



The Power to Question

# SAFETY DATA SHEET

Santa Cruz Biotechnology, Inc.

Revision date 25-May-2016

Version 2

## Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

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### 1.1. Product Identifier

Product Name	RIPA Lysis Buffer System (w/out PMSF) VIAL 1: RIPA Lysis Buffer
Product Code	SC-364162
Pure substance/mixture	Substance

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

For research use only. Not intended for diagnostic or therapeutic use.

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

Santa Cruz Biotechnology, Inc. 10410 Finnell Street Dallas, TX 75220 831.457.3800 800.457.3801 scbt@scbt.com	Santa Cruz Biotechnology, Inc. Bergheimer Str. 89-2 69115 Heidelberg, Germany +49.6221.4503 0 +1.800.457.3801 europe@scbt.com
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### 1.4. Emergency telephone number

Chemtrec  
1.800.424.9300 (Within USA)  
+1.703.527.3887 (Outside USA)

## Section 2: HAZARDS IDENTIFICATION

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### 2.1. Classification of the substance or mixture

*Regulation (EC) No 1272/2008*

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

*Classification according to 67/548/EEC*

Hazard symbols Not dangerous

### 2.2. Label Elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

Signal word Not classified

Symbols/Pictograms Not classified

Hazard statements Not classified

### 2.3. Other Hazards

General Hazards Not applicable

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Molecular Weight No information available  
Formula No information available

#### 3.1 Substances

Chemical Name	EC No	CAS No	Weight %	Classification according to 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Water	Present	7732-18-5	96	-	-
Tris HCl 1M stock solution pH 8.0	-	NONE	1	-	-
Sodium Chloride	Present	7647-14-5	1	-	-
Glycols, Polyethylene, Mono(1,1,3,3-tetramethyl butyl)phenyl) ether	-	9036-19-5	1	-	-
Sodium dodecyl sulfate solution CA. 20%	-	NONE	0.5	-	-
Deoxycholic acid sodium monohydrate	-	145224-92-6	0.5	-	-

Full text of R-phrases: see section 16

Full text of H- and EUH-phrases: see section 16

### Section 4: FIRST AID MEASURES

#### 4.1. Description of first aid measures

General advice Consult a physician if necessary.  
Inhalation Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.  
Skin Contact Wash skin with soap and water.  
Eye contact Wash with plenty of water.  
Ingestion Never give anything by mouth to an unconscious person. Clean mouth with water.

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

Symptoms No information available.

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

Note to physicians Treat symptomatically.

### Section 5: FIRE FIGHTING MEASURES

#### 5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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

Specific hazards arising from the chemical No information available  
Hazardous combustion products Carbon oxides.

#### 5.3. Advice for firefighters

Special protective equipment for fire-fighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### Section 6: ACCIDENTAL RELEASE MEASURES



Evaporation rate	No information available
Upper flammability limits	No information available
Lower flammability limit	No information available
Vapor pressure	No information available
Vapor density	No information available
Specific gravity	No information available
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

## Section 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Reactivity Not applicable

### 10.2. Chemical stability

Stability Stable under recommended storage conditions.  
Sensitivity to Mechanical Impact No information available.  
Sensitivity to Static Discharge No information available.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization No information available.  
Possibility of Hazardous Reactions None under normal processing.

### 10.4. Conditions to avoid

Conditions to avoid Extremes of temperature and direct sunlight.

### 10.5. Incompatible materials

Incompatible materials Strong oxidizing agents.

### 10.6. Hazardous decomposition products

Hazardous Decomposition Products Carbon oxides.

## Section 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### Acute toxicity

Product Information Product does not present an acute toxicity hazard based on known or supplied information.  
Unknown acute toxicity 100% of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document mg/l

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg ( Rat )		
Sodium Chloride	= 3 g/kg ( Rat )	> 10 g/kg ( Rabbit )	> 42 g/m <sup>3</sup> ( Rat ) 1 h
Glycols, Polyethylene, Mono(1,1,3,3-tetramethylbutyl)p henyl) ether	= 1700 mg/kg ( Rat ) = 4190 mg/kg ( Rat )		

## Section 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

Ecotoxicity May cause long lasting harmful effects to aquatic life.  
Unknown aquatic toxicity 100% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Sodium Chloride		5560 - 6080: 96 h Lepomis macrochirus mg/L LC50 flow-through 12946: 96 h Lepomis macrochirus mg/L LC50 static 4747 - 7824: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 7050: 96 h Pimephales promelas mg/L LC50 semi-static 6420 - 6700: 96 h Pimephales promelas mg/L LC50 static 6020 - 7070: 96 h Pimephales promelas mg/L LC50 static	340.7 - 469.2: 48 h Daphnia magna mg/L EC50 Static 1000: 48 h Daphnia magna mg/L EC50

### 12.2. Persistence and degradability

Persistence and degradability No information available.

