


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

- 1.1 Product identifier**
 GHS Product Identifier **O E Deletion Fluid**
 Product Code **SLM-OE**
 Chemical Name Mixture
 Trade name **O E Deletion Fluid**
 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 Corrosion 1C (3.2/2), Specific target organ toxicity 2 — single exposure (3.8/2).
2.1.2 Directive 67/548/EEC & Directive 1999/45/EC –Corrosive, 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) **Danger**
 Hazard statement(s) H314: Causes severe skin burns and eye damage.
 H371: May cause damage to organs
 Precautionary Statement(s) P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.
 P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
 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.
 P310: Immediately call a POISON CENTRE or doctor/physician.
- 2.2.2 Label elements According to Directive 67/548/EEC & Directive 1999/45/EC**
 Hazard Symbol
- Risk Phrases R22: Harmful if swallowed.
 R34: Causes burns.
- Safety Phrases S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 S28: After contact with skin, wash with plenty of soap and water.
 S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
 S46 If swallowed, seek medical advice immediately and show this container or label
- 2.3 Other hazards Hazardous under OSHA Hazard Communication Standard (USA), Corrosive, Harmful. HMIS: Health 2, Flammability 0, Reactivity 0.**



HMIS: Health-2, Flammability- 0 Reactivity – 0
 GHS Classification (USA): Irritant (Eyes).Irritant (Skin)
 H302: Harmful if swallowed
 H314: Causes severe skin burns and eye damage.
 H371: May cause damage to organs
 P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.
 P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
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 P301 + P330 + P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 P310: Immediately call a POISON CENTRE or doctor/physician.

WHMIS Classification (Canada): D1B, D2B, E - Corrosive, Immediately Toxic Material, Toxic material causing other toxic effects.

H302: Harmful if swallowed
 H314: Causes severe skin burns and eye damage.
 H318: Causes serious eye damage.
 H335: May cause respiratory irritation.
 P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.
 P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
 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.
 P310: Immediately call a POISON CENTRE or doctor/physician.



2.4 Additional Information

Potential Health Effects







Inhalation	May cause respiratory irritation
Eye Contact	Causes serious eye damage.
Skin Contact	Causes skin irritation.
Ingestion	May be toxic and/or corrosive.

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)
Thiomalic acid	7.0-13.0	70-49-5	200-736-4	NR	3.1/4,3.2/2,3.3/2,3.8/3: H302,H315, H319,H335.
Amorphous silica gel	5.0-20.0	7631-86-9	231-545-4	NR	3.3/2,3.8/3; H319, H335.
Hydrochloric Acid	1.0-5.0	7647-01-0	231-595-7	017-002-01-X	3.2/1B,3.3/1, 3.8/3: H314,H335
2-Mercaptoethylamine hydrochloride	1.0-5.0	156-57-0	205-858-1	NR	3.1/4:H302
Methyl Alcohol	1.0-5.0	67-56-1	200-659-6	603-001-00-X	2.6/2,3.1/3,3.8/1: H225, H301, H311, H331, H370

EC Classification No. 67/548/EEC

Hazardous ingredient(s)	% W/W	CAS No.	EC No.	REACH Registration No.	EC Classification and Risk Phrases
Thiomalic acid	7.0-13.0	70-49-5	200-736-4	NR	 R-22, R36/37/38
Amorphous silica gel	5.0-20.0	7631-86-9	231-545-4	NR	 Xi, R36/37
Hydrochloric Acid	1.0-5.0	7647-01-0	231-595-7	017-002-01-X	 R-34,R37
2-Mercaptoethyl-amine hydrochloride	1.0-5.0	156-57-0	205-858-1	NR	 R22,R37
Methyl Alcohol	1.0-5.0	67-56-1	200-659-6	NR	  R11,R23/24/25, R39/23/24/25

3.3 Additional Information

- For full text of H 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	Immediately wash affected skin with soap and water. If symptoms develop, obtain medical attention.
Eye Contact	Remove contact lenses. Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. If symptoms develop, obtain medical attention.
Ingestion	Do not induce vomiting. Obtain <u>immediate</u> medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Acute: Liquid product is corrosive to eyes and skin.
Delayed and chronic effects: Similar to acute exposures.. Product is toxic by ingestion due to methyl alcohol content. It cannot be made non-toxic.

