact lenses. Immediately flush eyes for 15 minutes in clear running water while holding eyelids open; seek medical attention immediately.

SKIN:

Wash contacted area with soap and water; DO NOT attempt to neutralize with chemical agents; if irritation persists, seek medical attention.

INGESTION:

Drink large quantities of water or milk; DO NOT induce vomiting; never give anything by mouth to an unconscious person; seek medical attention immediately.

SECTION 5 - FIRE FIGHTING MEASURES

GENERAL HAZARDS:

Product is not considered flammable or combustible. Products of combustion include compounds of carbon, hydrogen, nitrogen, sulfur and oxygen, including Carbon Monoxide.

EXTINGUISHING MEDIA:

Carbon Dioxide, water, water fog, dry chemical, chemical foam.

FIRE FIGHTING PROCEDURES:

Keep containers cool with water spray to prevent container rupture due to steam buildup; floor will become slippery if material is released.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

None

HAZARDOUS COMBUSTION PRODUCTS:

Smoke, fumes, oxides of carbon, oxides of nitrogen and oxides of sulfur.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Small spills - wash to sanitary sewer with plenty of water. 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 complete regulations 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. Keep this and other chemicals out of reach of children.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

HAZARDOUS COMPONENTS	NIOSH				ACGIH		OSHA	
	TWA ppm	TWA mg/m3	STEL ppm	STEL mg/m3	TLV/TWA ppm	TWA mg/m3	STEL ppm	STEL mg/m3
Diethylenetriamine		NE				NE		
Pentaacetic Acid mono iron, Diammonium Salt		NE				NE		
Ethylenediamine Tetraacetic Acid (a)		NE				NE		
Potassium Bromide		NE				NE		
Ammonium Thiosulfate		NE				NE		
Sodium Thiosulfate Pentahydrate (b)		NE				NE		

PERSONAL PROTECTION

RESPIRATORY PROTECTION:

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.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: Mitsubishi SLM - O E III Deletion Pen
PRODUCT NUMBER: _____ **DATE:** December 16, 2008

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR Yellowish brown solution, odorless.	VAPOR PRESSURE 17 mm Hg @ 20° C
pH 7.0 ± 0.2	SPECIFIC GRAVITY (WATER = 1) 1.173 ± 0.02
BOILING POINT / BOILING RANGE 212° F (100° C)	SOLUBILITY IN WATER Complete
FLASH POINT Non-Flammable	VISCOSITY Not Specified
FLAMMABLE LIMITS LEL: NA UEL: NA	VAPOR DENSITY (AIR = 1) > 1
AUTO-IGNITION TEMPERATURE ND	EVAPORATION RATE (WATER = 1) < 1

VOLATILE ORGANIC COMPOUND (VOC) INFORMATION
 There are no known Volatile Organic Compounds (VOCs) in this product.

SECTION 10 - STABILITY AND REACTIVITY

STABILITY STABLE X	CONDITIONS TO AVOID: Extreme temperatures.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers, strong acids.	
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon, hydrocarbons, sulfur, fumes, and smoke may be produced.	
HAZARDOUS POLYMERIZATION: Will Not Occur.	CONDITIONS TO AVOID: None Related to Polymerization.

SECTION 11 - TOXICOLOGICAL INFORMATION

Hazardous Components	CAS # EINECS #	LD50 of Ingredient (Specify Species and Route)	LC50 of Ingredient (Specify Species)
Diethylenetriamine Pentaacetic Acid mono iron, Diammonium Salt	85959-68-8	NE	NE
	289-064-0		
Ethylenediamine Tetraacetic Acid (a)	60-00-4	> 1000 mg / kg Oral - rat	NE
	200-449-4		
Potassium Bromide	7758-02-3	3070 mg / kg Oral - rat	NE
	231-830-3		
Ammonium Thiosulfate	7783-18-8	2890 mg / kg Oral - rat	NE
	231-982-0		
Sodium Thiosulfate Pentahydrate (b)	10102-17-7	> 2500 mg / kg Intravenous - rat	NE
	Not Found		

SECTION 12 - ECOLOGICAL INFORMATION

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.

