



SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1 Product identifier**
 GHS Product Identifier **Mitsubishi SLM-OEIII Deletion Pen**
 Product Code **SLM-OEIII**
 Chemical Name **Mixture**
 Trade name **Mitsubishi SLM-OEIII Deletion Pen**
 CAS No. **Mixture**
 EINECS No. **Mixture**
 REACH Registration No. **Not available**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
 Identified use(s) **Users are recommended to seek further advice.**
 Uses advised against **Users are recommended to seek further advice.**
- 1.3 Supplier's details**
 Company Identification **Mitsubishi Imaging (MPM), Inc.**
 Address **555 Theodore Fremd Avenue, Rye, NY 10580 USA**
 Telephone **(914) 925-3200**
 E-Mail (competent person)
- 1.4 Emergency telephone number – ChemTrec**
Emergency Phone No. (800) 424-9300 (US/Canada), +01 (703) 527-3887 (Elsewhere)

SECTION 2: HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture**
- 2.1.1 Regulation (EC) No. 1272/2008 (CLP) –Skin Irritation 2, Eye Irritation 2, 3.8/3 STOT Single exposure 3, (3.2/2, 3.3/2, 3.8/3)**
- 2.1.2 Directive 67/548/EEC & Directive 1999/45/EC – Harmful.**
- 2.2 Label elements**
- 2.2.1 Label elements According to Regulation (EC) No. 1272/2008 (CLP)**
 GHS Product Identifier (EU)
 Hazard pictogram(s) 
 Signal word(s) **Warning**
 Hazard statement(s) **H315 Causes skin irritation.**
H319 Causes serious eye irritation.
H335: May cause respiratory irritation.
 Precautionary Statement(s) **P261 Avoid breathing mist/ vapours/ spray.**
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- 2.2.2 Label elements According to Directive 67/548/EEC & Directive 1999/45/EC**
 Hazard Symbol 
 Risk Phrases **R36/37/38: Irritating to eyes, respiratory system and skin.**
 Safety Phrases **S24/25: Avoid contact with skin and eyes.**
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S27/28: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of: Cool water.
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
- 2.3 Other hazards Hazardous under OSHA Hazard Communication Standard (USA)**
 HMIS: Health-1, Flammability- 0 Reactivity – 0
 GHS Classification (USA): 3.1/5, 3.3/2,3.8/3,
 H303 May be harmful if swallowed. 
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H335: May cause respiratory irritation.

P261 Avoid breathing mist/ vapours/ spray.
 P280 Wear protective gloves/ eye protection/ face protection.
 P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
WHMIS Classification (Canada): Class D2B, Material having other toxic
GHS Classification (CANADA): 3.1/5,3.3/2, 3.8/3,4.1/3
 H303 May be harmful if swallowed.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H335: May cause respiratory irritation.
 P261 Avoid breathing mist/ vapours/ spray.
 P280 Wear protective gloves/ eye protection/ face protection.
 P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**2.4 Additional Information**

Potential Health Effects

Inhalation	May cause mild irritation
Eye Contact	Causes moderate eye irritation.
Skin Contact	May cause skin irritation.
Ingestion	Product is a gastro-intestinal irritant. May be harmful if swallowed.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**EC Classification No. 1272/2008/EC**

Hazardous ingredient(s)	% W/W	CAS No.	EC No.	REACH Registration No.	Hazard pictogram(s) and Hazard statement(s)	
Diethylenetriamine Pentaacetic Acid mono iron, Diammonium Salt	7-13	85959-68-8	289-064-0	NA	None	None
Ethylenediamine Tetraacetic Acid	1-5	60-00-4	200-449-4	NA		3.3/2; H319
Potassium Bromide	1-5	7758-02-3	231-830-3	NA		3.2/2, 3.3/2, 3.8/3, H315, H319, H335,
Ammonium Thiosulfate	10-30	7783-18-8	231-982-0	NA	None	None
Sodium Thiosulfate Pentahydrate	1-5	10102-17-7	231-867-5	NA	None	None

EC Classification No. 67/548/EEC

Hazardous ingredient(s)	% W/W	CAS No.	EC No.	REACH Registration No.	EC Classification and Risk Phrases	
Diethylenetriamine Pentaacetic Acid mono iron, Diammonium Salt	7-13	85959-68-8	289-064-0	NA	None	None
Ethylenediamine Tetraacetic Acid	1-5	60-00-4	200-449-4	NA		Xi, R36
Potassium Bromide	1-5	7758-02-3	231-830-3	NA		Xi, R36/37/38
Ammonium Thiosulfate	10-30	7783-18-8	231-982-0	NA	None	None
Sodium Thiosulfate Pentahydrate	1-5	10102-17-7	231-867-5	NA	None	None

3.3 Additional Information - For full text of H/P phrases see section 16. For full text of R phrases see section 16. Non-Hazardous ingredients are not listed and make up the balance of the product.

