

# SAFETY DATA SHEET

## 1. Identification

<b>Name of the substance or mixture (trade name)</b>	<b>Proteomic Stabilizer PROT1</b>
<b>Product code</b>	PROT1, PROT1-250ML, PROT1-1L, MTS1P-100/CS
<b>Major recommended uses for the substance or mixture</b>	Stabilization of whole blood samples.
<b>Specific restrictions for use of the substance or mixture</b>	Research use only.
<b>Manufacturer/Importer/Distributor information</b>	
<b>Company name</b>	Smart Tube, Inc.
<b>Address</b>	6658 W. Sunset Road, Suite 100 Las Vegas, NV 89118 USA
<b>Website</b>	www.smarttubeinc.com
<b>For product information call</b>	+1 855 397 8467
<b>For emergencies only call</b>	CHEMTREC: +55 21 3958-1449 (Rio De Janeiro) +55 11 4349-1359 (Sao Paulo) 0800 892 0479 (Toll Free - Mobile Enabled)

## 2. Hazards identification

### Classification of the substance or mixture

The product has been assessed and/or tested for its physical, health and environmental hazards following the regulations ABNT NBR 14725-4: (Safety data sheet for chemicals (SDS)) (Aug. 26, 2009) The classification of the substance or mixture has been performed in accordance with ABNT NBR 14725-2.

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	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 1A
	Germ cell mutagenicity	Category 2
	Carcinogenicity	Category 1A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 3

### GHS labeling elements, including precautionary statements

#### Hazard symbol(s)



#### 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. Avoid breathing mist/vapors. Wear protective gloves/protective clothing/eye protection/face protection.

<b>Response</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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 CENTER/doctor.
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed.
<b>Disposal</b>	Not assigned.
<b>Other hazards which do not result in classification</b>	None known.
<b>Supplemental information</b>	None.
<b>Other information</b>	The Safety Information Sheet Chemicals of hazardous chemical can be obtained through phone, email or on the company website.

### 3. Composition/information on ingredients

#### Mixture

Common chemical name or technical name	CAS number	Concentration or concentration range
Diethylene glycol	111-46-6	3 - 7
Formaldehyde	50-00-0	3 - 7
Sodium chloride	7647-14-5	1 - 3

<b>Composition comments</b>	All concentrations are in percent by weight unless otherwise indicated. Components not listed are either non-hazardous or are below reportable limits.
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### 4. First-aid measures

#### First-aid measures

<b>Inhalation</b>	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.
<b>Skin contact</b>	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.
<b>Eye contact</b>	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.
<b>Ingestion</b>	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.
<b>Most important symptoms/effects, acute and delayed</b>	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.
<b>Personal protection for first-aid responders</b>	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.
<b>Notes to physician</b>	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

### 5. Fire-fighting measures

#### Means of fire extinguishing

<b>Suitable extinguishing media</b>	Use fire-extinguishing media appropriate for surrounding materials.
<b>Unsuitable extinguishing media</b>	No restrictions known.

<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
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<b>Special fire fighting procedures</b>	Move containers from fire area if you can do so without risk.
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<b>Protective measures taken by firefighting crews</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
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<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
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<b>General fire hazards</b>	No unusual fire or explosion hazards noted.
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## 6. Control measures for spills and leaks

### Personal precautions, protective equipment and emergency procedures

**To be taken by those who are not involved in rendering emergency services** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate personal protective equipment.

**To be taken by those who are involved in rendering emergency services** Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Use personal protection recommended in Section 8 of the SDS. Avoid breathing mist/vapors. 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.

**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.

**Other issues relating to spills and releases** Environmental manager must be informed of all major releases.

**Emergency procedures** Ventilate the contaminated area. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent product from entering drains. Never return spills to original containers for re-use.

## 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/vapors. 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).

## 8. Exposure controls/personal protection

**Control parameters** Follow standard monitoring procedures.

### Occupational exposure limits

**Brazil. OELs (Ordinance No. 3214, 6/8/78, NR-15, Annex 11 (amended through ACGIH))**

Components	Type	Value
Formaldehyde (CAS 50-00-0)	Ceiling	2.3 mg/m <sup>3</sup>
		1.6 ppm