### 12.3. Bioaccumulative potential

Bioaccumulation No information available.

### 12.4. Mobility in soil

Mobility No information available.

### 12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

### 12.6. Other adverse effects

Other adverse effects No information available

### Endocrine Disruptor Information

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Endocrine disrupting potential
Glycols, Polyethylene, Mono(1,1,3,3-tetramethylbutyl)phenyl ether	Group III Chemical		

## Section 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

Waste from residues/unused products Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

## Section 14: TRANSPORT INFORMATION

	<u>RID / ADR</u>	<u>IMDG</u>	<u>ICAO (air) / IATA</u>
	Not regulated	Not regulated	Not regulated
14.1 UN/ID no	-	-	-
14.2 Proper shipping name	-	-	-
14.3 Hazard Class	-	-	-
Subsidiary hazard class / Labels	-	-	-
14.4 Packing Group	-	-	-

<b>14.5 Environmental Hazard</b>	-	-	-
<b>14.6 Special Provisions</b>	-	-	-

## Section 15: REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### National Regulations

Chemical Name	French RG number	Title
Sodium Chloride 7647-14-5	RG 78	

#### **European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

#### International Inventories

**All of the components in the product are on the following Inventory lists**

No information available

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Water	X	X	-	X	-	-	X	X	X	X
Sodium Chloride	X	X	-	X	-	X	X	X	X	X
Glycols, Polyethylene, Mono(1,1,3,3-tetramethylbut yl)phenyl) ether	X	X	-	-	-	X	X	X	X	X

X - Listed

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

### 15.2. Chemical safety assessment

Chemical Safety Report No information available

## Section 16: OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3  
Revision note

No information available  
No information available.

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

#### **Disclaimer**

The information provided in this Material 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

**End of Safety Data Sheet**



The Power to Question

# SAFETY DATA SHEET

Santa Cruz Biotechnology, Inc.

Revision date 11-Aug-2016

Version 1

## Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

---

### 1.1. Product Identifier

Product Name RIPA Lysis Buffer System (w/out PMSF) VIAL 2: Protease inhibitor cocktail in DMSO  
Product Code SC-364162 VIAL 2

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

For research use only. Not intended for diagnostic or therapeutic use.

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

Santa Cruz Biotechnology, Inc. Santa Cruz Biotechnology, Inc.  
10410 Finnell Street Bergheimer Str. 89-2  
Dallas, TX 75220 69115 Heidelberg, Germany  
831.457.3800 +49.6221.4503 0  
800.457.3801 +1.800.457.3801  
scbt@scbt.com europe@scbt.com

### 1.4. Emergency telephone number

Chemtrec  
1.800.424.9300 (Within USA)  
+1.703.527.3887 (Outside USA)

## Section 2: HAZARDS IDENTIFICATION

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### 2.1. Classification of the substance or mixture

*Regulation (EC) No 1272/2008*  
Skin corrosion/irritation Category 2 - (H315)  
Serious eye damage/eye irritation Category 2 - (H319)  
Flammable liquids Category 4

*Classification according to 67/548/EEC*  
Hazard symbols

Not dangerous

### 2.2. Label Elements

Signal word Warning  
Symbols/Pictograms



Hazard statements

H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H227 - Combustible liquid

EUH210 - Safety data sheet available on request  
Precautionary Statements - EU (§28, 1272/2008)

P321 - Specific treatment (see Emergency Phone Number on this label)

### 2.3. Other Hazards

Other hazards Combustible liquid  
General Hazards Not applicable



### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Molecular Weight No information available  
Formula No information available

Chemical Name	EC No	CAS No	Weight %	Classification according to 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
AESBF Hydrochloride	-	30827-99-7	1.99	Xi;R36/37/38 C;R34	Skin Corr. 1B (H314) Eye Dam. 1 (H318)

Full text of R-phrases: see section 16

Full text of H- and EUH-phrases: see section 16

### Section 4: FIRST AID MEASURES

#### 4.1. Description of first aid measures

General advice Consult a physician if necessary.  
Inhalation Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.  
Skin Contact Wash skin with soap and water.  
Eye contact Wash with plenty of water.  
Ingestion Never give anything by mouth to an unconscious person. Clean mouth with water.

