


# MATERIAL SAFETY DATA SHEET

## SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

<b>PRODUCT NAME:</b> Mitsubishi SDP-αOEL Deletion Pen		<b>DATE:</b> July 23, 2009
<b>PRODUCT NUMBER:</b>		
<b>TRADE NAME:</b> Mitsubishi SDP-αOEL Deletion Pen		
<b>GENERAL USE:</b> Deletion pen for SDP-α System		
<b>PRODUCT DESCRIPTION:</b> Dark brown viscous aqueous liquid, characteristic odor		
<b>MANUFACTURER:</b> Mitsubishi Paper Mills Ltd.	<b>DATE PREPARED:</b> July 23, 2009	<b>SUPERSEDES:</b> August 14, 2007
<b>ADDRESS (NUMBER, STREET, P.O. BOX):</b> 4-2 Marunouchi 3-Chome	<b>TELEPHONE NUMBER FOR INFORMATION / Customer Service:</b> 03-3213-3641	
<b>(CITY, STATE AND ZIP CODE):</b> Chiyoda-ku, Tokyo 100-005	<b>COUNTRY:</b> Japan	<b>Chemtrec 24-HOUR EMERGENCY TELEPHONE NUMBER:</b> 1-800-424-9300 (North America Toll Free) 01-703-527-3887 (International)
<b>DISTRIBUTOR:</b> Mitsubishi Imaging (MPM), Inc.	<b>TELEPHONE NUMBER FOR INFORMATION / Customer Service:</b> (914) 925-3200	
<b>ADDRESS (NUMBER, STREET, P.O. BOX):</b> 555 Theodore Fremd Avenue	<b>Chemtrec 24-HOUR EMERGENCY TELEPHONE NUMBER:</b> 1-800-424-9300 (North America Toll Free) 01-703-527-3887 (International)	
<b>(CITY, STATE AND ZIP CODE):</b> Rye, NY 10580	<b>COUNTRY:</b> USA	

## 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	10-30	85959-68-8	289-064-0	NC	Not Classified
Potassium Iodide	7-13	7681-11-0	231-659-4	Xn	R-36/38, 42/43,63
Malonic acid	3-7	141-82-2	205-503-0	Xn	R-22, 41, 37/38
Triethylene glycol monobutyl ether	10 - 30	143-22-6	205-592-6	Xi	R-36/37/38

**NOTES:** 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

<b>EMERGENCY OVERVIEW</b> Acidic liquid, contact may cause skin & eye irritation. Ingestion may cause gastric distress. Hazard symbols for this product - Xi, Risk Phrases - R36/37/38						
<b>POTENTIAL HEALTH EFFECTS</b>						
<b>INHALATION:</b> Irritating to upper respiratory tract and mucous membranes; may cause headache, dizziness, nausea, vomiting and malaise.						
<b>SKIN:</b> Irritation may result from contact; prolonged contact may cause moderate reddening, swelling and possible necrosis.						
<b>EYES:</b> Contact with eyes is painful and irritating and may cause chemical burns, associated with redness and swelling of the conjunctiva.						
<b>INGESTION:</b> Irritating to digestive tract; may cause gastric distress, stomach pains and vomiting; moderately toxic, may result in red blood cell hemolysis. Repeated contact with Potassium Iodide may affect the thyroid gland function.						
<b>CARCINOGENICITY:</b>						
<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">NTP? <b>NO</b></td> <td style="width: 33%;">IARC MONOGRAPHS? <b>NO</b></td> <td style="width: 33%;">OSHA REGULATED? <b>NO</b></td> </tr> <tr> <td>CALIFORNIA, Prop.65? <b>NO</b></td> <td><b>NO</b></td> <td>ESIS NOTATION? <b>NO</b></td> </tr> </table>	NTP? <b>NO</b>	IARC MONOGRAPHS? <b>NO</b>	OSHA REGULATED? <b>NO</b>	CALIFORNIA, Prop.65? <b>NO</b>	<b>NO</b>	ESIS NOTATION? <b>NO</b>
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## 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. Product is acidic. Products of combustion include compounds of carbon, hydrogen, iodine, nitrogen 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:**  
Contact with B:C extinguisher powder may produce large amounts of carbon dioxide.

**HAZARDOUS COMBUSTION PRODUCTS:**  
Smoke, fumes, oxides of carbon, oxides of nitrogen and iodine

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:**  
Material is acidic and will irritate the eyes if product is allowed to directly contact the eyes. Wash small spills to sanitary sewer. Large spills - confine spill, soak up with approved absorbent, shovel product into approved container for disposal.

## 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
<b>Diethylenetriamine Pentaacetic Acid mono iron, Diammonium Salt</b>		<b>NE</b>				<b>NE</b>		
<b>Potassium Iodide</b>		<b>NE</b>				<b>NE</b>		
<b>Malonic acid</b>		<b>NE</b>				<b>NE</b>		
<b>Triethylene glycol monobutyl ether</b>		<b>NE</b>				<b>NE</b>		

### 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.

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## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

<b>APPEARANCE AND ODOR</b> Dark brown viscous aqueous liquid, characteristic odor pH 3.1 ± 0.2	<b>VAPOR PRESSURE</b> 17 mm Hg @ 20° C <b>SPECIFIC GRAVITY (WATER = 1)</b> 1.196 ± 0.05
<b>BOILING POINT / BOILING RANGE</b> 212° F (100° C)	<b>SOLUBILITY IN WATER</b> Complete
<b>FLASH POINT</b> Non-Flammable	<b>VISCOSITY</b> Not Specified
<b>FLAMMABLE LIMITS</b> LEL: NA UEL: NA	<b>VAPOR DENSITY (AIR = 1)</b> > 1
<b>AUTO-IGNITION TEMPERATURE</b> ND	<b>EVAPORATION RATE (WATER = 1)</b> < 1
<b>VOLATILE ORGANIC COMPOUND (VOC) INFORMATION</b> VOC content of this product is 7.6% wt.	

## SECTION 10 - STABILITY AND REACTIVITY

<b>STABILITY</b> STABLE X	<b>CONDITIONS TO AVOID:</b> Extreme temperatures.
<b>INCOMPATIBILITY (MATERIALS TO AVOID):</b> Strong oxidizers, strong acids, strong alkalis.	
<b>HAZARDOUS DECOMPOSITION OR BYPRODUCTS:</b> Decomposition will not occur if handled and stored properly. Products of combustion under fire conditions include compounds of carbon, hydrogen, iodine, nitrogen and oxygen, including carbon monoxide.	
<b>HAZARDOUS POLYMERIZATION:</b> Will Not Occur.	<b>CONDITIONS TO AVOID:</b> 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		
Potassium Iodide	7681-11-0	2779 mg / kg Oral - rat	NE
	231-659-4		
Malonic acid	141-82-2	1310mg/kg Oral-rat	>8900mg/M <sup>3</sup> Inhalation, rat
	205-503-0		
Triethylene glycol monobutyl ether	143-22-6	5300 mg / kg Oral - rat	NE
	205-592-6		

## 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

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

