

## S-Palmitoylation Kit Buffer A / 10x Binding Buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

**Product Code:** K010-311A/ K010-311C

**Product Name:** S-Palmitoylation Buffer A/10x Binding Buffer

**Relevant identified uses of the substance or mixture and uses advised against:**

**Relevant identified uses:** For research use only, not for human or veterinary use.

**Details of the Supplier of the Safety Data Sheet:**

**Company Name:** Badrilla

15 Queen Square E-mail address  
Leeds LS2 8AJ  
United Kingdom

**Web site address :** [www.badrilla.com](http://www.badrilla.com)

: [enquiries@badrilla.com](mailto:enquiries@badrilla.com)

**Emergency telephone number:**

Emergency contact:	Badrilla Ltd	+44 7801 730 618
Information:	Badrilla Ltd	+44 1937 572 179

### Section 2: Hazards Identification

**Classification of the Substance or Mixture:**

**Classification according to Regulation (EC) No 1272/2008 [CLP]:**

Physical hazards

Flammable solids Category 2

Health Hazards

Eye irritation Category 2, H319

Acute oral toxicity Category 4

Acute Inhalation Toxicity - Dusts and Mists Category 4

Skin Corrosion/irritation Category 2

Serious Eye Damage/Eye Irritation Category 1

Specific target organ toxicity - (single exposure) Category 3

Environmental Hazards

Chronic aquatic toxicity Category 3

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

Xi Irritant R36

**Label Elements:**

**Labeling according to Regulation (EC) No 1272/2008 [CLP]:**

Pictogram



## S-Palmitoylation Kit Buffer A / 10x Binding Buffer

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### Hazard statement(s)

H319 - Causes serious eye irritation.  
 H228 - Flammable solid  
 H302 - Harmful if swallowed  
 H335 - May cause respiratory irritation  
 H315 - Causes skin irritation  
 H332 - Harmful if inhaled  
 H318 - Causes serious eye damage  
 H412 - Harmful to aquatic life with long lasting effects

### Precautionary Statements

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection  
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
 P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
 P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing  
 P310 - Immediately call a POISON CENTER or doctor/ physician

### 2.3. Other hazards

No information available

## Section 3: Composition/ Information on Ingredients

CAS# RTECS#	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
7365-45-9 TL6809000	4-(2-Hydroxyethyl)piperazine-1-ethanesulfonic acid	0-10%	230-907-9	-
60-00-4 AH4025000	Ethylenediaminetetraacetic acid	0-10%	200-449-4	Eye Irrit. 2; H319 Xi, R36
151-21-3	Sodium Dodecyl Sulphate	0-10%	205-788-1	Flam. Sol. 2 (H228) Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 1 (H318) Acute Tox. 4 (H332) Resp. Irrit. 3 (H335) Aquatic Chronic 3 (H412)

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### Section 4: First Aid Measures

#### 4.1 Description of First Aid Measures

In Case of Inhalation:	Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
In Case of Skin Contact:	Immediately wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing.
In Case of Eye Contact:	Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Have eyes examined and tested by medical personnel.
In Case of Ingestion:	Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

### Section 5: Fire Fighting Measures

#### 5.1. Extinguishing media

##### **Suitable Extinguishing Media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

##### **Extinguishing media which must not be used for safety reasons**

No information available.

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

Flammable. Dust can form an explosive mixture in air. Keep product and empty container away from heat and sources of ignition.

##### **Hazardous Combustion Products**

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Sulphur oxides, Sodium oxides.

#### 5.3. Advice for firefighters

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

Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation.

#### 6.2. Environmental precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

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

Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep in suitable, closed containers for disposal.

#### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

## S-Palmitoylation Kit Buffer A / 10x Binding Buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 7: Handling and Storage

#### 7.1. Precautions for safe handling

Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

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

Keep containers tightly closed in a dry, cool and well-ventilated place. Flammables area.

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

Use in laboratories

### 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

#### Biological limit values

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

#### Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

**Derived No Effect Level (DNEL)** - No information available

Route of exposure	Acute effects (local)	Acute effects (systemic)	Chronic effects (local)	Chronic effects (systemic)
<b>Oral</b>	-	-	-	-
<b>Dermal</b>	-	-	4060 mg/kg	
<b>Inhalation</b>	-	-	-	285 mg/m <sup>3</sup>

#### Predicted No Effect Concentration (PNEC)

No information available.

Fresh water	0.137 mg/L
Fresh water sediment	4.82 mg/kg
Marine water	0.0137 mg/L

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Marine water sediment	0.482 mg/kg
Water Intermittent	0.055 mg/L
Microorganisms in sewage treat.	1084 mg/L
Soil (Agriculture)	0.882 mg/kg

### 8.2. Exposure controls

#### Engineering Measures

Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

#### Personal protective equipment

**Eye Protection** Goggles (European standard - EN 166)

**Hand Protection** Protective gloves: Inspect gloves before use. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves (Refer to manufacturer/supplier for information). Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Remove gloves with care avoiding skin contamination.

**Skin and body protection** Long sleeved clothing

**Respiratory Protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**Small scale/Laboratory use** Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. **Recommended half mask:-** Particle filtering: EN149:2001. When RPE is used a face piece Fit Test should be conducted

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exp. controls** Prevent product from entering drains. Do not allow material to contaminate ground water system.

## Section 9: Physical and Chemical Properties

### 9.1 Information on Basic Physical and Chemical Properties

Physical States:  Gas  Liquid  Solid  
 Appearance and Odor: Solution

## S-Palmitoylation Kit Buffer A / 10x Binding Buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

pH:	7.5	
Melting Point:	No data.	
Boiling Point:	No data.	
Flash Pt:	No data.	
Evaporation Rate:	No data.	
Explosive Limits: LEL:	No data.	UEL: No data.
Vapor Pressure (vs. Air or mmHg):	No data.	
Vapor Density (vs. Air = 1):	No data.	
Specific Gravity (Water = 1):	No data.	
Solubility in Water:	No data.	
Autoignition Pt:	No data.	

### 9.2 Other Information

Percent Volatile: No data.

## Section 10: Stability and Reactivity

10.1 Reactivity: No data available.

10.2 Stability: Unstable [ ] Stable [ X ]

10.3 Stability Note(s): Stable if stored in accordance with information listed on the product insert.  
Polymerization: Will occur [ ] Will not occur [ X ]

10.4 Conditions To Avoid: No data available.

10.5 Incompatibility Strong oxidizing agents. Strong acids. Strong bases.

10.6 Hazardous No data available.  
Decomposition Or Byproducts: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Sulfur oxides. Sodium oxides.

