PRIMER DESIGN

Part of the Novacyt Group

# Safety Data Sheet

exsig® Mag Oyster Extract SDS

Date of Issue 17th Sep 2024

Product Components:

1. exsig® Mag Lysis Buffer
2. exsig® Mag Binding Buffer
3. exsig® Mag Particle Suspension
4. exsig® Mag Wash Buffer 1
5. exsig® Mag Wash Buffer 2
6. exsig® Mag Wash Buffer 3
7. exsig® Mag Elution Buffer
8. No.1 Proteinase K
9. No.1a Proteinase K buffer
10. Sample Prep Buffer

ISSUED TO MEET THE REQUIREMENTS OF REGULATION (EC) 1907/2006: ARTICLE 31

## SECTION 1: Identification of the substance and of the company/undertaking

| | | |
|---|---|---|
| Component Identifier:<br>1. **exsig® Mag Lysis Buffer** | Name: exsig® Mag Oyster Extract | |
| Product Use: Separation and Purification of Nucleic Acid | | |
| Manufacturer's Name: Primerdesign Limited | | |
| Manufacturer's Address: York House, School Lane, Chandlers Ford, United Kingdom | | |
| Postal Code: S053 4DG | Emergency Telephone:<br>+44 (0) 800 0156 494 | Fax:<br>+44 (0) 8708 362 155 |
| Hours of Operation: 09:00-17:30 UK time | Email: support@primerdesign.co.uk | |

## SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture:

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


GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life


GHS07

Acute Tox 4 H302 Harmful if Swallowed

Skin Irrit. 2 H315 Causes skin irritation

Eye Irrit. 2 H319 Causes serious eye irritation.

2.2 Labelling

Labelling according to Regulation (EC) No 1272/2008:

The product is classified and labelled according to the CLP regulation. Hazard pictograms:

GHS07 GHS09

Signal word: Warning

Hazard-determining components of labelling:

guanidinium chloride cetrimonium bromide

Hazard statements:

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

Precautionary statements:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P273 Avoid release to the environment.

P280 Wear protective gloves / eye protection / face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards:

Results of PBT and vPvB assessment:

PBT: Not applicable. vPvB: Not applicable.

## SECTION 3: Composition/Information on Ingredients

| Components | CAS Number/EC Number | Weight |
|---|---|---|
| guanidinium chloride | 50-01-1 | 25-50% |
| cetrimonium bromide | 57-09-0 | 1-<2.5% |

## SECTION 4: First aid measures

EYE CONTACT: Rinse opened eye for several minutes under running water.
Call a doctor immediately.
SKIN CONTACT: Immediately wash with water and soap and rinse thoroughly.
INGESTION: Call for a doctor immediately.
INHALATION: Supply fresh air; consult doctor in case of complaints.

Equipment to be available at the workplace for specific and immediate treatment: Eye-washing and skin washing facilities.

## SECTION 5: Fire-fighting measures

5.1 Extinguishing media

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture

No further relevant information available.

### 5.3 Advice for firefighters

Protective equipment: Mouth respiratory protective device.

Do not inhale explosion gases or combustion gases.

## SECTION 6: Accidental release measures

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

Wear protective equipment. Keep unprotected persons away.

### 6.2. Environmental precautions:

Do not allow to enter sewers/ surface or ground water.

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

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.

## SECTION 7: Handling and storage

### 7.1. Handling

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

### 7.2. Storage

Requirements to be met by storerooms and receptacles: Store only in the original receptacle.

Information about storage in one common storage facility: Store away from foodstuffs.

Further information about storage conditions: Keep container tightly sealed.

## SECTION 8: Exposure controls/personal protection

### 8.1. Exposure Limit Values

None

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2. Exposure Controls

8.2.1. Occupational

Use in a laboratory hood or other ventilated device. OSHA, ACGIH, or NIOSH has not established occupational exposure limits for this substance. Use prudent laboratory practices for handling chemical substances of unknown toxicity.

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Do not inhale gases / fumes / aerosols. Avoid contact with the eyes and skin.

EYE PROTECTION: Employees should wear safety goggles to prevent eye contact with this substance.