SECTION 4: FIRST AID MEASURES**4.1 Description of first aid measures**

Inhalation	Remove patient from exposure. Keep patient at rest and give oxygen if breathing difficult. If symptoms develop, obtain medical attention.
Skin Contact	Wash affected skin with soap and water. If symptoms develop, obtain medical attention.
Eye Contact	Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. Obtain immediate medical attention.
Ingestion	Do not induce vomiting. Obtain immediate medical attention.

- 4.2 Most important symptoms and effects, both acute and delayed** **Acute:** Causes damage to eyes and skin.
Delayed and chronic effects: Similar to acute exposures. May cause hemolysis of red blood cells.
- 4.3 Indication of the immediate medical attention and special treatment needed** Exposure by ingestion should be treated symptomatically by medical personnel.

SECTION 5: FIRE-FIGHTING MEASURES

- 5.1 Extinguishing media**
Suitable Extinguishing Media Choose media for surrounding fire.
Unsuitable Extinguishing Media None
- 5.2 Special hazards arising from the substance or mixture** Product is not flammable. Products of combustion include compounds of carbon, hydrogen, oxygen, nitrogen and sulfur, including Carbon Monoxide.
- 5.3 Advice for fire-fighters** A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions. Keep containers cool with water spray to prevent container rupture due to steam buildup;

SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures** Ensure full personal protection (including respiratory protection) during removal of spillages.
- 6.2 Environmental precautions** Do not let undiluted product enter drains.
- 6.3 Methods and material for containment and cleaning up** Rinse small spills to sewers with copious quantities of water. Confine large spills; either use vacuum gear or inert absorbent such as clay. Keep in suitable, closed containers for disposal.
- 6.4 Reference to other sections** See Sections 7, 8, 13.
- 6.5 Additional Information** None.

SECTION 7: HANDLING AND STORAGE

- 7.1 Precautions for safe handling** All employees who handle this material should be trained to handle it safely. Wear suitable protective clothing and eye/face protection. Avoid skin and eye contact.
- 7.2 Conditions for safe storage, including any incompatibilities** Attacks many metals. Store at ambient temperatures. Store in a closed container. Store in a well-ventilated place. Keep/store away from: Strong acids, Strong oxidizers and reactive metals.
Storage Temperature Ambient temperatures.
Storage Life Not available. Keep containers properly sealed when not in use.
Incompatible materials Strong acids, Strong oxidizers, reactive metals.
- 7.3 Specific end use(s)** Consult the supplier.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters****8.1.1 Occupational Exposure Limits**

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note:
Diethylenetriamine Pentaacetic Acid mono iron, Diammonium Salt	85959-68-8	NE	NE	NE	NE	None
Ethylenediamine Tetraacetic Acid	60-00-4	NE	NE	NE	NE	None
Potassium Bromide	7758-02-3	NE	NE	NE	NE	None
Ammonium Thiosulfate	7783-18-8	NE	NE	NE	NE	None
Sodium Thiosulfate Pentahydrate	10102-17-7	NE	NE	NE	NE	None

8.1.2 Biological limit value

Biological limit values are not available for this product.

8.1.3 PNECs and DNELs

No PNECs and/or DNELs are available for this product.

8.2 Exposure controls**8.2.1 Appropriate engineering controls**

Guarantee sufficient ventilation during and after use, in order to prevent vapour accumulation.

8.2.2 Personal protection equipment

Eye/face protection

Safety spectacles.



Skin protection
(Hand protection/ Other)

Plastic or synthetic rubber gloves. Wear chemical resistant apron.



Respiratory protection

Wear suitable respiratory protective equipment if exposure to levels above the occupational exposure limit is likely.

