

# CHEMICAL PRODUCT SAFETY DATA SHEET

Prepared in accordance with GB/T 16483 and GB/T 17519.

Product name: Proteomic Stabilizer PROT1

Issue date: 23-February-2022

Revision date: -

Version #: 01

## SECTION 1 Chemical product and company identification

Chinese name of chemical	Proteomic Stabilizer PROT1, 血液稳定剂
English name of chemical	Proteomic Stabilizer PROT1
Product code	PROT1, PROT1-250ML, PROT1-1L, MTS1P-100/CS
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: 400 120 4937
<b>Recommended use and Limitations on use</b>	
Recommended use	Stabilization of whole blood samples.
Limitations on use	Research use only.
Issue date	23-February-2022
Revision date	-
Supersedes date	-

## SECTION 2 Hazards identification

Emergency overview	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 irritation to the respiratory system. May cause damage to organs through prolonged or repeated exposure. Prolonged exposure may cause chronic effects. Dangerous for the environment if discharged into watercourses.
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### GHS hazard categories

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 1A Germ cell mutagenicity Category 2 Carcinogenicity Category 1A Specific target organ toxicity, single exposure Category 3 respiratory tract irritation Specific target organ toxicity, repeated exposure (oral) Category 2 (kidneys)
Environmental hazards	Hazardous to the aquatic environment, acute hazard Category 3

### Label elements

#### Pictograms



Signal word Danger

#### Hazard statement

H303	May be harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.

H318	Causes serious eye damage.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H373	May cause damage to organs (kidneys) through prolonged or repeated exposure by ingestion.
H402	Harmful to aquatic life.

**Precautionary statement****Prevention**

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe mist/vapors.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

**Response**

P308 + P313	IF exposed or concerned: Get medical advice/attention.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P311	Call a POISON CENTER/doctor.

**Safety storage**

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

**Disposal**

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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**Physical and chemical hazards** The product is stable and non-reactive under normal conditions of use, storage and transport. No unusual fire or explosion hazards noted.

**Health hazards** 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. May cause damage to organs through prolonged or repeated exposure by ingestion. Prolonged exposure may cause chronic effects.

**Environmental hazards** Harmful to aquatic life.

**Supplemental information** None.

**SECTION 3 Composition/information on ingredients**

Substance/mixture	Mixture		
Chemical name	Concentration (%)	CAS Number	
二甘醇 Diethylene glycol	3 - 7	111-46-6	
甲醛 Formaldehyde	3 - 7	50-00-0	
氯化钠 Sodium chloride	1 - 3	7647-14-5	

**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**

<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 and health effects</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>Expected acute symptoms and delayed symptoms</b>	Skin irritation. Causes serious eye damage. Sensitization. Respiratory tract irritation.
<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.

## SECTION 5 Fire-fighting measures

<b>Extinguishing media</b>	Use fire-extinguishing media appropriate for surrounding materials.
<b>Extinguishing media to avoid</b>	No restrictions known.
<b>Specific hazards</b>	During fire, hazardous combustion products are released that may include: Carbon oxides.
<b>Special fire fighting procedures</b>	Move containers from fire area if you can do so without risk.
<b>Protection of fire-fighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

## SECTION 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	Keep unnecessary personnel away. Wear appropriate personal protective equipment.
<b>For emergency responders</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe 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. Use personal protection recommended in Section 8 of the SDS.
<b>Environmental precautions</b>	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
<b>Clean-up methods and materials and containment measures</b>	<p>This product is miscible in water. Prevent product from entering drains.</p> <p>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.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>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.</p>
<b>Recovery and neutralization</b>	Not applicable.
<b>Prevention of secondary hazards</b>	Environmental manager must be informed of all major releases.

## SECTION 7 Handling and storage

<b>Handling</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe 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.
<b>Storage</b>	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

### Exposure limits

China Components	Type	Value
Formaldehyde (CAS 50-00-0)	MAC	0.5 mg/m3

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

**Monitoring methods** Follow standard monitoring procedures.

**Engineering measures** 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 equipment

**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 vapor cartridge and full facepiece. Check with respiratory protective equipment suppliers.

**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.

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

**Skin and body protection** Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**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.