## Section 11: Toxicological Information

See table below

## S-Palmitoylation Kit Buffer A / 10x Binding Buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

Toxicity	Hepes	EDTA	SDS
Acute toxicity	LD50 Dermal - Rat - > 2,000 mg/kg	LD50 Oral - rat - male and female - 4,500 mg/kg	Oral Cat 4 Dermal Criteria not met Inhalation Cat 4
Skin corrosion/irritation	No skin irritation	No skin irritation	Cat 2
Serious eye damage/irritation	No eye irritation	Eye irritation - Rabbit	Cat 1
Respiratory or skin sensitization	No skin sensitisation	No skin sensitisation	Criteria not met
Germ cell mutagenicity	Negative	Negative	Criteria not met
Carcinogenicity	Negative	Negative	Criteria not met
Reproductive toxicity	Negative	Negative	Criteria not met
STOT-single exposure	-	No data	Cat 3
STOT-repeated exposure	-	No data	Criteria not met
Aspiration hazard	-	No data	No information
Additional Information	No repeated dose toxicity	-	-

### Section 12: Ecological Information

#### 12.1 Toxicity:

Avoid release into the environment. Runoff from fire control or dilution water may cause pollution. Contains a substance which is harmful to aquatic organisms.

#### 12.2 Persistence and Degradability:

No data available.

## S-Palmitoylation Kit Buffer A / 10x Binding Buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

<u>12.3 Bioaccumulative Potential:</u>	Expected to be biodegradable. Soluble in water, Persistence is unlikely, based on information available.
<u>12.4 Mobility in Soil:</u>	The product is water soluble, and may spread in water systems . Will likely be mobile in the environment due to its water solubility. Highly mobile in soils.
<u>12.5 Results of PBT and vPvB assessment:</u>	No data available.
<u>12.6 Other adverse effects:</u>	No data available.

### Section 13: Disposal Considerations

#### 13.1. Waste treatment methods

##### Waste from Residues / Unused Products

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

##### Contaminated Packaging

Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

**European Waste Catalogue (EWC)** According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.

**Other Information** Do not dispose of waste into sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be incinerated, when in compliance with local regulations. Do not empty into drains. Do not let this chemical enter the environment.

### Section 14: Transport Information

#### 14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not dangerous goods.  
DOT Hazard Class: UN/NA Number:

#### 14.2 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name:  
Not dangerous goods. UN Number:  
Hazard Class:

#### 14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not dangerous goods.  
Additional Transport Information: Transport in accordance with local, state, and national regulations.



## S-Palmitoylation Kit Buffer A / 10x Binding Buffer

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### Section 15: Regulatory Information

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

**International Inventories** X = listed

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	IECSC	AICS	KECL
Sodium dodecyl sulphate	205-788-1	-		X	X	-	X	X	X	X	X

### National Regulations

Component	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Sodium dodecyl sulphate	WGK 2	

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment. Take note of Dir 94/33/EC on the protection of young people at work 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

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

### Section 16: Other Information

#### Full Text of H-/EUH-Statements Referred to Under Section 3

- H228 - Flammable solid
- H302 - Harmful if swallowed
- H332 - Harmful if inhaled
- H315 - Causes skin irritation
- H318 - Causes serious eye damage
- H335 - May cause respiratory irritation
- H412 - Harmful to aquatic life with long lasting effects

#### Legend

- DNEL** - Derived No Effect Level
- ENCS** - Japanese Existing and New Chemical Substances
- PNEC** - Predicted No Effect Concentration
- RPE** - Respiratory Protective Equipment **LD50** - Lethal Dose 50%
- IECSC** - Chinese Inventory of Existing Chemical Substances
- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- AICS** - Australian Inventory of Chemical Substances
- PBT** - Persistent, Bioaccumulative, Toxic
- OECD** - Organisation for Economic Co-operation and Development
- ATE** - Acute Toxicity Estimate

- KECL** - Korean Existing and Evaluated Chemical Substances
- vPvB** - very Persistent, very Bioaccumulative
- EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
- ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road
- ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association
- DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- VOC** - Volatile Organic Compounds
- BCF** - Bioconcentration factor

#### Key literature references and sources for data

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

## S-Palmitoylation Kit: Thiol Blocking Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

#### Product identifiers

Product name : Thiol Blocking Reagent  
Product Number : K010-311B  
Brand : Badrilla  
REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.  
CAS-No. : 2949-92-0

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

Identified uses : Laboratory chemicals, Manufacture of substances

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

Company : Badrilla  
15 Queen Square  
Leeds LS2 8AJ  
United Kingdom

Web site address : [www.badrilla.com](http://www.badrilla.com)  
E-mail address : [enquiries@badrilla.com](mailto:enquiries@badrilla.com)

#### Emergency telephone number

Emergency contact: Badrilla Ltd +44 7801 730 618  
Information: Badrilla Ltd +44 1937 572 179

### Section 2: Hazards Identification

#### Classification of the substance or mixture

##### 2.1 Classification according to Regulation (EC) No 1272/2008

Eye irritation (Category 2), H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

##### 2.2 Classification according to EU Directives 67/548/EEC or 1999/45/EC

Xi Irritant R36

For the full text of the R-phrases mentioned in this Section, see Section 16.

##### 2.3 Label elements

#### Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word Warning

Hazard statement(s)

H319 Causes serious eye irritation.

Precautionary statement(s)

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

## S-Palmitoylation Kit: Thiol Blocking Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

Supplemental Hazard Statements: None

### 2.3 Other hazards

Stench.

## Section 3: Composition/ Information on Ingredients

### 3.1 Substances

Formula : C<sub>2</sub>H<sub>6</sub>O<sub>2</sub>S<sub>2</sub>  
 Molecular Weight : 126.2 g/mol  
 CAS-No. : 2949-92-0  
 EC-No. : 220-970-0

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
<b>S-Methyl methanethiosulphonate</b>		
CAS-No. 2949-92-0 EC-No. 220-970-0	Eye Irrit. 2; H319	<= 100 %

Hazardous ingredients according to Directive 1999/45/EC

Component	Classification	Concentration
<b>S-Methyl methanethiosulphonate</b>		
CAS-No. 2949-92-0 EC-No. 220-970-0	Xi, R36	<= 100 %

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

## Section 4: First Aid Measures

### 4.1 Description of first aid measures

**General advice** - Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled** - If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact** - Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact** - Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed** - Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

no data available

## S-Palmitoylation Kit: Thiol Blocking Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 5: Fire Fighting Measures

#### 5.1 Extinguishing media Suitable extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

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

Carbon oxides, Sulphur oxides

#### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

#### 5.4 Further information

Use water spray to cool unopened containers.

### Section 6: Accidental Release Measures

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

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

#### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

#### 6.4 Reference to other sections For disposal see section 13.

### Section 7: Handling and Storage

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

#### 7.3 Specific end use(s)

A part from the uses mentioned in section 1.2 no other specific uses are stipulated

## S-Palmitoylation Kit: Thiol Blocking Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 8: Exposure Controls/Personal Protection

#### 8.1 Control parameters

##### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

#### 8.2 Exposure controls

##### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

##### Personal protective equipment Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

##### Body Protection

impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

##### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

##### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### Section 9: Physical and Chemical Properties

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

a) Appearance	Form: clear, liquid Colour: yellow
b) Odour	Stench.
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	no data available
f) Initial boil. point and range	69 - 71 °C at 0.5 hPa
g) Flash point	87 °C - closed cup
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	1.337 g/mL at 25 °C

## S-Palmitoylation Kit: Thiol Blocking Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

n) Water solubility	no data available
o) Partition coefficient:	n- octanol/water log Pow: -0.004
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties	no data available
t) Oxidizing properties	no data available

### 9.2 Other safety information

no data available

## Section 10: Stability and Reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

Heat, flames and sparks.