Thermal hazards

None

8.2.3 Environmental Exposure Controls

Adequate ventilation must be used.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Yellowish Brown Solution	Colour	Yellowish brown
Odour	Odorless	Odour Threshold (ppm)	Not available
Melting Point (°C) / Freezing Point (°C)	Not available	Boiling point/boiling range (°C):	Not available
Flash Point (°C)	Non-Flammable	Explosive limit ranges	Not available
Auto Ignition Temperature (°C)	Not available	Decomposition Temperature (°C)	Not available
Explosive properties	Not available	Oxidising properties	Not available
Flammability (solid, gas)	Not available	pH (Value)	7.0 ±0.2
Evaporation rate	<1	Vapor Pressure (mm Hg)	17mm Hg @ 20°C
Vapour Density (Air=1)	>1	Density (g/ml)	1.173 ±0.02 @25°C
Solubility (Water)	Complete	Solubility (Other)	Not available
Partition Coefficient (n-Octanol/water)	Not available	Viscosity (mPa.s)	Not specified.

9.2 Other information Volatile Organic Compound (VOC) Content: 60 g / L per EPA Method 24 (does not include water). VOC weight %: <5% (calc) per California CARB methodology.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	Stable.
10.2 Chemical stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	Can react violently if in contact with - strong acids, strong oxidisers.
10.4 Conditions to avoid	Extreme temperatures.
10.5 Incompatible materials	Strong acids, strong oxidisers reactive metals.
10.6 Hazardous Decomposition Product(s)	Oxides of carbon, sulfur, nitrogen, hydrocarbons, fumes, smoke.

SECTION 11: TOXICOLOGICAL INFORMATION

Ingredient	CAS No.	LD ₅₀ (Oral, Rat)	LC ₅₀ (Inhalation, Rat)
Diethylenetriamine Pentaacetic Acid mono iron, Diammonium Salt	85959-68-8	NE	NE
Ethylenediamine Tetraacetic Acid	60-00-4	>1000mg/kg	NE
Potassium Bromide	7758-02-3	3070 mg/kg	NE
Ammonium Thiosulfate	7783-18-8	2890 mg/kg	NE
Sodium Thiosulfate Pentahydrate	10102-17-7	NE	NE

11.1 Information on toxicological effects**11.1.2 Mixtures**

Acute toxicity	Possibly toxic if swallowed, may cause red blood cell hemolysis.
Irritation	Eye irritant, possible skin and respiratory irritant.
Corrosivity	None
Sensitisation	No data

Repeated dose toxicity	Similar to acute exposures.
Carcinogenicity	No data
Mutagenicity	No data
Toxicity for reproduction	No data

11.2 Other information None

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	No data available.
12.2 Persistence and degradability	No data.
12.3 Bioaccumulative potential	Slight.
12.4 Mobility in soil	Expected to have moderate to high mobility in soils.
12.5 Results of PBT and vPvB assessment	No data.
12.6 Other adverse effects	Environmental hazards cannot be excluded by inappropriate handling or disposal.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods	Do not empty into drains; dispose of this material and its container in a safe way. Send to a licensed recycler, reclaimer or incinerator. Avoid release to the environment. Decontaminate empty containers before recycling.
13.2 Additional Information	None

SECTION 14: TRANSPORT INFORMATION

Land transport (ADR/RID) (a)(c)

UN number	Not regulated
Proper Shipping Name	Not regulated
Transport hazard class(es)	Not regulated
Packing Group	Not regulated
Hazard label(s)	Not regulated
Environmental hazards	Not regulated
Special precautions for user	Not regulated

Land transport (Within USA) (b)(c)

UN number	Not regulated
Proper Shipping Name	Not regulated
Transport hazard class(es)	Not regulated
Packing Group	Not regulated
Hazard label(s)	Not regulated
Environmental hazards	Not regulated
Special precautions for user	Not regulated

Sea transport (IMDG) (a)(c)

UN number	Not regulated
Proper Shipping Name	Not regulated
Transport hazard class(es)	Not regulated
Packing Group	Not regulated
Marine Pollutant	Not regulated
Special precautions for user	Not regulated

Air transport (ICAO/IATA) (a)(c)

UN number	Not regulated
Proper Shipping Name	Not regulated
Transport hazard class(es)	Not regulated
Packing Group	Not regulated
Environmental hazards	Not regulated
Special precautions for user	Not regulated