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

Symptoms No information available.

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

Note to physicians Treat symptomatically.

### Section 5: FIRE FIGHTING MEASURES

#### 5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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

Specific hazards arising from the chemical No information available  
Hazardous combustion products Carbon oxides.

#### 5.3. Advice for firefighters

Special protective equipment for fire-fighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### Section 6: ACCIDENTAL RELEASE MEASURES

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

Personal precautions Ensure adequate ventilation, especially in confined areas.  
For emergency responders Use personal protection recommended in Section 8.

#### 6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

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

Methods for containment Prevent further leakage or spillage if safe to do so.  
Methods for cleaning up Pick up and transfer to properly labeled containers.





#### 6.4. Reference to other sections

See Section 12: ECOLOGICAL INFORMATION.

### Section 7: HANDLING AND STORAGE

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#### 7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.  
General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

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

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

#### 7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Material Safety Data Sheet.

### Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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#### 8.1. Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.  
Derived No Effect Level (DNEL) No information available  
Predicted No Effect Concentration (PNEC) No information available.

#### 8.2. Exposure controls

Engineering Controls Showers  
Eyewash stations  
Ventilation systems  
Eye/face protection Wear safety glasses with side shields (or goggles).  
Skin and Body Protection Wear protective gloves and protective clothing.  
Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.  
Environmental exposure controls No information available.

### Section 9: PHYSICAL AND CHEMICAL PROPERTIES

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Physical State liquid  
Appearance No information available  
Odor No information available

#### Property

pH No information available  
Melting point/freezing point No information available  
Boiling point No information available  
Flash point 87 °C CC (closed cup)  
Density No information available  
Evaporation rate No information available  
Upper flammability limits No information available  
Lower flammability limit No information available  
Vapor pressure No information available  
Vapor density No information available  
Specific gravity No information available  
Water solubility No information available  
Solubility in other solvents No information available  
Partition coefficient No information available  
Autoignition temperature No information available

#### Values



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Decomposition temperature	No information available
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

## Section 10: STABILITY AND REACTIVITY

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### 10.1. Reactivity

Reactivity Not applicable

### 10.2. Chemical stability

Stability Stable under recommended storage conditions.  
Sensitivity to Mechanical Impact No information available.  
Sensitivity to Static Discharge No information available.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization No information available.  
Possibility of Hazardous Reactions None under normal processing.

### 10.4. Conditions to avoid

Conditions to avoid Extremes of temperature and direct sunlight.

### 10.5. Incompatible materials

Incompatible materials Strong oxidizing agents.

### 10.6. Hazardous decomposition products

Hazardous Decomposition Products Carbon oxides.

## Section 11: TOXICOLOGICAL INFORMATION

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### 11.1. Information on toxicological effects

#### Acute toxicity

Product Information Product does not present an acute toxicity hazard based on known or supplied information.  
Unknown acute toxicity 1.75E-06% of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 14,848.00 mg/kg

## Section 12: ECOLOGICAL INFORMATION

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### 12.1. Toxicity

Ecotoxicity May cause long lasting harmful effects to aquatic life.  
Unknown aquatic toxicity 2.344% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

### 12.2. Persistence and degradability

Persistence and degradability No information available.

### 12.3. Bioaccumulative potential

Bioaccumulation No information available.



#### 12.4. Mobility in soil

Mobility No information available.