CLOTHING: Employees should wear appropriate protective clothing (laboratory coat with long sleeves) and equipment to prevent skin contact with this material.

GLOVES: Protective gloves

Material of gloves: Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.35 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed

## SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties:

General Information:

Appearance:

| | |
|---|---|
| Form: | Fluid |
| Colour: | Colourless |
| Odour: | Characteristic |
| Odour threshold: | Not determined. |
| pH-value: | Not determined. |
| Melting point/freezing point: | Undetermined. |

| | |
|---|---|
| Initial boiling point and boiling range: | 100 °C |
| Flash point: | Not applicable. |
| Flammability (solid, gas): | Not applicable. |
| Decomposition temperature: | Not determined. |

Explosive properties: Product does not present an explosion hazard.

Explosion limits:

| | |
|---|---|
| Lower: | Not determined. |
| Upper: | Not determined. |
| Vapour pressure at 20 °C: | 23 hPa |
| Density: | Not determined. |
| Relative density: | Not determined. |
| Vapour density: | Not determined. |
| Evaporation rate: | Not determined. |
| Solubility in / Miscibility with water: | Soluble. |

Partition coefficient: n-octanol/water: Not determined.

Viscosity:

| | |
|---|---|
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |

9.2 Other information

No further relevant information available.

Auto-ignition temperature: Product is not self-igniting.

## SECTION 10: Stability and Reactivity

10.1 Reactivity: No further relevant information available.

10.2 Chemical stability:

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions: No dangerous reactions known.

10.4 Conditions to avoid: No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide

## SECTION 11: Toxicological Information

11.1 Information on toxicological effects: Acute toxicity

Harmful if swallowed.

LD/LC50 values relevant for classification:

50-01-1 guanidinium chloride

Oral LD50 475 mg/kg (rat)

Primary irritant effect: Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/irritation: Causes serious eye irritation.

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

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):

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

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

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

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

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

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

## SECTION 12: Ecological Information:

12.1 Toxicity:

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability: No further relevant information available.

12.3 Bioaccumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

Additional ecological information:

General notes:

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

12.5 Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects: No further relevant information available.

Persistence and degradability: No data available

## SECTION 13: Disposal Considerations

Dispose of contents/container in accordance with local/regional/national/international regulations.

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

Contaminated packaging: Disposal must be made according to official regulations.

## SECTION 14: Transport Information

14.1 UN-Number:

| | |
|---|---|
| ADR, IMDG, IATA | UN3082 |

14.2 UN proper shipping name:

| | |
|---|---|
| ADR | 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (cetrimonium bromide) |
| IMDG | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (cetrimonium bromide), MARINE POLLUTANT |

| | |
|---|---|
| Class: | 9 Miscellaneous dangerous substances and articles. |
| Label: | |
| 14.4 Packing group: | 9 |
| ADR, IMDG, IATA | III |
| 14.5 Environmental hazards: | Product contains environmentally hazardous substances: cetrimonium bromide |
| Marine pollutant: | Symbol (fish and tree) |
| Special marking (ADR): | Symbol (fish and tree) |
| Special marking (IATA): | Symbol (fish and tree) |
| 14.6 Special precautions for user: | |
| | Warning: Miscellaneous dangerous substances and articles. |
| Danger code (Kemler): | 90 |
| EMS Number: | F-A,S-F |
| Stowage Category | A |

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Transport/Additional information:

| | |
|---|---|
| ADR | Not applicable. |
| Limited quantities (LQ): | 5L |
| Transport category: | 3 |
| Tunnel restriction code: | E |

UN "Model Regulation":UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. CETRIMONIUM BROMIDE), 9, III

## SECTION 15: Regulatory information

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

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other Information

16.1 Recommended restrictions on use: None

16.2 Relevant phrases:

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

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.

16.3 Sources of information used to compile this sheet Regulation (EC) No. 1907/2006 of the European Parliament and of the Council concerning the

registration, evaluation, authorisation and restriction of chemicals (REACH): Article 31: Requirements for safety data sheets, and Annex II: Guide to the compilation of safety data sheets, OJL, 136, 29.5.2007, pp 35-36 and pp 84-89.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, and amending Directive 67/548/EEC and Regulation (EC) No 1907/2006 (in short CLP).