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1 EU regulations

Authorisations and/or restrictions on use	Consult the supplier.
European Union (EINECS/ELINCS)	Referenced.
WGK number	1

15.1.2 National regulations

USA

TSCA (Toxic Substance Control Act)	All chemicals listed
SARA 311/312 - Hazard Categories	None
SARA 302 - Extremely Hazardous Substances	Listed –None
SARA 313 - Toxic Chemicals	Listed –None
CERCLA (Comprehensive Environmental Response Compensation and Liability Act)	Listed –None
CAA (Clean Air Act 1990)	Listed – None.
CWA (Clean Water Act)	Listed – None.
State Right to Know Lists	Listed – MA, NJ, PA
Proposition 65 (California)	Listed – None

Canada

WHMIS Classification D2B –Material having other toxic effects
 Canada (DSL/NDSL): Sodium Thiosulfate Pentahydrate (10102-17-7) is not listed on the Canadian DSL or NDSL; the anhydrous form is listed. All other components of this product identified by CAS number are listed on the DSL or NDSL.
 Canada Ingredient Disclosure List (CIDL) Listed as required.

15.2 Chemical Safety Assessment: Irritant to eyes, skin, and respiratory system**SECTION 16: OTHER INFORMATION**

The following sections contain revisions or new statements: 1-16.

LEGEND

ACGIH	American Conference of Governmental Industrial Hygienists	NA	not applicable, not available
AICS	Australian Inventory of Chemical Substances	NIOSH	National Institute for Occupational Safety and Health
ANSI	American National Standards Institute	ND	not determined
atm	atmosphere (pressure unit)	NFPA	National Fire Prevention Association
BOD	biological oxygen demand	NTP	National Toxicology Program
CAS	Chemical Abstracts Service	OC	open cup
CC	closed cup	OSHA	Occupational Safety and Health Administration
CDTA	Chemical Drug and Trafficking Act	Part	partition
COC	Cleveland Open Cup	PEL	permissible exposure limits
COD	chemical oxygen demand	ppb	parts per billion
coeff.	coefficient	PPE	personal protective equipment
CFR	Code of Federal Regulations	ppm	parts per million
CPR	cardio-pulmonary resuscitation	psi	pounds per square inch
DEA	Drug Enforcement Agency	RCRA	Resource Conservation and Recovery Act
DOT	Department of Transportation	RQ	Reportable quantity
DSCL	Dangerous Substances Classification and Labeling	RTK	Right to Know
EEC	European Economic Community	SARA	Superfund Amendments and Reauthorization Act
FDA	Food and Drug Administration	STEL	short-term exposure limit
HMIS	Hazardous Materials Information System	SUSDP	Standard for the Uniform Scheduling of Drugs and Poisons (Australia)
IARC	International Agency for Research on Cancer	TCC	Tagliabue Closed Cup
IDLH	immediate danger to life or health	TDG	Transportation of Dangerous Goods
kg	kilogram	TPQ	threshold planning quantity
L	liter	TQ	threshold quantity
LC50	median lethal concentration	TSCA	Toxic Substances Control Act
LD50	median lethal dose	TWA	time-weighted average
LEL	lower explosive limit	UEL	upper explosive limit
mg	milligram	WES	Workplace Exposure Standard (New Zealand)
mL	milliliter	WHMIS	Workplace Hazardous Material Information System

References: RTECS, CAS Registry, EINECS/ESIS, *Casarett & Doull's Toxicology*, *Goldfrank's Toxicological Emergencies*, Manufacturer Information

Risk Phrases and Safety Phrases

R36: Irritating to eyes.

R36/37/38: Irritating to eyes, respiratory system and skin.

Hazard statement(s) and Precautionary statement(s)

H303 May be harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335: May cause respiratory irritation.

H402 Harmful to aquatic life.

Training advice: None

Additional Information: Ingredient names for labeling purposes (CAS #) - Water (7732-18-5), Ammonium Thiosulfate (7783-18-8), Diethylenetriamine Pentaacetic Acid mono iron, Diammonium Salt (85959-68-8), Ethylenediamine Tetraacetic Acid (60-00-4), Potassium Bromide (7758-02-3), Sodium Thiosulfate Pentahydrate (10102-17-7)

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.