#### 12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

#### 12.6. Other adverse effects

Other adverse effects No information available

### Section 13: DISPOSAL CONSIDERATIONS

#### 13.1. Waste treatment methods

Waste from residues/unused products Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

### Section 14: TRANSPORT INFORMATION

	<u>RID / ADR</u>	<u>IMDG</u>	<u>ICAO (air) / IATA</u>
	Not regulated	Not regulated	Not regulated
14.1 UN/ID no	-	-	-
14.2 Proper shipping name	-	-	-
14.3 Hazard Class	-	-	-
Subsidiary hazard class / Labels	-	-	-
14.4 Packing Group	-	-	-
14.5 Environmental Hazard	-	-	-
14.6 Special Provisions	-	-	-

### Section 15: REGULATORY INFORMATION

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

##### National Regulations

##### European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

##### International Inventories

All of the components in the product are on the following Inventory lists

No information available

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
AEBSF Hydrochloride	-	-	-	-	-	-	X	-	-	-

X - Listed

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances



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## 15.2. Chemical safety assessment

Chemical Safety Report No information available

## Section 16: OTHER INFORMATION

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Full text of R-phrases referred to under sections 2 and 3

R34 - Causes burns

Full text of H-Statements referred to under sections 2 and 3

R36/37/38 - Irritating to eyes, respiratory system and skin

H314 - Causes severe skin burns and eye damage

Revision note

H318 - Causes serious eye damage

No information available.

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

### Disclaimer

The information provided in this Material 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

**End of Safety Data Sheet**



The Power to Question

# SAFETY DATA SHEET

Santa Cruz Biotechnology, Inc.

Revision date 11-Aug-2016

Version 1

## Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

---

### 1.1. Product Identifier

Product Name RIPA Lysis Buffer System (w/out PMSF) VIAL 3: 100mM Sodium orthovanadate in water  
Product Code SC-364162 VIAL 3

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

For research use only. Not intended for diagnostic or therapeutic use.

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

Santa Cruz Biotechnology, Inc. 10410 Finnell Street Dallas, TX 75220 831.457.3800 800.457.3801 scbt@scbt.com	Santa Cruz Biotechnology, Inc. Bergheimer Str. 89-2 69115 Heidelberg, Germany +49.6221.4503 0 +1.800.457.3801 europe@scbt.com
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### 1.4. Emergency telephone number

Chemtrec  
1.800.424.9300 (Within USA)  
+1.703.527.3887 (Outside USA)

## Section 2: HAZARDS IDENTIFICATION

---

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

Classification according to 67/548/EEC

Hazard symbols Not dangerous

### 2.2. Label Elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

Signal word Not classified

Symbols/Pictograms Not classified

Hazard statements Not classified

EUH210 - Safety data sheet available on request

### 2.3. Other Hazards

General Hazards Not applicable

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Molecular Weight No information available  
Formula No information available

Chemical Name	EC No	CAS No	Weight %	Classification according to 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Sodium Orthovanadate	Present	13721-39-6	1.81	Xn;R20/21/22 Xi;R36/37/38 T;R25-23-24	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Aquatic Acute 3 (H402) Aquatic Chronic 3 (H412)

Full text of R-phrases: see section 16

Full text of H- and EUH-phrases: see section 16

### Section 4: FIRST AID MEASURES

#### 4.1. Description of first aid measures

General advice Consult a physician if necessary.  
Inhalation Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.  
Skin Contact Wash skin with soap and water.  
Eye contact Wash with plenty of water.  
Ingestion Never give anything by mouth to an unconscious person. Clean mouth with water.

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

Symptoms No information available.

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

Note to physicians Treat symptomatically.

### Section 5: FIRE FIGHTING MEASURES

#### 5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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

Specific hazards arising from the chemical No information available

Hazardous combustion products Carbon oxides.

#### 5.3. Advice for firefighters

Special protective equipment for fire-fighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### Section 6: ACCIDENTAL RELEASE MEASURES

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

Personal precautions Ensure adequate ventilation, especially in confined areas.  
For emergency responders Use personal protection recommended in Section 8.

#### 6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

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

Methods for containment Prevent further leakage or spillage if safe to do so.  
 Methods for cleaning up Pick up and transfer to properly labeled containers.

### 6.4. Reference to other sections

See Section 12: ECOLOGICAL INFORMATION.

## Section 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.  
 General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

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

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

### 7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Material Safety Data Sheet.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	European Union	United Kingdom	France	Spain	Germany
Sodium Orthovanadate 13721-39-6					TWA: 0.005 mg/m <sup>3</sup> TWA: 0.03 mg/m <sup>3</sup>

Derived No Effect Level (DNEL) No information available  
 Predicted No Effect Concentration (PNEC) No information available.