Commission Decision 2000/532/EC establishing a list of wastes pursuant to Article 1 (a) of Directive 75/442/EEC on Waste and Article 1 (4) of Directive 91/689/EEC on Hazardous Waste. CONSLEG: 2000D0532-01/01/2002, Office for Official Publications of the European Communities.

Approved Supply List (8th edition), Information provided for the classification and labelling of substances and preparations for supply, United Kingdom Health and Safety Commission, 2005 (based on Annex I of 67/548/EEC).

Directive 98/79/EC of the European Parliament and of the Council on in vitro diagnostic medical devices, Annex II Essential Requirements, OJ L, 331, 7.12.98, p 20.

List of approved workplace exposure limits, Table 1 of EH40/2005, United Kingdom Health and Safety Commission, 2ND edition published 2011, implementing the European Commission's Indicative Occupational Exposure Limit Values Directive 2009/161/EU.

16.4 Changes from previous version
First Version

The above information is based on data available and is believed to be correct. Since the information may be applied under conditions beyond our control and with which we may be unfamiliar, we do not assume any responsibility for the results of its use and all persons receiving it shall make their own determinations of the effects, properties and protections which pertain to their particular conditions.

No representation, warranty or guarantee, expressed or implied (including a warranty of fitness or merchantability for a particular purpose), is made with respect to the material, the accuracy of this information, the results to be obtained from the use thereof, or the hazards connected with the use of the material. Caution should be used in the handling and use of the material.

ISSUED TO MEET THE REQUIREMENTS OF REGULATION (EC) 1907/2006: ARTICLE 31

## SECTION 1: Identification of the substance and of the company/undertaking

| | | |
|---|---|---|
| Component Identifier:<br>2. **exsig® Mag Binding Buffer** | Name: exsig® Mag Oyster Extract | |
| Product Use: Separation and Purification of Nucleic Acid. | | |
| Manufacturer's Name: Primerdesign Limited | | |
| Manufacturer's Address: York House, School Lane, Chandlers Ford, United Kingdom | | |
| Postal Code: S053 4DG | Emergency Telephone:<br>+44 (0) 800 0156 494 | Fax:<br>+44 (0) 8708 362 155 |
| Hours of Operation: 09:00-17:30 UK time | Email: support@primerdesign.co.uk | |

## SECTION 2: Hazards Identification

2.1 Classifications of the substance or mixture:

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

| | |
|---|---|
|  <br>Danger | H226 Flammable liquid or vapour<br>H302 Harmful if swallowed<br>H315 Causes skin irritation<br>H318 Causes serious eye damage<br>H336 May cause drowsiness or dizziness<br>H400 Very toxic to aquatic life |

2.2 Labelling

Labelling according to Regulation (EC) No 1272/2008:

The product is classified and labelled according to the CLP regulation.

**Hazard pictograms:**

GHS02 GHS05 GHS07 GHS09

Signal word: Danger

Hazard-determining components of labelling: propan-1-ol guanidinium chloride

Hazard statements:

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H336 May cause drowsiness or dizziness.

H400 Very toxic to aquatic life.

Precautionary statements:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

## SECTION 3: Composition/Information on Ingredients

| Components | CAS Number/EC Number | Weight |
|---|---|---|
| propan-1-ol | 71-23-8 | 50-100% |
| guanidinium chloride | 50-01-1 | 10-<25% |
| cetrimonium bromide | 57-09-0 | 0.3-<1% |

## SECTION 4: First aid measures

EYE CONTACT: Rinse opened eye for several minutes under running water. Then consult a doctor.

SKIN CONTACT: Immediately wash with water and soap and rinse thoroughly.

INGESTION: Call for a doctor immediately.

INHALATION: Supply fresh air; consult doctor in case of complaints

Equipment to be available at the workplace for specific and immediate treatment: Eye-washing and skin washing facilities.

## SECTION 5: Fire-fighting measures

5.1 Extinguishing media

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture

Can form explosive gas-air mixtures.

5.3. Advice for firefighters

Mouth respiratory protective device.

