

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
OSHA GHS

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:** TDP-HL Etching Solution for TDP System
- **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**
The product is not classified as hazardous according to the Globally Harmonized System (GHS).
The product is not classified as hazardous according to the CLP regulation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
- **Information concerning particular hazards for human and environment:**
The product does not have 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**
This product does not have a classification according to the CLP regulation.
The product is not classified as hazardous according to OSHA GHS regulations within the United States.
- **Hazard pictograms** Not Regulated
- **Signal word** Not Regulated
- **Hazard-determining components of labelling:** None.
- **Hazard statements** Not Regulated

(Contd. on page 2)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
OSHA GHS

Printing date 05.05.2015

Revision: 05.05.2015

Trade name: TDP-HL Etching Solution for TDP System

(Contd. of page 1)

- **Precautionary statements** Not Regulated
- **Additional information:**
EUH210 Safety data sheet available on request.
- **Hazard description:**
- **WHMIS-symbols:** Not hazardous under WHMIS.
- **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



HEALTH 0 Health = 0
FIRE 0 Fire = 0
REACTIVITY 0 Reactivity = 0

- **HMIS Long Term Health Hazard Substances**

None of the ingredients are listed.

- **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: 56-81-5 EINECS: 200-289-5	glycerol substance with a Community workplace exposure limit	2,5-10%
CAS: 10377-60-3 EINECS: 233-826-7	Magnesium Nitrate Xi R36/37/38; O R8 Ox. Sol. 3, H272 Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	2,5-10%

- **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:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately rinse with water.

(Contd. on page 3)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
OSHA GHS

Printing date 05.05.2015

Revision: 05.05.2015

Trade name: TDP-HL Etching Solution for TDP System

(Contd. of page 2)

If skin irritation is experienced, consult a doctor.

- **After eye contact:**

Protect unharmed eye.

Remove contact lenses if worn, if possible.

Rinse opened eye for several minutes under running water. If symptoms persist, 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**

Methaemoglobinaemia

Nausea in case of ingestion.

Gastric or intestinal disorders when ingested.

- **Hazards** No further relevant information available.

- **4.3 Indication of any immediate medical attention and special treatment needed**

Contains Magnesium nitrate. Consult literature for specific antidotes.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**

- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

- **For safety reasons unsuitable extinguishing agents:** None.

- **5.2 Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

- **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

For large spills, wear protective clothing.

- **6.2 Environmental precautions:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **6.3 Methods and material for containment and cleaning up:**

Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).

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.

(Contd. on page 4)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
OSHA GHS

Printing date 05.05.2015

Revision: 05.05.2015

Trade name: TDP-HL Etching Solution for TDP System

See Section 13 for disposal information.

(Contd. of page 3)

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:

- Substance/product is oxidising when dry.
- 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.
- Provide ventilation for receptacles.

Information about storage in one common storage facility: Store away from foodstuffs.

Further information about storage conditions: Keep container tightly sealed.

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

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:

56-81-5 glycerol

PEL (USA)	Long-term value: 15* 5** mg/m ³ mist; *total dust **respirable fraction
TLV (USA)	TLV withdrawn-insufficient data human occup. exp.
EL (Canada)	Long-term value: 10* 3** mg/m ³ *mist; **mist, resirable
EV (Canada)	Long-term value: 10 mg/m ³

- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.
- **Additional information:** The lists valid during the making were used as basis.

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.
- Wash hands before breaks and at the end of work.
- Do not inhale gases / fumes / aerosols.
- Avoid contact with the eyes and skin.

(Contd. on page 5)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
OSHA GHS

Printing date 05.05.2015

Revision: 05.05.2015

Trade name: TDP-HL Etching Solution for TDP System

(Contd. of page 4)

- **Respiratory protection:**
Not required under normal conditions of use.
For large spills, respiratory protection may be advisable.

- **Protection of hands:**



Protective 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**

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.

- **Eye protection:**



Safety glasses

- **Body protection:**

Not required under normal conditions of use.
Protection may be required for spills.

- **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
Colour: Colourless

- **Odour:** Slight

- **Odour threshold:** Not determined.

- **pH-value at 20 °C (68 °F):** 4,5-5,5

- **Change in condition**

Melting point/Melting range: Not Determined.
Boiling point/Boiling range: > 100 °C (> 212 °F)

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Not applicable.

(Contd. on page 6)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
OSHA GHS

Printing date 05.05.2015

Revision: 05.05.2015

Trade name: TDP-HL Etching Solution for TDP System

(Contd. of page 5)

- **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.
- **Oxidising properties:** Contains oxidizing agent.
- **Vapour pressure:** Not determined.
- **Density at 20 °C (68 °F):** 1,0-1,1 g/cm³ (8,345-9,18 lbs/gal)
- **Relative density:** Not determined.
- **Vapour density:** Not determined.
- **Evaporation rate:** 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 acids.
Reacts with alkali (lyes).
- **10.4 Conditions to avoid:** Avoid acids.
- **10.5 Incompatible materials:** Oxidizers, strong bases, strong acids
- **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Nitrogen oxides (NO_x)
Toxic metal oxide smoke

(Contd. on page 7)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
OSHA GHS

Printing date 05.05.2015

Revision: 05.05.2015

Trade name: TDP-HL Etching Solution for TDP System

(Contd. of page 6)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values relevant for classification:** None.
- **Primary irritant effect:**
- **on the skin:** Slight irritant effect on skin and mucous membranes.
- **on the eye:** Slight irritant effect on eyes.
- **Sensitisation:** No sensitising effects known.
- **Subacute to chronic toxicity:** No further relevant information available.
- **Additional toxicological information:**
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.
- **Acute effects (acute toxicity, irritation and corrosivity):** None.
- **Repeated dose toxicity:** No further relevant information available.
- **CMR effects (carcinogenicity, 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.
- **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.
- **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**
Smaller quantities can be disposed of with household waste.
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.

(Contd. on page 8)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
OSHA GHS

Printing date 05.05.2015

Revision: 05.05.2015

Trade name: TDP-HL Etching Solution for TDP System

(Contd. of page 7)

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**
- DOT, ADR, ADN, IMDG, IATA Not Regulated
- **14.2 UN proper shipping name**
- DOT, ADR, ADN, IMDG, IATA Not Regulated
- **14.3 Transport hazard class(es)**
- DOT, ADR, ADN, IMDG, IATA
- **Class** Not Regulated
- **14.4 Packing group**
- DOT, ADR, IMDG, IATA Not Regulated
- **14.5 Environmental hazards:**
- **Marine pollutant:** No
- **14.6 Special precautions for user** Not applicable.
- **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

SECTION 15: Regulatory information

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

- **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

- **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:**

None of the ingredients are listed.

(Contd. on page 9)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
OSHA GHS

Printing date 05.05.2015

Revision: 05.05.2015

Trade name: TDP-HL Etching Solution for TDP System

(Contd. of page 8)

- **Carcinogenic Categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

- **IARC (International Agency for Research on Cancer)**

7631-86-9 | silicon dioxide

3

- **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

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

None of the ingredients are listed.

- **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

- **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**

H272 May intensify fire; oxidiser.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

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

R8 Contact with combustible material may cause fire.

- **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

ACGIH: American Conference of Governmental Industrial Hygienists

(Contd. on page 10)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
OSHA GHS

Printing date 05.05.2015

Revision: 05.05.2015

Trade name: TDP-HL Etching Solution for TDP System

(Contd. of page 9)

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)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Ox. Sol. 3: Oxidising Solids, Hazard Category 3
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Sources

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com