### 10.5 Incompatible materials

Strong bases

### 10.6 Hazardous decomposition products

Other decomposition products - no data available In the event of fire: see section 5

## Section 11: Toxicological Information

### 11.1 Information on toxicological effects Acute toxicity

LD50 Intraperitoneal - mouse - 9.110 mg/kg

**Skin corrosion/irritation** no data available

**Serious eye damage/eye irritation** no data available

**Respiratory or skin sensitisation** no data available

**Germ cell mutagenicity** no data available

**Carcinogenicity** IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity** no data available

**Specific target organ toxicity**

- **single exposure** no data available

## S-Palmitoylation Kit: Thiol Blocking Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Specific target organ toxicity

- repeated exposure no data available

Aspiration hazard no data available

### Additional Information

RTECS: PB2765000

Nausea, Headache, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## Section 12: Ecological Information

12.1 Toxicity no data available

12.2 Persistence and degradability no data available

12.3 Bioaccumulative potential no data available

12.4 Mobility in soil no data available

12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects no data available

## Section 13: Disposal Considerations

### 13.1 Waste treatment methods

#### Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

## Section 14: Transport Information

### 14.1 UN number

ADR/RID: - IMDG: - IATA: 3334

### 14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Aviation regulated liquid, n.o.s. (S-Methyl methanethiosulphonate)

### 14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: 9

## S-Palmitoylation Kit: Thiol Blocking Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### 14.4 Packaging group

ADR/RID: -      IMDG: -      IATA: III

### 14.5 Environmental hazards

ADR/RID: no      IMDG Marine pollutant: no      IATA: no

### 14.6 Special precautions for user

no data available

## Section 15: Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006

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

no data available

### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

## Section 16: Other Information

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

Eye Irrit.	Eye irritation
H319	Causes serious eye irritation.

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

Xi	Irritant
R36	Irritating to eyes.



## S-Palmitoylation Kit: Acyl Preservation Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

#### 1.1 Product identifiers

Product name : Sodium chloride  
Product Number : K010-311E  
Brand : Fluka  
REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.  
CAS-No. : 7647-14-5

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

Identified uses : Laboratory chemicals, Manufacture of substances

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

Company : Badrilla  
15 Queen Square  
Leeds LS2 8AJ  
United Kingdom

**Web site address:** [www.badrilla.com](http://www.badrilla.com)  
E-mail address : [enquiries@badrilla.com](mailto:enquiries@badrilla.com)

#### Emergency telephone number

Emergency contact: Badrilla Ltd +44 7801 730 618  
Information: Badrilla Ltd +44 1937 572 179

### Section 2: Hazards Identification

#### 2.1 Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

#### 2.2 Label elements

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

#### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### Section 3: Composition/ Information on Ingredients

#### 3.1 Substances

Formula : ClNa  
Mol weight : 58.44 g/mol  
CAS-No. : 7647-14-5 EC-No.: 231-598-3

No components need to be disclosed according to the applicable regulations

## S-Palmitoylation Kit: Acyl Preservation Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 4: First Aid Measures

#### 4.1 Description of first aid measures General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### **If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### **In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

#### **In case of eye contact**

Flush eyes with water as a precaution.

#### **If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

### Section 5: Fire Fighting Measures

#### 5.1 Extinguishing media Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

No data available

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 Further information

No data available

### Section 6: Accidental Release Measures

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

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Avoid breathing dust. For personal protection see section 8.

#### 6.2 Environmental precautions

Do not let product enter drains.

#### 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

#### 6.4 Reference to other sections

For disposal see section 13.

## S-Palmitoylation Kit: Acyl Preservation Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 7: Handling and Storage

#### 7.1 Precautions for safe handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

### Section 8: Exposure Controls/Personal Protection

#### 8.1 Control parameters

##### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

#### 8.2 Exposure controls

##### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

##### Personal protective equipment Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166(EU).

**Skin protection** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0.11 mm Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail [sales@kcl.de](mailto:sales@kcl.de), test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

**Body Protection** Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

##### Respiratory Protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## S-Palmitoylation Kit: Acyl Preservation Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Control of environmental exposure

Do not let product enter drains.

## Section 9: Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	Form:	solid
	Colour:	colourless
b) Odour		No data available
c) Odour Threshold		No data available
d) pH		7
e) Melting point/freezing point		801 °C
f) Initial boiling point & boiling range		1,413 °C
g) Flash point		No data available
h) Evaporation rate		No data available
i) Flammability (solid, gas)		No data available
j) Upper/lower flammability or explosive limits		No data available
k) Vapour pressure		1.33 hPa at 865 °C
l) Vapour density		No data available
m) Relative density		2.165 g/cm <sup>3</sup>
n) Water solubility		358 g/l at 20 °C - soluble
o) Partition coefficient: n- octanol/water		No data available
p) Auto-ignition temperature		No data available
q) Decomposition temperature		No data available
r) Viscosity		No data available
s) Explosive properties		No data available
t) Oxidizing properties		No data available

### 9.2 Other safety information

No data available

## Section 10: Stability and Reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

## S-Palmitoylation Kit: Acyl Preservation Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

Other decomposition products - No data available In the event of fire: see section 5

## Section 11: Toxicological Information

### 11.1 Information on toxicological effects

#### **Acute toxicity**

LD50 Oral - Rat - 3,550 mg/kg

LC50 Inhalation - Rat - 1 h - > 42,000 mg/m<sup>3</sup> LD50 Dermal - Rabbit - > 10,000 mg/kg

#### **Skin corrosion/irritation**

No data available

#### **Serious eye damage/eye irritation**

No data available

#### **Respiratory or skin sensitisation**

No data available

#### **Germ cell mutagenicity**

No data available

#### **Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

#### **Reproductive toxicity**

No data available

#### **Specific target organ toxicity - single exposure**

No data available

#### **Specific target organ toxicity - repeated exposure**

No data available

#### **Aspiration hazard**

No data available

#### **Additional Information**

RTECS: VZ4725000

Vomiting, Diarrhoea, Dehydration and congestion may occur in internal organs. Hypertonic salt solutions can produce inflammatory reactions in the gastrointestinal tract., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## Section 12: Ecological Information

### 12.1 Toxicity

Toxicity to fish

LC50 - Lepomis macrochirus (Bluegill) - 5,840 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates

NOEC - Daphnia (water flea) - 1,500 mg/l - 7 d

LC50 - Daphnia magna (Water flea) - 1,661 mg/l - 48 h

## S-Palmitoylation Kit: Acyl Preservation Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Other adverse effects

No data available

## Section 13: Disposal Considerations

### 13.1 Waste treatment methods

#### **Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### **Contaminated packaging**

Dispose of as unused product.

