Printing date 05.05.2015 Revision: 05.05.2015

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

- · 1.1 Product identifier
- · Trade name: SLM-OE Deletion Liquid
- · 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:

CHEMTREC

1-800-424-9300 (US/Canada) +01 703-527-3887 (International)

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).



health hazard

STOT SE 2 H371 May cause damage to organs.



corrosion

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

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

Eye Dam. 1 H318 Causes serious eye damage.



Acute Tox. 4 H302 Harmful if swallowed.

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



C; Corrosive

R34:

Causes burns.

(Contd. on page 2)

Printing date 05.05.2015 Revision: 05.05.2015

Trade name: SLM-OE Deletion Liquid

(Contd. of page 1)

Xn; Harmful

R20/21/22-68/20/21/22: Harmful by inhalation, in contact with skin and if swallowed. Harmful: possible

risk of irreversible effects through inhalation, in contact with skin and if

swallowed.

· 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:

mercaptosuccinic acid

methanol

hydrochloric acid

mercaptamine hydrochloride

· Hazard statements

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H371 May cause damage to organs.

· Precautionary statements

P260 Do not breathe 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.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

(Contd. on page 3)

Printing date 05.05.2015 Revision: 05.05.2015

Trade name: SLM-OE Deletion Liquid

(Contd. of page 2)

P501

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

- · Hazard description:
- · WHMIS-symbols:

D2B - Toxic material causing other toxic effects

E - Corrosive material



· NFPA ratings (scale 0 - 4)



Health = 3Fire = 0

Reactivity = 0

· HMIS-ratings (scale 0 - 4)



*3 Health = *3 • Fire = 0

REACTIVITY Reactivity = 0

- * Indicates a long term health hazard from repeated or prolonged exposures.
- · HMIS Long Term Health Hazard Substances

67-56-1 methanol

- · 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: 70-49-5	mercaptosuccinic acid	10-25%
EINECS: 200-736-4	Xn R22	
	① Acute Tox. 4, H302	
CAS: 67-56-1	methanol	2,5-10%
EINECS: 200-659-6	∇ R23/24/25-39/23/24/25;	
Index number: 603-001-00-X	♠ Flam. Liq. 2, H225	
	Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331	
	♦ STOT SE 1, H370	

Printing date 05.05.2015 Revision: 05.05.2015

Trade name: SLM-OE Deletion Liquid

	(Con	td. of page 3)
CAS: 156-57-0	mercaptamine hydrochloride	2,5-10%
EINECS: 205-858-1	♦ Acute Tox. 4, H302	
CAS: 7647-01-0	hydrochloric acid	≤ 2,5%
EINECS: 231-595-7	C R34; X Xi R37	
	♦ STOT SE 3, H335	

· 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.
- · 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.

Do not induce vomiting; call for medical help immediately.

· 4.2 Most important symptoms and effects, both acute and delayed

Breathing difficulty

Coughing

Strong caustic effect on skin and mucous membranes.

Gastric or intestinal disorders when ingested.

Nausea in case of ingestion.

· Hazards

Danger of gastric perforation.

Danger of impaired breathing.

Causes serious eye damage.

Harmful if swallowed.

May be harmful if inhaled.

· 4.3 Indication of any immediate medical attention and special treatment needed

Medical supervision for at least 48 hours.

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.

(Contd. on page 5)

Printing date 05.05.2015 Revision: 05.05.2015

Trade name: SLM-OE Deletion Liquid

(Contd. of page 4)

- · 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

Ensure adequate ventilation

Wear protective equipment. Keep unprotected persons away.

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

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

Use limestone to neutralize and absorb spill.

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.

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

Use only in well ventilated areas.

Prevent formation of aerosols.

Avoid splashes or spray in enclosed areas.

- · Information about fire and explosion protection: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles:

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

Store only in the original receptacle.

Unsuitable material for receptacle: aluminium.