Do not inhale explosion gases or combustion gases.

## SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Keep unprotected people away. Ensure adequate ventilation. Keep away from ignition sources.

6.2 Environmental precautions:

Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

Ensure adequate ventilation. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

## SECTION 7: Handling and storage

7.1. Handling

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols. Work only in fume cupboard. Use only in well-ventilated areas. Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

Information about fire - and explosion protection:
Keep ignition sources away - Do not smoke.
Fumes can combine with air to form an explosive mixture.

7.2. Storage
Store only in the original receptacle. Store in a cool location.
Keep container tightly sealed. Store receptacle in a well-ventilated area.
Store away from foodstuffs.

## SECTION 8: Exposure controls/personal Protection

8.1. Exposure Limit Values
71-23-8 propan-1-ol

| | |
|---|---|
| WEL | Short-term value: 625 mg/m³, 250 ppm |
| | Long-term value: 500 mg/m³, 200 ppm Sk |

8.2. Exposure Controls

8.2.1. Occupational
Use in a laboratory hood or other ventilated device. OSHA, ACGIH, or NIOSH has not established occupational exposure limits for this substance. Use prudent laboratory practices for handling chemical substances of unknown toxicity.

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

EYE PROTECTION: Employees should wear safety glasses to prevent eye contact with this substance.
CLOTHING: Employees should wear appropriate protective clothing (laboratory coat with long sleeves) and equipment to prevent skin contact with this material.
GLOVES: Protective gloves

Material of gloves: Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.35 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

## SECTION 9: Physical and Chemical Properties

General Information:

Appearance:

| | |
|---|---|
| Form: | Fluid |
| Colour: | Colourless |
| Odour: | Characteristic |
| Odour threshold: | Not determined. |
| pH value: | Not determined |
| Flash point: | 28 °C |
| Ignition temperature: | 360 ° |
| Decomposition temperature: | Not determined. |
| Auto-ignition temperature: | Product is not self-igniting. |
| Explosive properties: | Product is not explosive. However, formation of explosive air/ vapour mixtures is possible. |
| Explosion limits: | |
| Lower: | 2.1 Vol % |
| Upper: | 13.5 Vol % |
| Vapour pressure at 20 °C: | 19 hPa |
| 9.2 Other information: | No further relevant information available. |

## SECTION 10: Stability and Reactivity

10.1 Reactivity: No further relevant information available.

10.2 Chemical stability:

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions: Forms explosive gas mixture with air.

10.4 Conditions to avoid: No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide

## SECTION 11: Toxicological Information

11.1 Information on toxicological effects: Acute toxicity

Harmful if swallowed.

LD/LC50 values relevant for classification:

Oral LD50 1,870 mg/kg (rat)

Dermal LD50 5,040 mg/kg (rabbit)

Primary irritant effect: Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/irritation: Causes serious eye damage.

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

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):

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

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

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

STOT-single exposure: May cause drowsiness or dizziness.

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

## SECTION 12: Ecological Information:

12.1 Toxicity:

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability: No further relevant information available.

12.3 Bioaccumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

Additional ecological information

General notes:

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

12.5 Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects: No further relevant information available.

## SECTION 13: Disposal Considerations

Dispose of contents/container in accordance with local/regional/national/international regulations.

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

Contaminated packaging: Disposal must be made according to official regulations.

## SECTION 14: Transport Information

14.1 UN-Number:

| | |
|---|---|
| ADR, IMDG, IATA | UN1274 |

14.2 UN proper shipping name:

| | |
|---|---|
| ADR | 1274 n-PROPANOL (PROPYL ALCOHOL, NORMAL) solution, ENVIRONMENTALLY HAZARDOUS |
| IMDG | n-PROPANOL (PROPYL ALCOHOL, NORMAL) solution, MARINE POLLUTANT |
| IATA | n-PROPANOL (PROPYL ALCOHOL, NORMAL) solution |

