SAFETY DATA SHEET

Section 1: Identification

Product identifier **Proteomic Stabilizer PROT1**

Other means of identification

Product code PROT1, PROT1-250ML, PROT1-1L, MTS1P-100/CS

Recommended use of the chemical and restrictions on use

Recommended use Stabilization of whole blood samples.

Restrictions on use Research use only.

Details of manufacturer or importer

Company name Smart Tube, Inc.

Address 6658 W. Sunset Road, Suite 100
Las Vegas, NV 89118
USA

Website www.smarttubeinc.com

For product information call +1 855 397 8467

For emergencies only call CHEMTREC: +64 9-801 0034
0800 425 459 (Toll Free - Mobile Enabled)

Section 2: Hazard identification

Classification of the hazardous chemical

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 5
	Acute toxicity, inhalation	Category 3
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1
	Sensitization, skin	Category 1
	Germ cell mutagenicity	Category 2
	Carcinogenicity	Category 1A
	Specific target organ toxicity following single exposure	Category 3 respiratory tract irritation
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3

Label elements, including precautionary statements

Hazard symbol(s)

Skull and crossbones | Corrosion | Health hazard

Signal word Danger

Hazard statement(s) May be harmful if swallowed. Toxic if inhaled. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause cancer. May cause respiratory irritation. Harmful to aquatic life.

Precautionary statement(s)

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing mist/vapours. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response	IF exposed or concerned: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison centre/doctor.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards which do not result in classification	None.
HSNO classification	6.1C - Substances that are acutely toxic- Toxic 6.1E - Substances that are acutely toxic – May be harmful 6.1E - Substances that are acutely toxic – May be harmful, Respiratory tract irritant 6.3A - Substances that are irritating to the skin 6.5B - Substances that are contact sensitisers 6.6B - Substances that are suspected human mutagens 6.7A - Substances that are known or presumed human carcinogens 8.3A - Substances that are corrosive to ocular tissue 9.1D - Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action
Supplemental information	None.

Section 3: Composition/information on ingredients

Substance or mixture Mixture

Chemical property	CAS Number	Concentration (%)
Diethylene glycol	111-46-6	3 - 7
Formaldehyde	50-00-0	3 - 7
Sodium chloride	7647-14-5	1 - 3

Composition comments All concentrations are in percent by weight unless otherwise indicated.
Components not listed are either non-hazardous or are below reportable limits.

Section 4: First-aid measures

Description of necessary first aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a poison center or doctor/physician.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.
Personal protection for first-aid responders	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.
Symptoms caused by exposure	Skin irritation. May cause redness and pain. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.
Medical attention and special treatment	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

Section 5: Fire-fighting measures

Extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Extinguishing media to avoid	No restrictions known.
HAZCHEM Code Number	None.
Specific hazards during fire fighting	During fire, hazardous combustion products are released that may include: Carbon oxides.
Special fire fighting procedures	Move containers from fire area if you can do so without risk.
Protection of fire-fighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Hazards from combustion products	Carbon oxides. Sodium oxides. Potassium oxides. Chlorine compounds.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Keep unnecessary personnel away. Wear appropriate personal protective equipment.
For emergency responders	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapours. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
Methods and materials for containment and cleaning up	This product is miscible in water. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Retain and dispose of contaminated wash water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

Section 7: Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing mist/vapours. Do not get this material in contact with eyes. Avoid contact with skin and clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see section 10 of the SDS).

Section 8: Exposure controls/personal protection

Control parameters Follow standard monitoring procedures.

Occupational exposure limits

New Zealand. WES. (Workplace Exposure Standards)

Components	Type	Value
Diethylene glycol (CAS 111-46-6)	TWA	101 mg/m3
		23 ppm
Formaldehyde (CAS 50-00-0)	STEL	0.6 ppm
	TWA	0.3 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Formaldehyde (CAS 50-00-0)	STEL	0.3 ppm
	TWA	0.1 ppm

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Diethylene glycol (CAS 111-46-6)	TWA	101 mg/m3
		23 ppm
Formaldehyde (CAS 50-00-0)	STEL	2.5 mg/m3
		2 ppm
	TWA	2.5 mg/m3
		2 ppm

Australia. National Workplace OELs (Workplace Exposure Standards for Airborne Contaminants, Appendix A)