4.3 Indication of the immediate medical attention and special treatment needed

Treat symptomatically; ingestions may require patient monitoring to include diagnostic testing.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media	Non-combustible.
Unsuitable Extinguishing Media	None

5.2 Special hazards arising from the substance or mixture

Methanol vapors may be emitted from heated containers. Keep containers cool with water spray.

5.3 Advice for fire-fighters

A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

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 product enter drains.

6.3 Methods and material for containment and cleaning up

Soak up with inert absorbent material and dispose accordingly. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

See Also Section 7, 8, 13.

6.5 Additional Information

None

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Wear suitable protective clothing and eye/face protection. Avoid contact with eyes and skin. Avoid ingestion.

- 7.2 Conditions for safe storage, including any incompatibilities**
 Store at ambient temperatures. Store in closed containers.
 Store in a well-ventilated place. Keep/store away from: Water-reactive materials
 Storage Temperature Ambient temperatures.
 Storage Life Not available
 Incompatible materials Water-reactive materials.
- 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:
Thiomalic acid	70-49-5	NE	NE	NE	NE	OSHA
		NE	NE	NE	NE	ACGIH
Amorphous silica gel	7631-86-9	NE	NE	NE	15	OSHA
		NE	15	NE	NE	ACGIH
Hydrochloric acid	7647-01-0	NE	NE	5 Ceiling	7.5 Ceiling	OSHA
		5 Ceiling	7.5 Ceiling	NE	NE	ACGIH
2-Mercaptoethyl-amine hydrochloride	156-57-0	NE	NE	NE	NE	OSHA
		NE	NE	NE	NE	ACGIH
Methyl Alcohol	67-56-1	NE	NE	250	327	OSHA
		200	262	NE	NE	ACGIH

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 glasses.



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.

HMIS PPE Rating:

C – Safety Glasses, Gloves, & Chemical Apron.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Opaque solution.	Colour	Pinkish
Odour	Weak Hot-spring like odour.	Odour Threshold (ppm)	Not available
Melting Point (°C) / Freezing Point (°C)	Not available	Boiling point/boiling range (°C):	100°C
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)	0.5-1.0
Evaporation rate	<1	Vapour Pressure (mm Hg)	NA
Vapour Density (Air=1)	>1	Density (g/ml)	1.11 ± 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 Compounds: 5% maximum by weight.

SECTION 10: STABILITY AND REACTIVITY

- 10.1 Reactivity** Moderate.

10.2 Chemical stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	Can react violently if in contact with - Strong alkalis, Strong oxidizers.
10.4 Conditions to avoid	Extreme temperatures
10.5 Incompatible materials	Strong oxidizers, Strong alkalis.
10.6 Hazardous Decomposition Product(s)	Decomposition will not occur if handled and stored properly. In case of fire, oxides of carbon , hydrocarbons, fumes and smoke may be produced.

SECTION 11: TOXICOLOGICAL INFORMATION

Ingredient	CAS No.	LD ₅₀ (Oral, Rat)	LC ₅₀ (Inhalation, Rat)
Thiomalic acid	70-49-5	NE	NE
Silica Gel Amorphous	7631-86-9	NE	NE
Hydrochloric Acid	7647-01-0	900 mg/kg (Rabbit)	1108 ppm/1Hr (Mouse)
2-mercaptoethylamine hydrochloride	156-57-0	1352 mg/kg (Mouse)	NE
Methyl Alcohol	67-56-1	5600 mg/kg	64000 ppm/ 4H Inhalation