## Section 14: Transport Information

### 14.1 UN number

ADR/RID: -      IMDG: -      IATA: -

### 14.2 UN proper shipping name

ADR/RID:      Not dangerous goods

IMDG:      Not dangerous goods

IATA:      Not dangerous goods

### 14.3 Transport hazard class(es)

ADR/RID: -      IMDG: -      IATA: -

### 14.4 Packaging group

ADR/RID: -      IMDG: -      IATA: -

### 14.5 Environmental hazards

ADR/RID:      no

IMDG Marine pollutant:      no

IATA:      no

### 14.6 Special precautions for user

No data available

## S-Palmitoylation Kit: Acyl Preservation Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 15: Regulatory Information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

#### 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

### Section 16: Other Information

## S-Palmitoylation Kit: Thiol Cleavage Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

#### 1.1 Product identifiers

Product name : Thiol Cleavage Reagent  
Product Number : K010-311D  
Brand : Badrilla  
REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.  
CAS-No. : 5470-11-1

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

Identified uses : Laboratory chemicals, Manufacture of substances

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

Company : Badrilla  
15 Queen Square  
Leeds LS2 8AJ  
United Kingdom

Web site address : [www.badrilla.com](http://www.badrilla.com)  
E-mail address : [enquiries@badrilla.com](mailto:enquiries@badrilla.com)

#### Emergency telephone number

Emergency contact: Badrilla Ltd +44 7801 730 618  
Information: Badrilla Ltd +44 1937 572 179

### Section 2: Hazards Identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008

Corrosive to metals (Category 1), H290  
Acute toxicity, Oral (Category 4), H302  
Acute toxicity, Dermal (Category 4), H312  
Skin irritation (Category 2), H315  
Eye irritation (Category 2), H319  
Skin sensitisation (Category 1), H317  
Carcinogenicity (Category 2), H351  
Specific target organ toxicity  
- repeated exposure (Category 2), H373

Acute aquatic toxicity (Category 1), H400  
Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.



## S-Palmitoylation Kit: Thiol Cleavage Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### 2.2 Label elements

#### Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word      Warning

Hazard statement(s)

H290	May be corrosive to metals.
H302 + H312	Harmful if swallowed or in contact with skin
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
Precautionary statement(s)	
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301, P312, P330	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P305, P351, P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements      none

### 2.2 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## Section 3: Composition/ Information on Ingredients

### 3.1 Substances

Synonyms	:	Hydroxylammonium chloride
Formula	:	H3NO · HCl
Mol. weight	:	69.49 g/mol
CAS-No.	:	5470-11-1
EC-No.	:	226-798-2
Index-No.	:	612-123-00-2

## S-Palmitoylation Kit: Thiol Cleavage Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
<b>Hydroxylamine hydrochloride</b>		
CAS-No. 5470-11-1	Met. Corr. 1; Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; Skin Sens. 1; Carc. 2; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H290, H302, H312, H315, H319, H317, H351, H373, H400, H410 M-Factor - Aquatic Acute: 10	<= 100 %
EC-No. 226-798-2		
Index-No. 612-123-00-2		

For the full text of the H-Statements mentioned in this Section, see Section 16.

### Section 4: First Aid Measures

#### 4.1 Description of first aid measures General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled** - If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact** - Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact** - Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed** - Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

### Section 5: Fire Fighting Measures

#### 5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Container explosion may occur under fire conditions.

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 Further information

May explode when heated.

## S-Palmitoylation Kit: Thiol Cleavage Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 6: Accidental Release Measures

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

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

#### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

#### 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

#### 6.4 Reference to other sections

For disposal see section 13.

### Section 7: Handling and Storage

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Air and moisture sensitive.

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

### Section 8: Exposure Controls/Personal Protection

#### 8.1 Control parameters

##### **Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

#### 8.2 Exposure controls

##### **Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

##### **Personal protective equipment**

**Eye/face protection** - Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection** - Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

## S-Palmitoylation Kit: Thiol Cleavage Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0.11 mm Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail [sales@kcl.de](mailto:sales@kcl.de), test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## Section 9: Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

- |                    |                                    |
|--------------------|------------------------------------|
| a) Appearance      | Form: crystalline<br>Colour: white |
| b) Odour           | No data available                  |
| c) Odour Threshold | No data available                  |

## S-Palmitoylation Kit: Thiol Cleavage Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

d) pH	2.5 - 3.5 at 50 g/l at 20 °C	
e) Melting point/freezing point		Melting point/range: 155 - 157 °C - dec
f) Initial boiling point and boiling range		No data available
g) Flash point		No data available
h) Evaporation rate		No data available
i) Flammability (solid, gas)		No data available
j) Upper/lower flammability or explosive limits		No data available
k) Vapour pressure		No data available
l) Vapour density		No data available
m) Relative density		1.67 g/cm <sup>3</sup> at 25 °C
n) Water solubility		soluble
o) Partition coefficient: n- octanol/water		No data available
p) Auto-ignition temperature		No data available
q) Decomposition temperature		> 150 °C - Heating may cause an explosion.
r) Viscosity		No data available
s) Explosive properties		No data available
t) Oxidizing properties		No data available

### 9.2 Other safety information

No data available

## **Section 10: Stability and Reactivity**

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

May explode when heated.

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Air Exposure to moisture May be unstable at temperatures above: 75° C

### 10.5 Incompatible materials

Strong oxidizing agents, phosphorous pentachloride, Calcium, Anhydrous copper(II) sulfate

### 10.6 Hazardous decomposition products

Other decomposition products - No data available

Hazardous decomposition products formed under fire conditions. - Nitrogen oxides (NO<sub>x</sub>), Hydrogen chloride gas

In the event of fire: see section 5

## S-Palmitoylation Kit: Thiol Cleavage Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 11: Toxicological Information

#### 11.1 Information on toxicological effects Acute toxicity

LD50 Oral - Rat - 600 mg/kg

Dermal: No data available

#### Skin corrosion/irritation

No data available

#### Serious eye damage/eye irritation

No data available

#### Respiratory or skin sensitisation Germ cell mutagenicity

Rat Embryo

Morphological transformation.

Hamster Lungs

Sister chromatid exchange

#### Carcinogenicity

Suspected human carcinogens

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

#### Reproductive toxicity

No data available

#### Specific target organ toxicity - single exposure

No data available

#### Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

#### Aspiration hazard

No data available

#### Additional Information

RTECS: NC3675000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Liver - Irregularities - Based on Human Evidence

### Section 12: Ecological Information

#### 12.1 Toxicity

Toxicity to fish LC50 - Leuciscus idus (Golden orfe) - 1 - 10 mg/l - 48.0 h

## S-Palmitoylation Kit: Thiol Cleavage Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Other adverse effects

Very toxic to aquatic life with long lasting effects.

## Section 13: Disposal Considerations

### 13.1 Waste treatment methods

#### **Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### **Contaminated packaging**

Dispose of as unused product.