**US. ACGIH Threshold Limit Values**

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

### Personal protective measures

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

**Skin protection**

<b>Hand protection</b>	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.
<b>Other</b>	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
<b>Respiratory protection</b>	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 vapor cartridge and full facepiece. Check with respiratory protective equipment suppliers.
<b>Thermal hazards</b>	No protection is ordinarily required under normal conditions of use.
<b>Hygiene measures</b>	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.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Colorless.
<b>Odor</b>	Formaldehyde.
<b>Odor threshold</b>	Not determined.
<b>pH</b>	7.8
<b>Melting point/freezing point</b>	Property has not been measured.
<b>Initial boiling point and boiling temperature range</b>	212 °F (100 °C)
<b>Flash point</b>	Does not flash.
<b>Evaporation rate</b>	Property has not been measured.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Explosive limit - lower (%)</b>	Not applicable.
<b>Explosive limit - upper (%)</b>	Not applicable.
<b>Vapor pressure</b>	Property has not been measured.
<b>Vapor density</b>	Property has not been measured.
<b>Relative density</b>	Property has not been measured.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Miscible in water.
<b>Partition coefficient (n-octanol/water)</b>	Not applicable, product is a mixture.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition temperature</b>	Property has not been measured.
<b>Viscosity</b>	1 cP (77 °F (25 °C))

### Other physical and chemical parameters

<b>Explosive properties</b>	Not explosive.
<b>Kinematic viscosity</b>	Property has not been measured.
<b>Oxidizing properties</b>	Not oxidizing.
<b>Particle size</b>	Not applicable, material is a liquid.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.

**Hazardous decomposition products** No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Toxic if inhaled.
<b>Skin contact</b>	Causes skin irritation. May cause an allergic skin reaction.
<b>Eye contact</b>	Causes serious eye damage.
<b>Ingestion</b>	May be harmful if swallowed.

**Symptoms** 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.

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

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

**Skin irritation and corrosion** Causes skin irritation.

**Serious eye damage/eye irritation** Causes serious eye damage.

### Respiratory or skin sensitization

#### ACGIH sensitization

Formaldehyde (CAS 50-00-0)

Dermal sensitization

Respiratory sensitization

**Respiratory sensitization** Does not meet classification criteria.

**Skin sensitization** 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.

**Toxic to reproduction** 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.

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

**Other information** Symptoms may be delayed.

## 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			
Partition coefficient n-octanol / water (log Kow)			
Formaldehyde (CAS 50-00-0)	0.35		
Bioconcentration factor (BCF)	Not available.		
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.		

### 13. Considerations on final disposal

#### Recommended methods for final destination

<b>Residual waste</b>	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.
<b>Contaminated packaging</b>	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.
<b>Local disposal regulations</b>	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.

### 14. Transport information

#### National regulations

##### ANTT

Not regulated as dangerous goods.

#### International regulations

##### 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.

### 15. Regulatory information

<b>Federal regulations</b>	This product is not classified for Transportation in accordance with Resolution ANTT Resolution 5232, of December 14, 2016, as amended. This chemical product safety data sheet was prepared in accordance with the Brazilian Standard (ABNT NBR 14725-4: (Safety data sheet for chemicals (SDS))).
<b>Chemical Products Controlled by the Federal Police (Ordinance No. 240)</b>	
	Not applicable.
<b>Chemical Products for the Manufacture and Synthesis of Narcotics and Psychotropic Subject to Control of the Ministry of Justice (Resolution No. 169 of 15 August 2017, Annex I, List D2)</b>	
	Not listed.
<b>Controlled products that must be reported to the Army (Decree No. 3655, Annex 1, as amended)</b>	
	Not applicable.
<b>Ozone depleting substances (Decree No. 99.280, Annexes A, B, C and E, as amended)</b>	
	Not applicable.
<b>POPs (Decree No. 5.472 promulgates the Stockholm Convention on persistent organic pollutants)</b>	
	Not listed.
<b>Use and physiological effects of chemical products (Decree No. 3665, Annex 3)</b>	
	Not applicable.
<b>International regulations</b>	

**Montreal Protocol**

Not applicable.

**Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Kyoto protocol**

Not applicable.

**Basel Convention**

Not applicable.

**16. Other information**

**Significant information, yet not specifically related to the previous sections**      None known.

**Legends and abbreviations**

ANTT: National Agency of Land Transport.  
EC50: Effective Concentration, 50%.  
IATA: International Air Transport Association.  
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.  
IMDG Code: International Maritime Dangerous Goods Code.  
LC50: Lethal Concentration 50%.  
LD50: Lethal Dose, 50%.  
MARPOL: International Convention for the Prevention of Pollution from Ships.  
STEL: Short-Term Exposure Limit.  
TWA: Time Weighted Average Value.

**Disclaimer**

Smart Tube, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.