11.1 Information on toxicological effects

11.1.2 Mixtures

Acute toxicity	May be toxic and/or corrosive if swallowed.
Irritation	Severe eye irritant ; skin and respiratory irritant.
Corrosivity	Corrosive to Eyes, Skin and Gastrointestinal tract.
Sensitisation	Not to be expected.
Repeated dose toxicity	Similar to acute exposures.
Carcinogenicity	None of the components present in this formulation at concentrations equal to or greater than 0.1% are listed by the IARC, NTP or OSHA.
Mutagenicity	No data.
Toxicity for reproduction	Methanol is considered to be a developmental toxin by the state of California.

11.2 Other information

No data.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	No data.
12.2 Persistence and degradability	No data.
12.3 Bioaccumulative potential	No data.
12.4 Mobility in soil	No data.
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)(b)		Land transport (Within USA) (a)(b)	
UN number	UN 3264	UN number	UN 3264
Proper Shipping Name - Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric and mercaptosuccinic acid)		Proper Shipping Name - Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric and mercaptosuccinic acid)	
Transport hazard class(es)	8	Transport hazard class(es)	8
Packing Group	III	Packing Group	III
Hazard label(s)	Corrosive	Hazard label(s)	Corrosive
Environmental hazards	No data	Environmental hazards	No data
Special precautions for user	None	Special precautions for user	None

Sea transport (IMDG) (a)(b)

UN number UN 3264
 Proper Shipping Name - Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric and mercaptosuccinic acid)
 Transport hazard class(es) 8
 Packing Group III
 Marine Pollutant NO
 Special precautions for user None

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

UN number UN 3264
 Proper Shipping Name - Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric and mercaptosuccinic acid)
 Transport hazard class(es) 8
 Packing Group III
 Environmental hazards No data
 Special precautions for user None

(a)– Consult with transport provider.

(b)– Check relevant regulations for Special Provisions.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

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	Acute health.
SARA 302 - Extremely Hazardous Substances	Listed – None.
SARA 313 - Toxic Chemicals	Listed – Methyl alcohol (CAS#67-56-1)
CERCLA (Comprehensive Environmental Response Compensation and Liability Act)	Listed – 20,000 lbs as RQ.
CAA (Clean Air Act 1990)	Listed – None.
CWA (Clean Water Act)	Listed – None.
State Right to Know Lists	Listed as required.
Proposition 65 (California)	WARNING: Methanol is a substance known to the state of California to cause developmental toxicity.

Canada

WHMIS Classification	Class D1B – Immediately Toxic Materials, D2B – Materials with other Toxic Effects, E – Corrosive Materials
Canada (DSL/NDSL)	Components of this are listed on the DSL or NDSL, or are otherwise in compliance with the New Substances Notification (NSN) regulations.
Canada Ingredient Disclosure List (CIDL)	Listed – Hydrochloric acid, Methyl Alcohol.

15.2 Chemical Safety Assessment: Corrosive, Harmful or toxic if ingested, Irritant (to eyes), Irritant to skin, eyes, and respiratory system, Causes specific organ injury if ingested (blindness)

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

GMSD00030BF0021

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

Risk Phrases

R11: Highly flammable.

R22: Harmful if swallowed.

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

R34: Causes burns.

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

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.

Hazard statement(s)

H301: Toxic if swallowed.

H302 Harmful if swallowed.

H311: Toxic in contact with skin.

H314: Causes severe skin burns and eye damage.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

H370: Causes damage to organs.

H371: May cause damage to organs.

Training advice: None

Additional Information: Ingredient names for labeling purposes (CAS #) -,Water (7732-18-5), Amorphous silica gel (7631-86-9), Thiomalic acid (70-49-5), Hydrochloric acid (7647-01-0), 2-Mercaptoethylamine hydrochloride (156-57-0), Methyl alcohol (67-56-1).

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.