14.3 Transport hazard class(es):

ADR, IMDG

| | |
|---|---|
| Class: | 3 Flammable liquids. |
| Label: | 3 |

IATA

| | |
|---|---|
| Class: | 3 Flammable liquids. |
| Label: | 3 |

14.4 Packing group:

| | |
|---|---|
| ADR, IMDG, IATA | III |

| | |
|---|---|
| 14.5 Environmental hazards: | Product contains environmentally hazardous substances: cetrimonium bromide |
| Marine pollutant: | Symbol (fish and tree) |
| Special marking (ADR): | Symbol (fish and tree) |
| 14.6 Special precautions for user: | Warning: Flammable liquids. |

| | |
|---|---|
| Danger code (Kemler): | 30 |
| EMS Number: | F-E,S-D |
| Stowage Category | A |

| | |
|---|---|
| 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |

Transport/Additional information:

ADR

| | |
|---|---|
| Limited quantities (LQ): | 5L |
| Transport category: | 3 |
| Tunnel restriction code: | D/E |
| UN "Model Regulation": | UN 1274 N-PROPANOL (PROPYL ALCOHOL, NORMAL) SOLUTION, 3, III, ENVIRONMENTALLY HAZARDOUS |

## SECTION 15: Regulatory Information

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

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other Information

16.1 Recommended restrictions on use: None

16.2 Relevant phrases:

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes Serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

16.3 Sources of information used to compile this sheet Regulation (EC) No. 1907/2006 of the European Parliament and of the Council concerning the registration evaluation, authorisation and restriction of chemicals (REACH): Article 31: Requirements for safety data sheets, and Annex II: Guide to the compilation of safety data sheets, OJLI 136, 29.52007, pp 35-36 and pp 84-89.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, and amending Directive 67/548/EEC and Regulation (EC) No 1907/2006 (in short CLP).

Commission Decision 2000/532/EC establishing a list of wastes pursuant to Article 1 (a) of Directive 75/442/EEC on Waste and Article 1 (4) of Directive 91/689/EEC on Hazardous Waste. CONSLEG: 2000D0532-01/01/2002, Office for Official Publications of the European Communities.

Approved Supply List (8th edition), Information provided for the classification and labelling of substances and preparations for supply, United Kingdom Health and Safety Commission, 2005 (based on Annex I of 67/548/EEC).

Directive 98/79/EC of the European Parliament and of the Council on in vitro diagnostic medical devices, Annex I, Essential Requirements, OJ L, 331, 7.12.98, p 20.

List of approved workplace exposure limits, Table 1 of EH40/2005, United Kingdom Health and Safety Commission, 2ND edition published 2011, implementing the European Commission's Indicative Occupational Exposure Limit Values Directive 2009/161/EU.

16.4 Changes from previous version

First Version

The above information is based on data available and is believed to be correct. Since the information may be applied under conditions beyond our control and with which we may be unfamiliar, we do not assume any responsibility for the results of its use and all persons receiving it shall make their own determinations of the effects, properties and protections which pertain to their particular conditions.

No representation, warranty or guarantee, expressed or implied (including a warranty of fitness or merchantability for a particular purpose), is made with respect to the material, the accuracy of this

information, the results to be obtained from the use thereof, or the hazards connected with the use of the material. Caution should be used in the handling and use of the material.

ISSUED TO MEET THE REQUIREMENTS OF REGULATION (EC) 1907/2006:
ARTICLE 31

## SECTION 1: Identification of the substance and of the company/undertaking

| | | |
|---|---|---|
| Component Identifier:<br>3. **exsig® Mag Particle Suspension** | Name: exsig® Mag Oyster Extract | |
| Product Use: Separation and Purification of Nucleic Acid. | | |
| Manufacturer's Name: Primerdesign Limited | | |
| Manufacturer's Address: York House, School Lane, Chandlers Ford, United Kingdom | | |
| Postal Code: S053 4DG | Emergency Telephone:<br>+44 (0) 800 0156 494 | Fax:<br>+44 (0) 8708 362 155 |
| Hours of Operation: 09:00-17:30 UK time | Email: support@primerdesign.co.uk | |

## SECTION 2: Hazards Identification

2.1 Classifications

Classification of the substance or mixture: Not a hazardous substance or mixture.

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

Classification according to Directive 67/548/EEC or Directive 1999/45/EC: Not a hazardous substance or mixture.