## Section 14: Transport Information

### 14.1 UN number

ADR/RID: 2923    IMDG: 2923    IATA: 2923

### 14.2 UN proper shipping name

ADR/RID: CORROSIVE SOLID, TOXIC, N.O.S. (Hydroxylamine hydrochloride)

IMDG: CORROSIVE SOLID, TOXIC, N.O.S. (Hydroxylamine hydrochloride)

IATA: Corrosive solid, toxic, n.o.s. (Hydroxylamine hydrochloride)

### 14.3 Transport hazard class(es)

ADR/RID: 8 (6.1)                      IMDG: 8 (6.1)                      IATA: 8 (6.1)

### 14.4 Packaging group

ADR/RID: III                              IMDG: III                              IATA: III

### 14.5 Environmental hazards

ADR/RID: yes                              IMDG Marine pollutant: yes                      IATA: no

### 14.6 Special precautions for user

No data available

## S-Palmitoylation Kit: Thiol Cleavage Reagent

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 15: Regulatory Information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

#### 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

### Section 16: Other Information

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

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H302 + H312	Harmful if swallowed or in contact with skin H312 Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.



## S-Palmitoylation Kit: CAPTUREome™ Capture Resin

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

#### 1.1 Product identifier

<b>Product name</b>	<b>Thiopropyl Sepharose™ 6B, 15 g</b>
<b>Catalogue Number</b>	K010-311F
<b>EC number</b>	232-731-8
<b>CAS number</b>	9012-36-6
<b>Product description</b>	Not available.
<b>Product type</b>	Solid.
<b>Other means of identification</b>	cross-linked Agarose

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

**Identified uses** Use in laboratories

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

**Company Name:** Badrilla **Web site address:** [www.badrilla.com](http://www.badrilla.com)  
15 Queen Square E-mail address : [enquiries@badrilla.com](mailto:enquiries@badrilla.com)  
Leeds LS2 8AJ  
United Kingdom

#### **Emergency telephone number**

Emergency contact: Badrilla Ltd +44 7801 730 618  
Information: Badrilla Ltd +44 1937 572 179

### Section 2: Hazards Identification

#### 2.1 Classification of the substance or mixture

**Product definition** UVCB

**Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended. See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

#### 2.2 Label elements

**Hazard pictograms**

**Signal word** No signal word.

**Hazard statements** No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** Not applicable

## S-Palmitoylation Kit: CAPTUREome™ Capture Resin

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

<b>Response</b>	Not applicable
<b>Storage</b>	Not applicable
<b>Disposal</b>	Not applicable
<b>Supplemental label elements</b>	Not applicable

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** Not applicable

### Special packaging requirements

<b>Containers to be fitted with child-resistant fastenings</b>	Not applicable
<b>Tactile warning of danger</b>	Not applicable.

### 2.3 Other hazards

**Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII** No.

P: Not available. B: Not available. T: No. Not available

**Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** Not available

**Other hazards which do not result in classification** None known.

## Section 3: Composition/ Information on Ingredients

Substance/mixture UVCB

Product/ingredient name	Identifiers	%	Classification Regulation (EC) No. 1272/2008[CLP]	Type
Agarose	EC: 232-731-8 CAS: 9012-36-6	100	Not classified.	[A]

There are no additional ingredients present which, with the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

### Type

[\*] Substance [A] Constituent [B] Impurity

[C] Stabilising additive

Occupational exposure limits, if available, are listed in Section 8.

## S-Palmitoylation Kit: CAPTUREome™ Capture Resin

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 4: First Aid Measures

#### 4.1 Description of first aid measures

<b>Eye contact</b>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
<b>Skin contact</b>	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training.

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

##### Potential acute health effects

<b>Eye contact</b>	No known significant effects or critical hazards.
<b>Inhalation</b>	No known significant effects or critical hazards.
<b>Skin contact</b>	No known significant effects or critical hazards.
<b>Ingestion</b>	No known significant effects or critical hazards.

##### Over-exposure signs/symptoms

<b>Eye contact</b>	No specific data.
<b>Inhalation</b>	No specific data.
<b>Skin contact</b>	No specific data.
<b>Ingestion</b>	No specific data.

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

<b>Notes to physician</b>	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	No specific treatment

## S-Palmitoylation Kit: CAPTUREome™ Capture Resin

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 5: Fire Fighting Measures

#### 5.1 Extinguishing media

**Suitable extinguishing media** Use an extinguishing agent suitable for the surrounding fire  
**Unsuitable extinguishing media** None known.

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

**Hazards from the substance or Mixture** No specific fire or explosion hazard  
**Hazardous combustion products** No specific data.

#### 5.3 Advice for firefighters

##### **Special precautions for fire-fighters**

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

##### **Special protective equipment for fire-fighters**

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

### Section 6: Accidental Release Measures

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

**For non-emergency personnel** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.  
**For emergency responders** If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

#### 6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

#### 6.3 Methods and materials for containment and cleaning up

**Small spill** Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.  
**Large spill** Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

## S-Palmitoylation Kit: CAPTUREome™ Capture Resin

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

**6.4 Reference to other sections** See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

### Section 7: Handling and Storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

#### 7.1 Precautions for safe handling

**Protective measures** Put on appropriate personal protective equipment (see Section 8).

#### **Advice on general occupational hygiene**

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

Store between the following temperatures: 4 to 8°C (39.2 to 46.4°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

#### 7.3 Specific end use(s)

**Recommendations** Laboratory chemicals Liquid chromatography. Research and Development

#### **Industrial sector specific solutions**

Not available.

### Section 8: Exposure Controls/Personal Protection

#### 8.1 Control parameters

**Occupational exposure limits** No exposure limit value known

#### **Recommended monitoring**

#### **Procedures**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres-Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

## S-Palmitoylation Kit: CAPTUREome™ Capture Resin

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### DNELs/DMELs

No DELs available.

### PNECs

No PECs available.

### 8.2 Exposure controls

**Appropriate engineering controls** Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

### Individual protection measures

#### **Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### **Eye/face protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### **Skin protection**

#### **Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary

#### **Body protection**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### **Other skin protection**

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### **Respiratory protection**

Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. 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**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## S-Palmitoylation Kit: CAPTUREome™ Capture Resin

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 9: Physical and Chemical Properties

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

##### Appearance

Physical state	Solid. [Solid beads.]
Colour	White
Odour	Odourless
Odour threshold	Not available
pH	Not applicable
Melting point/freezing point	Not available
Initial boiling point and boiling range	Not available.
Flash point	[Product does not sustain combustion.]
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Burning time	Not available.
Burning rate	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	0 kPa [room temperature]
Vapour density	Not available.
Relative density	Not available.
Solubility(ies)	Insoluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/ water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not available
Oxidising Properties	Not available.

#### 9.2 Other information

No additional information

### Section 10: Stability and Reactivity

10.1 Reactivity	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	The product is stable.
10.3 Possibility of hazardous Reaction	Under normal conditions of storage and use, hazardous reactions will not occur
10.4 Conditions to avoid	No specific data.
10.5 Incompatible materials	No specific data
10.6 Hazardous decomposition Products	Under normal conditions of storage and use, hazardous decomposition products should not be produced

## S-Palmitoylation Kit: CAPTUREome™ Capture Resin

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 11: Toxicological Information

#### 11.1 Information on toxicological effects

##### Acute toxicity

**Conclusion/Summary** Not available.

##### Irritation/Corrosion

**Conclusion/Summary** Not available.

##### Sensitisation

**Conclusion/Summary** Not available.

##### Mutagenicity

**Conclusion/Summary** Not available.

##### Carcinogenicity

**Conclusion/Summary** Not available.

##### Reproductive toxicity

**Conclusion/Summary** Not available.

##### Teratogenicity

**Conclusion/Summary** Not available.

##### Specific target organ toxicity

**(single exposure)** Not available.

##### Specific target organ toxicity

**(repeated exposure)** Not available.

##### Aspiration hazard

Not available.

#### Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

#### Potential acute health effects

**Inhalation** No known significant effects or critical hazards.

**Ingestion** No known significant effects or critical hazards.

**Skin contact** No known significant effects or critical hazards.

**Eye contact** No known significant effects or critical hazards.

#### Symptoms related to the physical, chemical and toxicological characteristics

**Inhalation** No specific data.

**Ingestion** No specific data.

**Skin contact** No specific data.

**Eye contact** No specific data.

#### Delayed and immediate effects and also chronic effects from short and long term exposure

##### Short term exposure

**Potential immediate effects** Not available.

**Potential delayed effects** Not available.

##### Long term exposure

**Potential immediate effects** Not available.

**Potential delayed effects** Not available.



## S-Palmitoylation Kit: CAPTUREome™ Capture Resin

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

<b><u>Potential chronic health effects</u></b>	Not available.
<b>Conclusion/Summary</b>	Not available.
<b>General</b>	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	No known significant effects or critical hazards
<b>Mutagenicity</b>	No known significant effects or critical hazards
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.
<b>Other information</b>	Not available

### Section 12: Ecological Information

#### 12.1 Toxicity

**Conclusion/Summary** Not available.

#### 12.2 Persistence and degradability

**Conclusion/Summary** Not available.

#### 12.3 Bioaccumulative potential

Not available.

#### 12.4 Mobility in soil

**Soil/water partition coefficient ( $K_{oc}$ )**

Not available.

**Mobility**

Not available.

#### 12.5 Results of PBT and vPvB assessment

**PBT** No  
P: Not available. B: Not available. T: No

**vPvB** Not available.  
vP: Not available. vB: Not available.

12.6 Other adverse effects No known significant effects or critical hazards.

### Section 13: Disposal Considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

#### **13.1 Waste treatment methods**

##### **Product**

**Methods of disposal**

The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional

## S-Palmitoylation Kit: CAPTUREome™ Capture Resin

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

### Packaging

**Methods of disposal** The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

### Section 14: Transport Information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

#### 14.6 Special precautions for user

**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

#### 14.7 Transport in bulk according to Annex II of MARPOL

#### 73/78 and the IBC Code

Not available.

## S-Palmitoylation Kit: CAPTUREome™ Capture Resin

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 15: Regulatory Information

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

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

**Annex XIV** None of the components are listed.

**Substances of very high concern** None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

Not applicable.

#### Other EU regulations

**Europe inventory** This material is listed or exempted.

**Black List Chemicals** Not listed

**Priority List Chemicals** Not listed

**Integrated pollution prevention and control list (IPPC) – Air**

Not listed

**Integrated pollution prevention and control list (IPPC) – Water**

Not listed

#### Seveso II Directive

This product is not controlled under the Seveso II Directive.

#### **Chemical Weapons**

##### **Convention List Schedule**

**I Chemicals** Not listed

##### **Chemical Weapons**

##### **Convention List Schedule**

**II Chemicals** Not listed

##### **Chemical Weapons**

##### **Convention List Schedule**

**II Chemicals** Not listed

#### **15.2 Chemical Safety**

**Assessment** Not available

## S-Palmitoylation Kit: CAPTUREome™ Capture Resin

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 16: Other Information

#### Abbreviations and acronyms

ATE = Acute Toxicity Estimate  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
DNEL = Derived No Effect Level  
EUH statement = CLP-specific Hazard statement  
PNEC = Predicted No Effect Concentration  
RRN = REACH Registration Number

#### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Not classified.	

#### Full text of abbreviated H Statements

Not applicable

#### Full text of classifications [CLP/ GHS]

Not applicable

## S-Palmitoylation Kit: 2x Laemmli Sample Buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

**Product Code:** K010-311G

**Product Name:** S-Palmitoylation 2x Laemmli Sample Buffer

**Relevant identified uses of the substance or mixture and uses advised against:**

**Relevant identified uses:** For research use only, not for human or veterinary use.

**Details of the Supplier of the Safety Data Sheet:**

**Company Name:** Badrilla

15 Queen Square E-mail address  
Leeds LS2 8AJ  
United Kingdom

**Web site address : Information:** [www.badrilla.com](http://www.badrilla.com)

: [enquiries@badrilla.com](mailto:enquiries@badrilla.com)

**Emergency telephone number**

Emergency contact: Badrilla Ltd +44 7801 730 618

Information: Badrilla Ltd +44 1937 572 179

### Section 2: Hazards Identification

2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 4), H332

Acute toxicity, Dermal (Category 4), H312

Skin irritation (Category 2), H315

Serious eye damage (Category 1), H318

Skin sensitisation (Category 1), H317

Specific target organ toxicity - repeated exposure (Category 2), H373

Chronic aquatic toxicity (Category 2), H411

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

**Labelling according Regulation (EC) No 1272/2008**

Pictogram



Signal word      Danger

Hazard statement(s)

H302 + H312 + H332

Harmful if swallowed, in contact with skin or if inhaled

H315

Causes skin irritation.

H317

May cause an allergic skin reaction.

H318

Causes serious eye damage.

H373

May cause damage to organs through prolonged or repeated exposure.

H411

Toxic to aquatic life with long lasting effects.

## S-Palmitoylation Kit: 2x Laemmli Sample Buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Precautionary statement(s)

P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273	Avoid release to the environment.
P302 + P352 + P312	IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/doctor if you feel unwell.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338 + P310	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.
P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.

Supplemental Hazard Statements none

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## Section 3: Composition/ Information on Ingredients

### 3.1 Mixtures

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
<b>2-Mercaptoethanol</b>		
CAS-No. 60-24-2 EC-No. 200-464-6	Acute Tox. 3; Acute Tox. 2; Skin Irrit. 2; Eye Dam. 1; Skin Sens. 1; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H301, H331, H310, H315, H318, H317, H373, H400, H410 M-Factor - Aquatic Acute: 1	>= 10 - < 20 %
<b>Sodium dodecyl sulphate</b>		
CAS-No. 151-21-3 EC-No. 205-788-1	Flam. Sol. 2; Acute Tox. 4; Skin Irrit. 2; Eye Dam. 1; STOT SE 3; Aquatic Chronic 3; H228, H302, H332, H315, H318, H335, H412 Concentration limits: 10 - < 20 %: Eye Irrit. 2, H319; >= 20 %: Eye Dam. 1, H318;	>= 3 - < 5 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

## S-Palmitoylation Kit: 2x Laemmli Sample Buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 4: First Aid Measures

#### 4.1 Description of first aid measures

##### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

##### **If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

##### **In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

##### **In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

##### **If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

### Section 5: Fire Fighting Measures

#### 5.1 Extinguishing media Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

No data available

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 Further information

No data available

### Section 6: Accidental Release Measures

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

Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation.