Components	Type	Value
Diethylene glycol (CAS 111-46-6)	TWA	100 mg/m3
		23 ppm
Formaldehyde (CAS 50-00-0)	STEL	2.5 mg/m3
		2 ppm
	TWA	1.2 mg/m3
		1 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, for example personal protective equipment (PPE)

Eye/face protection When working with liquids wear splash-proof chemical goggles and face shield unless full facepiece respiratory protection is worn.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Nitrile or neoprene gloves are recommended.
- material thickness: 3.9 mm
- break through time: 120 min
Other suitable gloves can be recommended by the glove supplier.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Chemical respirator with organic vapour cartridge and full facepiece. Respiratory protection should meet Australian/New Zealand Standards AS/NZS 1716 and AS/NZS 1715. Check with respiratory protective equipment suppliers.

Thermal hazards No protection is ordinarily required under normal conditions of use.

Hygiene measures Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

Section 9: Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Colour Colourless.

Odour Formaldehyde.

Odour threshold Not determined.

pH 7.8

Melting point/freezing point Property has not been measured.

Initial boiling point and boiling range 100 °C (212 °F)

Flash point Does not flash.

Evaporation rate Property has not been measured.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not applicable.

Explosive limit – upper (%) Not applicable.

Vapour pressure Property has not been measured.

Vapour density Property has not been measured.

Relative density Property has not been measured.

Solubility(ies)

Solubility (water) Miscible in water.

Partition coefficient (n-octanol/water)	Not applicable, product is a mixture.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Property has not been measured.
Kinematic viscosity	Property has not been measured.

Other physical and chemical parameters

Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
Particle size	Not applicable, material is a liquid.
Viscosity	1 cP (25 °C (77 °F))

Section 10: Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidising agents.
Hazardous decomposition products	No hazardous decomposition products are known.

Section 11: Toxicological information

Information on likely routes of exposure

Inhalation	Toxic if inhaled.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye damage.
Ingestion	May be harmful if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Skin irritation. May cause redness and pain. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.

Information on toxicological effects

Acute toxicity Toxic if inhaled. May be harmful if swallowed.

Components	Species	Test Results
Diethylene glycol (CAS 111-46-6)		
Acute		
Dermal		
LD50	Rabbit	11890 mg/kg
Formaldehyde (CAS 50-00-0)		
Acute		
Inhalation		
Vapour		
LC50	Rat	< 0.58 mg/l, 4 Hours
Oral		
LD50	Rat	460 mg/kg
Other		
LD50	Rabbit	270 mg/kg

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory irritation	May cause respiratory irritation.

Respiratory or skin sensitisation

ACGIH sensitisation

Formaldehyde (CAS 50-00-0)	Dermal sensitisation Respiratory sensitisation

Respiratory sensitisation Does not meet classification criteria.

Skin sensitisation May cause an allergic skin reaction.

Germ cell mutagenicity Suspected of causing genetic defects.

Carcinogenicity May cause cancer.

ACGIH Carcinogens

Formaldehyde (CAS 50-00-0) A1 Confirmed human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Formaldehyde (CAS 50-00-0) 1 Carcinogenic to humans.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Narcotic effects Not expected.

Chronic effects Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

Further information Symptoms may be delayed.

Section 12: Ecological information

Ecotoxicity Harmful to aquatic life.

Components		Species	Test Results
Formaldehyde (CAS 50-00-0)			
Aquatic			
Algae	EC50	Desmodesmus subspicatus	3.48 mg/l, 72 hours
Crustacea	LC50	Daphnia pulex	5.8 mg/l, 48 hours
Fish	LC50	Morone saxatilis	6.7 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient n-octanol / water (log Kow)

Formaldehyde (CAS 50-00-0) 0.35

Mobility in soil This product is miscible in water. Expected to be mobile in soil.

Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation potential.

Section 13: Disposal considerations

Disposal methods Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Residual waste Dispose in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Special precautions to be taken during disposal Dispose in accordance with all applicable regulations.

Method of disposal that should not be used None known.

Section 14: Transport information

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

Section 15: Regulatory information

Applicable regulations

New Zealand Inventory of Chemicals (NZIoC): Registration status

Diethylene glycol (CAS 111-46-6)	HSNO Approved
Formaldehyde (CAS 50-00-0)	HSNO Approved

Section 16: Other information

References

ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
EPA: AQUIRE database
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity
NLM: Hazardous Substances Data Base
National Toxicology Program (NTP) Report on Carcinogens

Issued by

Not available.

Prepared by

Not available.

Disclaimer

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