

# SMT1

## Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Issue date: 2020-09-30

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Version: 1.0

### SECTION 1: Identification

#### 1.1. Product identifier

Product name : SMT1  
Product code : Not available

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : SARS-CoV-2 spike glycoprotein solution Reference Material, for laboratory use only

#### 1.3. Details of the supplier of the safety data sheet

National Research Council Canada  
1200 Montreal Road  
Ottawa, K1A 0R6 - Canada  
T 613-993-2359



National Research  
Council Canada

Conseil national de  
recherches Canada

#### 1.4. Emergency telephone number

Emergency number : CANUTEC 1-613-996-6666

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS classification

Not classified

#### 2.2. Label elements

##### GHS labelling

No labelling applicable

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS)

Not applicable

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Product identifier	% (by weight)
Water	(CAS-No.) 7732-18-5	98.6
Sodium chloride	(CAS-No.) 7647-14-5	0.8
4-(2-Hydroxyethyl)piperazine-1-ethanesulfonic acid sodium salt	(CAS-No.) 75277-39-3	0.3
Phosphoric acid, disodium salt	(CAS-No.) 7558-79-4	0.15
SARS-CoV-2 spike protein	(CAS-No.) Not assigned	0.1
Phosphoric acid, potassium salt (1:1)	(CAS-No.) 7778-77-0	0.024
Potassium chloride	(CAS-No.) 7447-40-7	0.02

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

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| First-aid measures after skin contact | : If skin irritation occurs: Wash skin with plenty of water. Obtain medical attention if irritation persists.  |
| First-aid measures after eye contact  | : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| First-aid measures after ingestion    | : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.                                     |

### 4.2. Most important symptoms and effects, both acute and delayed

- |                                     |   |
|-------------------------------------|---|
| Symptoms/effects after inhalation   | : May cause irritation to the respiratory tract.  |
| Symptoms/effects after skin contact | : May cause skin irritation. Repeated exposure may cause skin dryness or cracking.  |
| Symptoms/effects after eye contact  | : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling. |
| Symptoms/effects after ingestion    | : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.  |

### 4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- |                                |   |
|--------------------------------|---|
| Suitable extinguishing media   | : Use extinguishing media appropriate for surrounding fire. |
| Unsuitable extinguishing media | : None known  |

### 5.2. Special hazards arising from the substance or mixture

- |             |   |
|-------------|---|
| Fire hazard | : Products of combustion may include, and are not limited to: oxides of carbon. |
|-------------|---|

### 5.3. Advice for firefighters

- |                                |  |
|--------------------------------|--|
| Protection during firefighting | : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). |
|--------------------------------|--|

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- |                  |  |
|------------------|--|
| General measures | : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. |
|------------------|--|

### 6.2. Methods and material for containment and cleaning up

- |                         |   |
|-------------------------|---|
| For containment         | : Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE). |
| Methods for cleaning up | : Sweep or shovel spills into appropriate container for disposal.   |

### 6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- |                               |   |
|-------------------------------|---|
| Precautions for safe handling | : Avoid contact with skin and eyes. Avoid breathing vapour, mist. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. |
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Hygiene measures : Wash contaminated clothing before reuse. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed, dry and in a well-ventilated place. Keep out of the reach of children. Containers that have been opened must be carefully resealed and kept upright to prevent leakage

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Phosphoric acid, disodium salt (7558-79-4)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable
Phosphoric acid, potassium salt (1:1) (7778-77-0)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable
Water (7732-18-5)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable
Sodium chloride (7647-14-5)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable
Potassium chloride (7447-40-7)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

4-(2-Hydroxyethyl)piperazine-1-ethanesulfonic acid sodium salt (75277-39-3)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

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### SARS-CoV-2 spike protein (Not assigned)

ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

### 8.2. Exposure controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Hand protection	: Wear suitable gloves.
Eye protection	: Safety glasses or goggles are recommended when using product.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Environmental exposure controls	: Avoid release to the environment.
Other information	: Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: No data available
Odour	: Little or no odour
Odour threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not flammable
Vapour pressure	: No data available
Relative vapour density at 20 °C / 68 °F	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

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### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No dangerous reactions known under normal conditions of use.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Heat. Incompatible materials.

