




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

- 1.1 Product identifier**  
 GHS Product Identifier **SDP - α STL Solution B**  
 Product Code **SDP - α STL Solution B**  
 Chemical Name **Mixture**  
 Trade name **SDP - α STL Solution B**  
 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, Respiratory Sensitizer 1, (3.2/2, 3.3/2, 3.4/1)**  
**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) **Danger**  
 Hazard statement(s) **H315 Causes skin irritation.**  
**H319: Causes serious eye irritation.**  
**H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.**  
 Precautionary Statement(s) **P261 Avoid breathing mist/ vapours/ spray.**  
**P281: Use personal protective equipment as required.**  
**P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**  
**P304 + P341: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.**
- 2.2.2 Label elements According to Directive 67/548/EEC & Directive 1999/45/EC**  
 Hazard Symbol   
 Risk Phrases **R36/38: Irritating to eyes and skin.**  
**R42 May cause sensitization by inhalation.**  
 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.**  
**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):Irritant (Eyes, Skin).   
**H319: Causes serious eye irritation.**  
**H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.**

P261 Avoid breathing mist/ vapours/ spray.  
 P281: Use personal protective equipment as required.  
 P304 + P341: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 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): D2A, D2B - Material causing other toxic effects. Respiratory sensitiser, Skin/Eye irritant.**  
 H316: Causes mild skin irritation.    
 H319: Causes serious eye irritation.  
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
 P280 Wear protective gloves/ eye protection/ face protection.  
 P304 + P341: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 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 irritation. May cause sensitization by inhalation.

Eye Contact Causes moderate eye irritation.


Skin Contact May cause irritation. Repeated or prolonged skin overexposure may cause dermatitis.

Ingestion Chronic ingestion exposure may have adverse effects on the kidneys and liver.

**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)
Protease Bacillus licheniformis (Subtilisin)	3-7	9014-01-1	232-752-2	NA	   3.2/2, 3.3/1, 3.4/1, 3.5/3; H315, H318, H334, H335
1,2-Propylene Glycol	30-50	57-55-6	200-338-0	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
Protease Bacillus licheniformis (Subtilisin)	3-7	9014-01-1	232-752-2	NA	 Xn, R37/38, R41, R42
1,2-Propylene Glycol	30-50	57-55-6	200-338-0	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. If symptoms develop, obtain medical attention.

Ingestion Do not induce vomiting. Obtain immediate medical attention.

**4.2 Most important symptoms and effects, both acute and delayed****Acute:** Liquid product is irritant to eyes and skin. Sen: Capable of causing respiratory sensitisation**Delayed and chronic effects:** Similar to acute exposures.**4.3 Indication of the immediate medical attention and special treatment needed**

Treat symptomatically.

**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** None
- 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** None
- 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** All employees who handle this material should be trained to handle it safely. Wear suitable protective clothing and eye/face protection. Avoid contact with eyes. Avoid ingestion.
- 7.2 Conditions for safe storage, including any incompatibilities** Store at ambient temperatures. Store in a closed container. Store in a well-ventilated place. Keep/store away from: Strong acids, Strong bases and oxidizers.
- Storage Temperature Ambient temperatures.  
Storage Life Not available  
Incompatible materials Strong oxidizing agents, Strong acids/bases.
- 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 <sup>3</sup> )	STEL (ppm)	STEL (mg/m <sup>3</sup> )	Note:
Subtilisin *	9014-01-1	NE	NE	NE	0.00006mg/m <sup>3</sup>	OSHA*
		NE	0.00006mg/m <sup>3</sup>	NE	NE	ACGIH TLV*
Propylene Glycol	57-55-6	NE	NE	NE	NE	None

\* Ceiling Limits for both ACGIH and OSHA values. Compliance with the subtilisins ceiling limit is assessed by sampling with a high volume sampler (600-800 liters per minute) for at least 60 minutes.

**8.1.2 Biological limit value**

Biological limit value = 0.00006mg/m<sup>3</sup> as a ceiling value for *Subtilisin* protease listed under NIOSH in the USA.

