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Safety Data Sheet

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: K010-310A/ K010-310C
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
Leeds LS2 8AJ
United Kingdom

Web site address : www.badrilla.com
E-mail address : info@badrilla.com

Emergency telephone number:

Emergency contact:	Badrilla Ltd	+44 7801 730 618
Information:	Badrilla Ltd	www.badrilla.com

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

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

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)

S-Palmitoylation Kit Buffer A / 10x Binding 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

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_2), 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)**
Oral	-	-	-	-
Dermal	-	-	4060 mg/kg	
Inhalation	-	-	-	285 mg/m³

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

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	[**X**] 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_2). 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

12.3 Bioaccumulative Potential:	Expected to be biodegradable. Soluble in water, Persistence is unlikely, based on information available.
12.4 Mobility in Soil:	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.
12.5 Results of PBT and vPvB assessment:	No data available.
12.6 Other adverse effects:	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

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

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

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Safety Data Sheet

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 : K010-310B
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 Name: Badrilla
15 Queen Square
Leeds LS2 8AJ
United Kingdom

Web site address : www.badrilla.com
E-mail address : info@badrilla.com

Emergency telephone number

Emergency contact:	Badrilla Ltd	+44 7801 730 618
Information:	Badrilla Ltd	www.badrilla.com

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 : C2H6O2S2
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
S-Methyl methanethiosulphonate		
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
S-Methyl methanethiosulphonate		
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.

6.3Methods 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 sectionsFor 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) Evapouration 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 I dentified 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

12.4Mobility 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.

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Safety Data Sheet

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	:	K010-310E
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 Name: Badrilla
15 Queen Square
Leeds LS2 8AJ
United Kingdom

Web site address : www.badrilla.com
E-mail address : info@badrilla.com

Emergency telephone number

Emergency contact:	Badrilla Ltd	+44 7801 730 618
Information:	Badrilla Ltd	www.badrilla.com

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, 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/cm3
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/m3 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

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 : K010-310D
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 Name: Badrilla
15 Queen Square
Leeds LS2 8AJ
United Kingdom

Web site address : www.badrilla.com
E-mail address : info@badrilla.com

Emergency telephone number

Emergency contact:	Badrilla Ltd	+44 7801 730 618
Information:	Badrilla Ltd	www.badrilla.com

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

3.1Substances

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
Hydroxylamine hydrochloride			
CAS-No. EC-No. Index-No.	5470-11-1 226-798-2 612-123-00-2	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 %

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.

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, 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 Colour: white
b) Odour	No data available
c) Odour Threshold	No data available

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/cm3 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 (NOx), 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

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.	

Badrilla
excellence in a box

Safety Data Sheet

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

Product name	**Thiopropyl Sepharose™ 6B, 15 g**
Catalogue Number	K010-310F
EC number	232-731-8
CAS number	9012-36-6
Product description	Not available.
Product type	Solid.
Other means of identification	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
15 Queen Square
Leeds LS2 8AJ
United Kingdom

Web site address : www.badrilla.com
E-mail address : info@badrilla.com

Emergency telephone number

Emergency contact:	Badrilla Ltd	+44 7801 730 618
Information:	Badrilla Ltd	www.badrilla.com

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

Response	Not applicable
Storage	Not applicable
Disposal	Not applicable
Supplemental label elements	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

Containers to be fitted with child-resistant fastenings	Not applicable
Tactile warning of danger	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, withn 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

Eye contact 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.

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion 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.

Protection of first-aiders 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

Eye contact No known significant effects or critical hazards.
Inhalation No known significant effects or critical hazards.
Skin contact No known significant effects or critical hazards.
Ingestion No known significant effects or critical hazards

Over-exposure signs/symptoms

Eye contact No specific data.
Inhalation No specific data.
Skin contact No specific data
Ingestion No specific data

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments 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.

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 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

Potential chronic health effects Not available.

Conclusion/Summary Not available.

General No known significant effects or critical hazards.
Carcinogenicity No known significant effects or critical hazards
Mutagenicity No known significant effects or critical hazards
Teratogenicity No known significant effects or critical hazards.
Developmental effects No known significant effects or critical hazards.
Fertility effects No known significant effects or critical hazards.
Other information 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

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

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Safety Data Sheet

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: K010-310G
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
Leeds LS2 8AJ
United Kingdom

Web site address : www.badrilla.com
E-mail address : info@badrilla.com

Emergency telephone number

Emergency contact:	Badrilla Ltd	+44 7801 730 618
Information:	Badrilla Ltd	www.badrilla.com

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
2-Mercaptoethanol		
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 %**
Sodium dodecyl sulphate		
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/m3	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/m3	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, 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

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 (NOx), 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.

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.

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Safety Data Sheet

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: K010-310H
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
E-mail address : info@badrilla.com

Emergency telephone number

Emergency contact:	Badrilla Ltd	+44 7801 730 618
Information:	Badrilla Ltd	www.badrilla.com

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

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.

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Inhalation	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.
Ingestion	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.
Most important symptoms/effects	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.
Notes to Physician	Treat symptomatically

Section 5: Fire Fighting Measures

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

Health	Flammability	Instability	Physical hazards
3	0	1	N/A

S-Palmitoylation Kit: Neutralisation buffer

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Section 6: Accidental Release Measures

Personal Precautions

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.
Refer to protective measures listed in Sections 7 and 8

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.

Methods for Containment and Clean Up

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

Handling

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.

Storage

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/m3	(Vacated) Ceiling: 2 mg/m3 TWA: 2 mg/m3	IDLH: 10 mg/m3 Ceiling: 2 mg/m3

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Sodium hydroxide	Ceiling: 2 mg/m3	Ceiling: 2 mg/m3	CEV: 2 mg/m3

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

Eye/face Protection
Tightly fitting safety goggles.

Skin and body protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection
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.

Hygiene Measures
When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use.

S-Palmitoylation Kit: Neutralisation buffer

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Section 9: Physical and Chemical Properties

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

Section 10: Stability and Reactivity

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

S-Palmitoylation Kit: Neutralisation buffer

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Section 11: Toxicological Information

Acute Toxicity

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

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Causes burns by all exposure routes

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

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

Mutagenic Effects No information available
Reproductive Effects No information available.
Developmental Effects No information available.
Teratogenicity No information available.
STOT - single exposure Respiratory system
STOT - repeated exposure None known
Aspiration hazard No information available
Symptoms / effects,both acute and delayed 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
Endocrine Disruptor Information No information available
Other Adverse Effects The toxicological properties have not been fully investigated.

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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

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

Section 13: Disposal Considerations

Waste Disposal Methods Should not be released into the environment.

Section 14: Transport Information

DOT
UN-No UN1824
Proper Shipping Name SODIUM HYDROXIDE SOLUTION
Hazard Class 8
Packing Group II

TDG
UN-No UN1824
Proper Shipping Name SODIUM HYDROXIDE SOLUTION
Hazard Class 8
Packing Group II

IATA
UN-No UN1824
Proper Shipping Name SODIUM HYDROXIDE SOLUTION
Hazard Class 8
Packing Group II

IMDG/IMO
UN-No UN1824
Proper Shipping Name SODIUM HYDROXIDE SOLUTION
Hazard Class 8
Packing Group 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

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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

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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. Badrirlla and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.