#### 6.2. Environmental precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

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

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

## S-Palmitoylation Kit: 2x Laemmli Sample Buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

## Section 7: Handling and Storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Air and moisture sensitive.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## Section 8: Exposure Controls/Personal Protection

### 8.1 Control parameters

#### Components with workplace control parameters

Component	CAS-No.	ValueForm of exposure	Control parameters	Basis
Glycerol	56-81-5	TWA	10 mg/m <sup>3</sup>	UK. EH40 WEL - Workplace Exposure Limits
	Remarks	Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used		
		TWA (Mist)	10 mg/m <sup>3</sup>	UK. EH40 WEL - Workplace Exposure Limits
		Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used		

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

**Eye/face protection** - Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection** - Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)



## S-Palmitoylation Kit: 2x Laemmli Sample Buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

Splash contact Material: Nitrile rubber  
Minimum layer thickness: 0.11 mm Break through time: 480 min  
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail [sales@kcl.de](mailto:sales@kcl.de), test method: EN374  
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.  
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## Section 9: Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	Form: liquid Colour: colourless
b) Odour	unpleasant
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	No data available
f) Initial boiling point/ range	No data available
g) Flash point	No data available
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available

## S-Palmitoylation Kit: 2x Laemmli Sample Buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

k) Vapour pressure	No data available
l) Vapour density	No data available
m) Relative density	No data available
n) Water solubility	No data available
o) Partition coefficient: n- octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

### 9.2 Other safety information

No data available

## **Section 10: Stability and Reactivity**

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Strong bases, Bases, Oxidizing agents, Strong oxidizing agents, Metals

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Sulphur oxides, Hydrogen chloride gas, Sodium oxides

Other decomposition products - No data available In the event of fire: see section 5

## **Section 11: Toxicological Information**

### 11.1 Information on toxicological effects

Acute toxicity

No data available

#### **Skin corrosion/irritation**

No data available

#### **Serious eye damage/eye irritation**

No data available

## S-Palmitoylation Kit: 2x Laemmli Sample Buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### **Respiratory or skin sensitisation**

No data available

### **Germ cell mutagenicity**

No data available

### **Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### **Reproductive toxicity**

No data available

### **Specific target organ toxicity - single exposure**

No data available

### **Specific target organ toxicity - repeated exposure**

No data available

### **Aspiration hazard**

No data available

### **Additional Information**

RTECS: Not available

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Weakness, Nausea, Unconsciousness, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Kidney - Irregularities - Based on Human Evidence (Glycerol)

## **Section 12: Ecological Information**

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Other adverse effects

Toxic to aquatic life with long lasting effects.

## **Section 13: Disposal Considerations**

### 13.1 Waste treatment methods Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

## S-Palmitoylation Kit: 2x Laemmli Sample Buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Contaminated packaging

Dispose of as unused product.

### Section 14: Transport Information

#### 14.1 UN number

ADR/RID: 3082    IMDG: 3082    IATA: 3082

#### 14.2 UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-Mercaptoethanol)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-Mercaptoethanol)

IATA: Environmentally hazardous substance, liquid, n.o.s. (2-Mercaptoethanol)

#### 14.3 Transport hazard class(es)

ADR/RID: 9    IMDG: 9    IATA: 9

#### 14.4 Packaging group

ADR/RID: III    IMDG: III    IATA: III

#### 14.5 Environmental hazards

ADR/RID: yes    IMDG Marine pollutant: yes    IATA: yes

#### 14.6 Special precautions for user

### Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

### Section 15: Regulatory Information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

#### 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

### Section 16: Other Information

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

H228	Flammable solid.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H302 + H312	
+ H332	Harmful if swallowed, in contact with skin or if inhaled
H310	Fatal in contact with skin.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

## S-Palmitoylation Kit: 2x Laemmli Sample Buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

## S-Palmitoylation Kit: Neutralisation buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

**Product Code:** K010-311H  
**Product Name:** Neutralisation Buffer

**Relevant identified uses of the substance or mixture and uses advised against:**  
**Relevant identified uses:** For research use only, not for human or veterinary use.

**Details of the Supplier of the Safety Data Sheet:**

**Company Name:** Badrilla  
15 Queen Square  
Leeds LS2 8AJ  
United Kingdom

**Web site address :** [www.badrilla.com](http://www.badrilla.com)  
**E-mail address :** [enquiries@badrilla.com](mailto:enquiries@badrilla.com)

**Emergency telephone number**

Emergency contact:	Badrilla Ltd	+44 7801 730 618
Information:	Badrilla Ltd	+44 1937 572 179

### Section 2: Hazards Identification

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Physical Hazards**

Corrosive to metals	Category 1
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**Health Hazards**

Skin Corrosion/irritation	Category 1 A
Serious Eye Damage/Eye Irritation	Category 1
Specific target organ toxicity (single exposure)	
Target Organs - Respiratory system.	Category 3

**Label Elements**

**Signal Word**

Danger

**Hazard Statements**

May be corrosive to metals  
Causes severe skin burns and eye damage  
May cause respiratory irritation

## S-Palmitoylation Kit: Neutralisation buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

Pictogram



### Precautionary Statements Prevention

Do not breathe dust/fume/gas/mist/vapors/spray

Wash face, hands and any exposed skin thoroughly after handling Wear protective gloves/protective clothing/eye protection/face protection Use only outdoors or in a well-ventilated area

Keep only in original container

### Response

Immediately call a POISON CENTER or doctor/physician

### Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

### Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower Wash contaminated clothing before reuse

### Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

### Ingestion

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

### Spills

Absorb spillage to prevent material damage

### Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Store in corrosive resistant polypropylene container with a resistant inliner Store in a dry place

### Disposal

Dispose of contents/container to an approved waste disposal plant

### Hazards not otherwise classified (HNOC)

None identified

## Section 3: Composition/ Information on Ingredients

Component	CAS-No	Weight %
Water	7732-18-5	60
Sodium hydroxide	1310-73-2	40

## Section 4: First Aid Measures

**General Advice** Take off contaminated clothing and shoes immediately.

**Eye Contact** Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

**Skin Contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

## S-Palmitoylation Kit: Neutralisation buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

<b>Inhalation</b>	Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required.
<b>Ingestion</b>	Do not induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician immediately.
<b>Most important symptoms/effects</b>	Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.
<b>Notes to Physician</b>	Treat symptomatically

### Section 5: Fire Fighting Measures

<b>Suitable Extinguishing Media</b>	Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.
<b>Unsuitable Extinguishing Media</b>	No information available
<b>Flash Point</b>	Not applicable
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	No information available
<b>Explosion Limits</b>	
• <b>Upper</b>	No data available
• <b>Lower</b>	No data available
• <b>Sensitivity to Mechanical Impact</b>	No information available
• <b>Sensitivity to Static Discharge</b>	No information available

#### Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. Corrosive Material.