Unsuitable material for receptacle: steel.

Provide ventilation for receptacles.

· Information about storage in one common storage facility:

Store away from foodstuffs.

Do not store together with alkalis (caustic solutions).

Store away from oxidising agents.

· Further information about storage conditions: Keep container tightly sealed.

(Contd. on page 6)

Printing date 05.05.2015 Revision: 05.05.2015

Trade name: SLM-OE Deletion Liquid

· 7.3 Specific end use(s) No further relevant information available.

(Contd. of page 5)

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:		
67-56-1 methanol		
Long-term value: 260 mg/m³, 200 ppm Skin		
Long-term value: 260 mg/m³, 200 ppm		
Short-term value: 325 mg/m³, 250 ppm Long-term value: 260 mg/m³, 200 ppm Skin		
Short-term value: 328 mg/m³, 250 ppm Long-term value: 262 mg/m³, 200 ppm Skin; BEI		
Short-term value: 250 ppm Long-term value: 200 ppm Skin		
Short-term value: 325 mg/m³, 250 ppm Long-term value: 260 mg/m³, 200 ppm Skin		
7647-01-0 hydrochloric acid		
Short-term value: 15 mg/m³, 10 ppm Long-term value: 8 mg/m³, 5 ppm		
Ceiling limit: 7 mg/m³, 5 ppm		
Ceiling limit: 7 mg/m³, 5 ppm		
Ceiling limit: 2,98 mg/m³, 2 ppm		
Ceiling limit: 2 ppm		
Ceiling limit: 2 ppm		

- DNELs No further relevant information available.
- · PNECs No further relevant information available.
- · Ingredients with biological limit values:

67-56-1 methanol

BEI (USA) 15 mg/L

Medium: urine Time: end of shift

Parameter: Methanol (background, nonspecific)

· Additional information: The lists valid during the making were used as basis.

(Contd. on page 7)

Printing date 05.05.2015 Revision: 05.05.2015

Trade name: SLM-OE Deletion Liquid

(Contd. of page 6)

- · 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.

Avoid contact with the eves 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: Acid 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.

SECTION 9: Physical and chemical properties

- · 9.1 Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Liquid

(Contd. on page 8)

Printing date 05.05.2015 Revision: 05.05.2015

Trade name: SLM-OE Deletion Liquid

(Contd. of page 7)

Colour: Light yellow • Odour: Slight

· Odour threshold: Not determined.

• **pH-value at 20 °C (68 °F):** 1,0

· Change in condition

Melting point/Melting range: <-4 °C (<25 °F) Boiling point/Boiling range: > 100 °C (> 212 °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.

· 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.

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

Reacts with alkali (lyes).

Corrosive action on metals.

Reacts with oxidising agents.

Toxic fumes may be released if heated above the decomposition point.

(Contd. on page 9)

Printing date 05.05.2015 Revision: 05.05.2015

Trade name: SLM-OE Deletion Liquid

(Contd. of page 8)

- 10.4 Conditions to avoid No further relevant information available.
- 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)

Hydrogen chloride (HCI)

Chlorine

SECTION 11: Toxicological information

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

· LD/LC50 values relevant for classification:		
67-56-1 m	nethanol	
Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)
Inhalative	LC50/4h	130,7 mg/l (RAT)

- · Primary irritant effect:
- · on the skin: Caustic effect on skin and mucous membranes.
- · on the eye: Strong caustic effect.
- · Sensitisation: No sensitising effects known.
- · Subacute to chronic toxicity: May cause damage to organs.
- · 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:

Harmful

Corrosive

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.

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

May be harmful if inhaled.

Harmful if swallowed.

Causes severe skin burns and eye damage.

- · Repeated dose toxicity: May cause damage to organs through prolonged or repeated exposure.
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction): None.

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.