### 10.5. Incompatible materials

Strong oxidizers. Strong acids. Reducing agents

### 10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

#### Phosphoric acid, disodium salt (7558-79-4)

LD50 oral rat	17 g/kg
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#### Phosphoric acid, potassium salt (1:1) (7778-77-0)

LD50 oral rat	3200 mg/kg
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#### Water (7732-18-5)

LD50 oral rat	> 90 ml/kg
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#### Sodium chloride (7647-14-5)

LD50 oral rat	3 g/kg
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LC50 inhalation rat	> 42 g/m <sup>3</sup> (Exposure time: 1 h)
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#### Potassium chloride (7447-40-7)

LD50 oral rat	2600 mg/kg
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Skin corrosion/irritation : Based on available data, the classification criteria are not met.

Serious eye damage/irritation : Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation : Based on available data, the classification criteria are not met.

Germ cell mutagenicity : Based on available data, the classification criteria are not met.

Carcinogenicity : Based on available data, the classification criteria are not met.

Reproductive toxicity : Based on available data, the classification criteria are not met.

STOT-single exposure : Based on available data, the classification criteria are not met.

STOT-repeated exposure : Based on available data, the classification criteria are not met.

Aspiration hazard : Based on available data, the classification criteria are not met.

Symptoms/effects after inhalation : May cause irritation to the respiratory tract.

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### Potassium chloride (7447-40-7)

Symptoms/effects after skin contact	: May cause skin irritation. Repeated exposure may cause skin dryness or cracking.
Symptoms/effects after eye contact	: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/effects after ingestion	: May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: May cause long-term adverse effects in the aquatic environment.
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#### Sodium chloride (7647-14-5)

LC50 fish 1	5560 – 6080 mg/L (Exposure time: 96 h - Species: <i>Lepomis macrochirus</i> [flow-through])
EC50 Daphnia 1	1000 mg/L (Exposure time: 48 h - Species: <i>Daphnia magna</i> )
LC50 fish 2	12946 mg/L (Exposure time: 96 h - Species: <i>Lepomis macrochirus</i> [static])
EC50 Daphnia 2	340.7 – 469.2 mg/L (Exposure time: 48 h - Species: <i>Daphnia magna</i> [Static])

#### Potassium chloride (7447-40-7)

LC50 fish 1	1060 mg/L (Exposure time: 96 h - Species: <i>Lepomis macrochirus</i> [static])
EC50 Daphnia 1	825 mg/L (Exposure time: 48 h - Species: <i>Daphnia magna</i> )
LC50 fish 2	750 – 1020 mg/L (Exposure time: 96 h - Species: <i>Pimephales promelas</i> [static])
EC50 Daphnia 2	83 mg/L (Exposure time: 48 h - Species: <i>Daphnia magna</i> [Static])

### 12.2. Persistence and degradability

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Persistence and degradability	Not established
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### 12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established
<b>Sodium chloride (7647-14-5)</b>	
BCF fish 1	(no bioaccumulation)

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product/Packaging disposal recommendations	: This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.
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### SECTION 14: Transport information

#### Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

In accordance with DOT/TDG

Not regulated for transport

#### Additional information

Other information : No supplementary information available.  
Special transport precautions : Do not handle until all safety precautions have been read and understood.

### SECTION 15: Regulatory information

#### 15.1. Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

#### Phosphoric acid, disodium salt (7558-79-4)

CERCLA RQ	5000 lb
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#### 15.2 US State regulations

No additional information available

### SECTION 16: Other information

Issue date : 2020-09-30  
Revision date : 2020-09-30  
Version # : 1.0  
Prepared by : Nexreg Compliance Inc.

#### DISCLAIMER:

*The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.*

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