SECTION 13 - DISPOSAL CONSIDERATIONS

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. Product is classified as non-hazardous, however, non-hazardous materials may become hazardous waste upon contact with other products. Refer to "40 CFR Protection of Environment Parts 260 - 299" for complete waste disposal regulations. Consult your local, state, or Federal Environmental Protection Agency before disposing of any chemicals.

SECTION 14 - TRANSPORT INFORMATION

PROPER SHIPPING NAME: Not Regulated	
DOT HAZARD CLASS / Pack Group: Not Regulated	IATA HAZARD CLASS / Pack Group: Not Regulated
REFERENCE: NA	IMDG HAZARD CLASS: Not Regulated
UN / NA IDENTIFICATION NUMBER: None	RID/ADR Dangerous Goods Code: Not Regulated
LABEL: None Required	UN TDG Class / Pack Group: Not Regulated
HAZARD SYMBOLS: None	Hazard Identification Number (HIN): None

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 - O E III Deletion Pen
PRODUCT NUMBER: _____ **DATE:** December 16, 2008

SECTION 15 - REGULATORY INFORMATION

TSCA (USA - Toxic Substance Control Act): All components of this product are listed.
SARA TITLE III (USA - Superfund Amendments and Reauthorization Act): Immediate health.
 Acute Health: **NO** Chronic Health: **NO**
 Fire: **NO** Sudden Release of Pressure: **NO**
 Reactive: **NO**

SARA 313 REPORTABLE INGREDIENTS: None
CERCLA (USA - Comprehensive Response Compensation and Liability Act): The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) has notification requirements for releases or spills to the environment in quantities greater than 24,000 pounds, based on the reportable quantities of the individual components, and in agreement with US Code of Federal Regulations 40 CFR 302.
 California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986: **No**
CPR (Canadian Controlled Products Regulations): WHMIS Classification: **D2B**
IDL (Canadian Ingredient Disclosure List): Listed.
DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List):
(b) Sodium Thiosulfate Pentahydrate (10102-17-7) is not listed on the Canadian DSL or NDSL. All other components of this product identified by CAS number are listed.
EINECS (European Inventory of Existing Commercial Chemical Substances): Referenced.

WGK Water Quality Index: 1 **VbK Index:** NA

RISK PHRASES: R36/37/38 : Irritating to eyes, respiratory system and skin.	SYMBOL(S) REQUIRED FOR EU LABEL  Xi - Irritating	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

Legend:

- ACGIH - American Congress of Government Industrial Hygienists**
- CAS - Chemical Abstracts Service**
- EINECS - European Inventory of Existing Commercial Chemical Substances**
- HMIS - Hazardous Materials Identification System**
- IARC - International Agency for Research on Cancer**
- NA - Not Available**
- ND - Not Determined**
- NE - Not Established**
- NR - Not Reported**
- NIOSH - National Institute for Occupational Safety and Health**
- NTP - National Toxicology Program**
- OSHA - Occupational Safety and Health Administration**

HMIS HAZARD RATINGS	HEALTH: 1 FLAMMABILITY: 0 PHYSICAL HAZARD: 0 PERSONAL PROTECTIVE EQUIPMENT: C	0 = INSIGNIFICANT 1 = SLIGHT 2 = MODERATE 3 = HIGH 4 = EXTREME
----------------------------	--	--

REVISION SUMMARY: Revised to GHS/E.U. protocols 12/16/2008 supersedes 8/14/2007 issue.

MSDS Prepared by:
 ChemTel Inc.
 1305 North Florida Avenue
 Tampa, Florida USA 33602-2902
 Toll Free North America 1-888-255-3924 Intl. +01 813-248-0585
 Website: 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.