**Color** Colorless.

**Odor** Formaldehyde.

**Odor threshold** Not determined.

**pH** 7.8

**Melting point/freezing point** Property has not been measured.

**Boiling point, initial boiling point, and boiling range** 212 °F (100 °C)

**Flash point** Does not flash.

**Explosive limit - lower (%)** Not applicable.

**Explosive limit - upper (%)** Not applicable.

**Vapor pressure** Property has not been measured.

**Vapor density** Property has not been measured.

**Relative density** Property has not been measured.

**Density** Not available.

### 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.

**Evaporation rate** Property has not been measured.

**Flammability (solid, gas)** Not applicable.

### Other data

**Explosive properties** 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.
<b>Viscosity</b>	1 cP (77 °F (25 °C))

## SECTION 10 Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>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.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## SECTION 11 Toxicological information

<b>Acute toxicity</b>	Toxic if inhaled. May be harmful if swallowed.
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<b>Components</b>	<b>Species</b>	<b>Test Results</b>
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

<b>Routes of exposure</b>	Inhalation. Ingestion. Skin contact. Eye contact.
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<b>Symptoms</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.
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<b>Skin corrosion/irritation</b>	Causes skin irritation.
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<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.
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### Respiratory or skin sensitization

<b>Respiratory sensitization</b>	Does not meet classification criteria.
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<b>Skin sensitizer</b>	May cause an allergic skin reaction.
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<b>Germ cell mutagenicity</b>	Suspected of causing genetic defects.
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<b>Carcinogenicity</b>	May cause cancer.
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### China OELs for hazardous agents in the workplace: Carcinogen Category

FORMALDEHYDE (CAS 50-00-0)	Carcinogenic to humans.
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### IARC Monographs. Overall Evaluation of Carcinogenicity

Formaldehyde (CAS 50-00-0)	1 Carcinogenic to humans.
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<b>Toxic to reproduction</b>	This product is not expected to cause reproductive or developmental effects.
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<b>Specific target organ toxicity following single exposure</b>	May cause respiratory irritation.
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<b>Specific target organ toxicity following repeated exposure</b>	May cause damage to organs (kidneys) through prolonged or repeated exposure by ingestion.
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<b>Aspiration hazard</b>	Not an aspiration hazard.
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<b>Chronic effects</b>	Prolonged inhalation may be harmful. May cause damage to organs through prolonged or repeated exposure. Prolonged exposure may cause chronic effects.
<b>Other information</b>	Symptoms may be delayed.

## SECTION 12 Ecological information

### Ecotoxicological data

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

**Ecotoxicity** Harmful to aquatic life.

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

**Bioaccumulation** No data available on bioaccumulation.

#### Bioaccumulative potential

##### Octanol/water partition coefficient 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 hazardous effects** The product contains volatile organic compounds which have a photochemical ozone creation potential.

## SECTION 13 Disposal considerations

<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. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

## SECTION 14 Transport information

### CNDG

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

**Transport in bulk according to** Not established.

**Annex II of MARPOL 73/78 and  
the IBC Code**

## SECTION 15 Regulatory information

### Law of the People's Republic of China on Prevention and Control of Occupational Diseases

#### Classification of occupational disease hazards

FORMALDEHYDE (CAS 50-00-0)

### Regulations on the Control over Safety of Dangerous Chemicals

#### Catalog of Hazardous Chemicals

Formaldehyde (CAS 50-00-0)

#### Identification of Major Hazard Installations of Dangerous Chemicals (GB 18218-2018)

Chemical name	CAS number	Threshold quantity (Tons)
Formaldehyde	50-00-0	5

### Regulations on Labor Protection in Workplaces Where Toxic Substances Are Used

#### Directory of Highly Toxic Substances

Formaldehyde (CAS 50-00-0)

**Provision on the Environmental Administration of New Chemical Substances****China Inventory of Existing Chemical Substances**

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**Other regulations**

This safety data sheet was prepared in accordance with GB/T 16483-2008 (Safety Data Sheet for Chemical Products - Content and Order of Sections) and GB/T 17519-2013 (Guidance on the Compilation of Safety Data Sheet for Chemical Products). Measures for the Safe Use of Chemicals in Workplaces

General Rules for Preparation of Precautionary Labels for Chemicals (GB15258-2009 )

Regulations on Labor Protection in Workplaces Where Toxic Products Are Used

Packing Symbol of Dangerous Goods(GB190-2009)

Regulations on the Control over Safety of Dangerous Chemicals

Safety Data Sheet for Chemical Products - Content and Order of Sections (GB/T 16483-2008)

Packing - Pictorial Marking for Handling of Goods (GB/T191-2008)

Guidance on the compilation of safety data sheet for chemical products (GB/T 17519-2013).

**International regulations****Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Montreal Protocol**

Not applicable.

**Kyoto protocol**

Not applicable.

**Basel Convention**

Not applicable.

**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

GB6944-2012: Classification and Code of Dangerous Goods.

GB12268-2012: List of Dangerous Goods.

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