### 8.2. Exposure controls

Engineering Controls Showers  
 Eyewash stations  
 Ventilation systems  
 Eye/face protection Wear safety glasses with side shields (or goggles).  
 Skin and Body Protection Wear protective gloves and protective clothing.  
 Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.  
 Environmental exposure controls No information available.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State liquid  
 Appearance No information available  
 Odor No information available

### Property

pH No information available  
 Melting point/freezing point 850 - 866 °C  
 Boiling point No information available  
 Flash point No information available  
 Density No information available  
 Evaporation rate No information available  
 Upper flammability limits No information available  
 Lower flammability limit No information available  
 Vapor pressure No information available

Vapor density	No information available
Specific gravity	No information available
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

## Section 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Reactivity Not applicable

### 10.2. Chemical stability

Stability Stable under recommended storage conditions.  
Sensitivity to Mechanical Impact No information available.  
Sensitivity to Static Discharge No information available.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization No information available.  
Possibility of Hazardous Reactions None under normal processing.

### 10.4. Conditions to avoid

Conditions to avoid Extremes of temperature and direct sunlight.

### 10.5. Incompatible materials

Incompatible materials Strong oxidizing agents.

### 10.6. Hazardous decomposition products

Hazardous Decomposition Products Carbon oxides.

## Section 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### Acute toxicity

Product Information Product does not present an acute toxicity hazard based on known or supplied information.  
Unknown acute toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity.

#### The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 18,232.00 mg/kg  
ATEmix (dermal) 60,773.00 mg/kg  
ATEmix (inhalation-dust/mist) 82.90 mg/l

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium Orthovanadate	= 330 mg/kg ( Rat )		

## Section 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

Ecotoxicity May cause long lasting harmful effects to aquatic life.



Unknown aquatic toxicity 0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

**12.2. Persistence and degradability**

Persistence and degradability No information available.

**12.3. Bioaccumulative potential**

Bioaccumulation No information available.

**12.4. Mobility in soil**

Mobility No information available.

**12.5. Results of PBT and vPvB assessment**

PBT and vPvB assessment No information available.

**12.6. Other adverse effects**

Other adverse effects No information available

**Section 13: DISPOSAL CONSIDERATIONS**

**13.1. Waste treatment methods**

Waste from residues/unused products Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

**Section 14: TRANSPORT INFORMATION**

	<u>RID / ADR</u>	<u>IMDG</u>	<u>ICAO (air) / IATA</u>
	Not regulated	Not regulated	Not regulated
14.1 UN/ID no	-	-	-
14.2 Proper shipping name	-	-	-
14.3 Hazard Class	-	-	-
14.3 Hazard Class	-	-	-
Subsidiary hazard class / Labels	-	-	-
14.4 Packing Group	-	-	-
14.5 Environmental Hazard	-	-	-
14.6 Special Provisions	-	-	-

**Section 15: REGULATORY INFORMATION**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**National Regulations**

**European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

**International Inventories**

All of the components in the product are on the following Inventory lists

TSCA (United States): Canada (DSL/NDSL) Europe (EINECS/ELINCS/NLP) Australia (AICS) South Korea (KECL): China (IECSC)

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Sodium Orthovanadate	X	X	-	X	-	X	X	X	-	X

*X - Listed*

*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*

*DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List*

*EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

*ENCS - Japan Existing and New Chemical Substances*

*IECSC - China Inventory of Existing Chemical Substances*

*KECL - Korean Existing and Evaluated Chemical Substances*

*PICCS - Philippines Inventory of Chemicals and Chemical Substances*

## 15.2. Chemical safety assessment

Chemical Safety Report No information available

## Section 16: OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3

R23 - Toxic by inhalation

R24 - Toxic in contact with skin

R25 - Toxic if swallowed

R36/37/38 - Irritating to eyes, respiratory system and skin

R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed

Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed

H312 - Harmful in contact with skin

H332 - Harmful if inhaled

H402 - Harmful to aquatic life

H412 - Harmful to aquatic life with long lasting effects

Revision note

No information available.

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

### Disclaimer

The information provided in this Material 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

**End of Safety Data Sheet**