#### Hazardous Combustion Products

Sodium oxides

#### Protective Equipment and Precautions for Firefighters

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

#### NFPA

<b>Health</b>	<b>Flammability</b>	<b>Instability</b>	<b>Physical hazards</b>
3	0	1	N/A



## S-Palmitoylation Kit: Neutralisation buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 6: Accidental Release Measures

<b>Personal Precautions</b>	Avoid contact with the skin and the eyes. Use personal protective equipment. Evacuate personnel to safe areas. Do not touch or walk through spilled material.
<b>Environmental Precautions</b>	Refer to protective measures listed in Sections 7 and 8 Should not be released into the environment. Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological information.
<b>Methods for Containment and Clean Up</b>	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

### Section 7: Handling and Storage

<b>Handling</b>	Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Use only in well-ventilated areas. Wash thoroughly after handling.
<b>Storage</b>	Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Corrosives area. Store in original container.

### Section 8: Exposure Controls/Personal Protection

#### Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium hydroxide	Ceiling: 2 mg/m <sup>3</sup>	(Vacated) Ceiling: 2 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> Ceiling: 2 mg/m <sup>3</sup>
Component	Quebec	Mexico OEL (TWA)	Ontario TWA/EV
Sodium hydroxide	Ceiling: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>	CEV: 2 mg/m <sup>3</sup>

#### Legend

**ACGIH** - American Conference of Governmental Industrial Hygienists

**OSHA** - Occupational Safety and Health Administration

**NIOSH IDLH**: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

**Engineering Measures** Ensure that eyewash stations and safety showers are close to the workstation location.

#### Personal Protective Equipment

<b>Eye/face Protection</b>	Tightly fitting safety goggles.
<b>Skin and body protection</b>	Wear appropriate protective gloves and clothing to prevent skin exposure.
<b>Respiratory Protection</b>	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
<b>Hygiene Measures</b>	When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use.

## S-Palmitoylation Kit: Neutralisation buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 9: Physical and Chemical Properties

<b>Physical State</b>	Liquid
<b>Appearance</b>	Clear
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH</b>	> 12.0 Alkaline
<b>Melting Point/Range</b>	-10 °C / 14 °F
<b>Boiling Point/Range</b>	>100 °C / > 212 °F
<b>Flash Point</b>	Not applicable
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid,gas)</b>	No information available
<b>Flammability or explosive limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Vapor Pressure</b>	14 mmHg
<b>Vapor Density</b>	> 1.0
<b>Relative Density</b>	1.32
<b>Solubility</b>	Soluble in water
<b>Partition coefficient; n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	No information available
<b>Decomposition Temperature</b>	No information available
<b>Viscosity</b>	No information available

### Section 10: Stability and Reactivity

<b>Reactive Hazard</b>	Yes
<b>Stability</b>	Stable under recommended storage conditions.
<b>Conditions to Avoid</b>	Exposure to air. Incompatible products.
<b>Incompatible Materials</b>	Acids, Organic materials, Metals, Aluminium, copper
<b>Hazardous Decomposition Products</b>	Sodium oxides
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	Corrosive to metals.

## S-Palmitoylation Kit: Neutralisation buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 11: Toxicological Information

#### Acute Toxicity

<b>Product Information</b>	No acute toxicity information is available for this product
<b>Oral LD50</b>	Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.
<b>Dermal LD50</b>	Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.
<b>Vapor LC50</b>	Based on ATE data, the classification criteria are not met. ATE > 20 mg/l.

#### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium hydroxide	Not listed	1350 mg/kg ( Rabbit )	Not listed

<b>Toxicologically Synergistic Products</b>	No information available
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#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Irritation</b>	Causes burns by all exposure routes
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<b>Sensitization</b>	No information available
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<b>Carcinogenicity</b>	The table below indicates whether each agency has listed any ingredient as a carcinogen.
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Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed	Not listed
Sodium hydroxide	1310-73-2	Not listed	Not listed	Not listed	Not listed	Not listed

<b>Mutagenic Effects</b>	No information available
<b>Reproductive Effects</b>	No information available.
<b>Developmental Effects</b>	No information available.
<b>Teratogenicity</b>	No information available.
<b>STOT - single exposure</b>	Respiratory system
<b>STOT - repeated exposure</b>	None known
<b>Aspiration hazard</b>	No information available
<b>Symptoms / effects, both acute and delayed</b>	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
<b>Endocrine Disruptor Information</b>	No information available
<b>Other Adverse Effects</b>	The toxicological properties have not been fully investigated.

## S-Palmitoylation Kit: Neutralisation buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 12: Ecological Information

#### Ecotoxicity

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants. Large amounts will affect pH and harm aquatic organisms.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Sodium hydroxide	Not listed	45.4 mg/L LC50 96 h	Not listed	Not listed

<b>Persistence and Degradability</b>	Soluble in water Persistence is unlikely based on information available.
<b>Bioaccumulation/ Accumulation</b>	No information available
<b>Mobility</b>	Will likely be mobile in the environment due to its water solubility.

### Section 13: Disposal Considerations

<b>Waste Disposal Methods</b>	Should not be released into the environment.
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### Section 14: Transport Information

#### DOT

<b>UN-No</b>	UN1824
<b>Proper Shipping Name</b>	SODIUM HYDROXIDE SOLUTION
<b>Hazard Class</b>	8
<b>Packing Group</b>	II

#### TDG

<b>UN-No</b>	UN1824
<b>Proper Shipping Name</b>	SODIUM HYDROXIDE SOLUTION
<b>Hazard Class</b>	8
<b>Packing Group</b>	II

#### IATA

<b>UN-No</b>	UN1824
<b>Proper Shipping Name</b>	SODIUM HYDROXIDE SOLUTION
<b>Hazard Class</b>	8
<b>Packing Group</b>	II

#### IMDG/IMO

<b>UN-No</b>	UN1824
<b>Proper Shipping Name</b>	SODIUM HYDROXIDE SOLUTION
<b>Hazard Class</b>	8
<b>Packing Group</b>	II

### Section 15: Regulatory Information

#### International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Water	X	X	-	231-791-2	-		X	-	X	X	X
Sodium hydroxide	X	X	-	215-185-5	-		X	X	X	X	X

## S-Palmitoylation Kit: Neutralisation buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Legend: X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA. F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA. S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

### U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313 Not applicable

### SARA 311/312 Hazardous Categorization

Acute Health Hazard Yes

Chronic Health Hazard No

Fire Hazard No

Sudden Release of

Pressure Hazard No

Reactive Hazard Yes

### Clean Water Act

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Sodium hydroxide	X	1000 lb	-	-

Clean Air Act Not applicable

### OSHA

Occupational Safety and Health Administration Not applicable

### CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Sodium hydroxide	1000 lb	-

California Proposition 65 This product does not contain any Proposition 65 chemicals

## S-Palmitoylation Kit: Neutralisation Buffer

According to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Water	-	-	X	-	-
Sodium hydroxide	X	X	X	-	X

### U.S. Department of Transportation

Reportable Quantity (RQ): Y  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

### U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

### Other International Regulations

**Mexico - Grade** No information available

#### Canada

**This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR**

**WHMIS Hazard Class** E Corrosive material



### Section 16: Other Information

#### Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Badrilla and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.