**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.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

Appearance	Clear Liquid	Colour	Yellowish
Odour	Yeast like	Odour Threshold (ppm)	Not available
Melting Point (°C) / Freezing Point (°C)	Not available	Boiling point/boiling range (°C):	212°F (100°C)
Flash Point (°C)	Not 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)	7.4± 0.2
Evaporation rate	<1	Vapour Pressure (mm Hg)	17mm Hg @20°C
Vapour Density (Air=1)	>1	Density (g/ml)	1.1 ± 0.005
Solubility (Water)	Complete	Solubility (Other)	Not available
Partition Coefficient (n-Octanol/water)	Not available	Viscosity (mPa.s)	Like water

**9.2 Other information** Volatile Organic Compound (VOC) Content: 550 g / L per EPA Method 24 (does not include water). VOC weight %: <5% (calc) per California CARB methodology.

**SECTION 10: STABILITY AND REACTIVITY**

<b>10.1 Reactivity</b>	None
<b>10.2 Chemical stability</b>	Stable under normal conditions.
<b>10.3 Possibility of hazardous reactions</b>	Can react violently if in contact with - strong acids, oxidizers.
<b>10.4 Conditions to avoid</b>	Extreme temperatures
<b>10.5 Incompatible materials</b>	Strong oxidizers, strong acids
<b>10.6 Hazardous Decomposition Product(s)</b>	Oxides of carbon, hydrocarbons, fumes, smoke.

**SECTION 11: TOXICOLOGICAL INFORMATION**

Ingredient	CAS No.	LD <sub>50</sub> (Oral, Rat)	LC <sub>50</sub> (Inhalation, Rat)
Subtilisin	9014-01-1	2,000 mg/kg	No Data
Propylene Glycol	57-55-6	20,000 mg/kg	No Data

**11.1 Information on toxicological effects****11.1.2 Mixtures**

Acute toxicity	May be harmful if swallowed..
Irritation	Moderate Eye irritant, Mild skin irritant.
Corrosivity	No data
Sensitisation	May cause allergic respiratory reaction.
Repeated dose toxicity	Persons previously sensitized may develop asthmatic symptoms.
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	Not to be expected.
Toxicity for reproduction	No data

**11.2 Other information** None

**SECTION 12: ECOLOGICAL INFORMATION**

<b>12.1 Toxicity</b>	No environmental hazards have been reported or known.
<b>12.2 Persistence and degradability</b>	No data.
<b>12.3 Bioaccumulative potential</b>	Does not bioaccumulate.
<b>12.4 Mobility in soil</b>	No data.
<b>12.5 Results of PBT and vPvB assessment</b>	No data.
<b>12.6 Other adverse effects</b>	No data.

**SECTION 13: DISPOSAL CONSIDERATIONS**

<b>13.1 Waste treatment methods</b>	Send to a licensed recycler, reclaimer or incinerator. Avoid release to the environment.
<b>13.2 Additional Information</b>	None

**SECTION 14: TRANSPORT INFORMATION****Land transport (ADR/RID)**

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

**Land transport (Within USA)**

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

**Sea transport (IMDG)**

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

**Air transport (ICAO/IATA)**

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

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

<b>SECTION 15: REGULATORY INFORMATION</b>
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**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 Hazard.
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 – NJ, PA
Proposition 65 (California)	Listed – None.

**Canada**

WHMIS Classification	Class D2A & D2B – Material causing other toxic effects.
Canada (DSL/NDSL)	Protease Bacillus licheniformis (9014-01-1) is not listed on the Canadian DSL or NDSL. All other components of this product identified by CAS number are listed on the DSL or NDSL.
Canada Ingredient Disclosure List (CIDL)	Listed – None

**15.2 Chemical Safety Assessment: Irritant (eye/skin), sensitizer/ allergen.**

<b>SECTION 16: OTHER INFORMATION</b>
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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**

R37/38 Irritating to respiratory system and skin.

R41 Risk of serious damage to eyes.

R42 May cause sensitization by inhalation

**Hazard statement(s)**

H315 Causes skin irritation.

H318 Causes serious eye damage.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

**Training advice:** None

**Additional Information: Ingredient names for labeling purposes (CAS #)** - Water (7732-18-5), Propylene Glycol (55-57-6), Bacillus Subtilisin (9014-01-1), Sodium Bicarbonate (144-55-8).

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