(Contd. on page 10)

Printing date 05.05.2015 Revision: 05.05.2015

Trade name: SLM-OE Deletion Liquid

(Contd. of page 9)

· 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.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. If the dilution of the use-level pH-value is considerably increased after use, 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.

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

UN3265

· 14.2 UN proper shipping name



Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 5 L (1.3 gal).

· DOT, IATA Corrosive liquid, acidic, organic, n.o.s. (Mercaptosuccinic acid)

• ADR, IMDG 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (MERCAPTOSUCCINIC ACID)

(Contd. on page 11)

Printing date 05.05.2015 Revision: 05.05.2015

Trade name: SLM-OE Deletion Liquid

Trade name: SLW-OE Deletion Liquid	
· 14.3 Transport hazard class(es) · DOT	(Contd. of page 10)
· Class · Label	8 Corrosive substances.
· ADR	
· Class · Label	8 (C3) Corrosive substances.
· IMDG, IATA	
Class Label 14.4 Packing group DOT, ADR, IMDG, IATA 14.5 Environmental hazards: Marine pollutant: 14.6 Special precautions for user Danger code (Kemler): EMS Number: Segregation groups 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	8 Corrosive substances. 8 III No Warning: Corrosive substances. 80 F-A,S-B Acids Not applicable.
Transport/Additional information: ADR Limited quantities (LQ) Excepted quantities (EQ) Transport category Tunnel restriction code	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml 3 E
· IMDG · Limited quantities (LQ)	5L (Contd. on page 12)

Printing date 05.05.2015 Revision: 05.05.2015

Trade name: SLM-OE Deletion Liquid

Excepted quantities (EQ)
 Code: E1

(Contd. of page 11)

Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

UN3265, CORROSIVE LIQUID, ACIDIC, ORGANIC,

N.O.S. (HYDROCHLORIC ACID), 8, III

SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · United States (USA)

· UN "Model Regulation":

- ·SARA
- · Section 355 (extremely hazardous substances):

7647-01-0 hydrochloric acid

· Section 313 (Specific toxic chemical listings):

67-56-1 methanol

7647-01-0 hydrochloric acid

· 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.

· Chemicals known to cause developmental toxicity:

67-56-1 methanol

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

None of the ingredients are listed.

· IARC (International Agency for Research on Cancer)

7631-86-9 silicon dioxide, chemically prepared

7647-01-0 hydrochloric acid

3

· TLV (Threshold Limit Value established by ACGIH)

7647-01-0 hydrochloric acid

A4

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

None of the ingredients are listed.

(Contd. on page 13)

Printing date 05.05.2015 Revision: 05.05.2015

Trade name: SLM-OE Deletion Liquid

(Contd. of page 12)	
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· Canada

· Canadian Domestic Substances List (DSL)

All ingredients are listed.

· Canadian Ingredient Disclosure list (limit 0.1%)

None of the ingredients are listed.

Canadian Ingredient Disclosure list (limit 1%)

7631-86-9 silicon dioxide, chemically prepared

67-56-1 methanol

7647-01-0 hydrochloric acid

· 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

H225	Highly flammable liquid ar	nd vapour.

H290 May be corrosive to metals.

H301 Toxic if swallowed.

H302 Harmful if swallowed.

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

H331 Toxic if inhaled.

H335 May cause respiratory irritation.

H370 Causes damage to organs.

R11 Highly flammable.

R22 Harmful if swallowed.

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R34 Causes burns.

R37 Irritating to respiratory system.

R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

· 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

(Contd. on page 14)

Printing date 05.05.2015 Revision: 05.05.2015

Trade name: SLM-OE Deletion Liquid

(Contd. of page 13)

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)

VOC: Volatile Organic Compounds (USA, EU) DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Met. Corr.1: Corrosive to metals, Hazard Category 1

Acute Tox. 3: Acute toxicity, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4

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

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

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1 STOT SE 2: Specific target organ toxicity - Single exposure, Hazard Category 2

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

· Sources

SDS Prepared by:

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