Information concerning particular hazards for human and environment: None

Other hazards that do not result in classification: None

2.2 Labelling

Labelling according to Regulation (EC) No 1272/2008: None

## SECTION 3: Composition/Information on Ingredients

| Components | CAS Number/EC Number | Weight |
|---|---|---|
| edetic acid | 60-00-4 | 2.5-<3% |

## SECTION 4: First aid measures

EYE CONTACT: Rinse opened eye for several minutes under running water. Then consult a doctor.
SKIN CONTACT: Immediately wash with water and soap and rinse thoroughly.
INGESTION: Call for a doctor immediately.
INHALATION: Supply fresh air; consult doctor in case of complaints.

Equipment to be available at the workplace for specific and immediate treatment: Eye-washing and skin-washing facilities.

## SECTION 5: Fire-fighting measures

5.1 Extinguishing media

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture

No further relevant information available.

5.3. Advice for firefighters

Protective equipment:

Mouth respiratory protective device. Do not inhale explosion gases or combustion gases.

## SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures: Wear protective clothing.

6.2. Environmental precautions:

Do not allow product to reach sewage system or any water course.

6.3. Methods and material for containment and cleaning up:

Absorb with liquid binding material. Ensure adequate ventilation.

Wear appropriate protective clothing and chemically compatible gloves. Place spillage in appropriate container for waste disposal. Wash contaminated clothing before reuse.

## SECTION 7: Handling and storage

7.1. Handling
Observe all federal, state and local regulations. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Ensure good ventilation/exhaustion at the workplace

7.2. Storage
Store only in the original receptacle. Store away from foodstuffs

## SECTION 8: Exposure controls/personal protection

8.1. Exposure Limit Values
None

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2. Exposure Controls

8.2.1. Occupational

Use in a laboratory hood or other ventilated device. OSHA, ACGIH, or NIOSH has not established occupational exposure limits for this substance. Use prudent laboratory practices for handling chemical substances of unknown toxicity.

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Do not inhale gases / fumes / aerosols. Avoid contact with the eyes and skin.

EYE PROTECTION: Employees should wear safety goggles to prevent eye contact with this substance.

CLOTHING: Employees should wear appropriate protective clothing (laboratory coat with long sleeves) and equipment to prevent skin contact with this material.

GLOVES: Protective gloves

Material of gloves: Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.35 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed

## SECTION 9: Physical and Chemical Properties

9.1 General Information:

| | |
|---|---|
| Appearance: | |
| Form: | Suspension |
| Colour: | Brown |
| Odour: | Characteristic |
| Odour threshold: | Not determined. |
| | |
| pH-value at 20 °C: | 7 |
| Melting point/freezing point: | Undetermined. |
| Initial boiling point and boiling range: | 100 °C |
| Flash point: | Not applicable. |
| Flammability (solid, gas): | Not applicable. |
| Ignition temperature: | Not applicable |
| Decomposition temperature: | Not determined. |
| Auto-ignition temperature: | Product is not self-igniting. |
| Explosive properties: | Product does not present an explosion hazard. |
| Explosion limits: | |
| Lower: | Not determined. |
| Upper: | Not determined. |
| Vapour pressure at 20 °C: | 23 hPa |
| Density: | Not determined. |
| Relative density: | Not determined. |
| Vapour density: | Not determined. |
| Evaporation rate: | Not determined. |
| Solubility in water: | Partly miscible. |
| Partition coefficient: n-octanol/water: | Not determined. |
| Viscosity: | Not Determined |
| Dynamic: | Not determined. |
| Kinematic: | Not determined |

9.2 Other information: No further relevant information available

## SECTION 10: Stability and Reactivity

10.1. Stability:
Stable under recommended storage conditions.

10.2. Materials/Conditions to avoid:

No data available

10.3. Incompatible Materials:
No data available

10.4. Hazardous decomposition products:
No dangerous decomposition products known.

## SECTION 11: Toxicological Information

11.1 Information on toxicological effects:

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

Primary irritant effect:

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

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

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

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):

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

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

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

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

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

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

## SECTION 12: Ecological Information:

12.1 Toxicity:

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability: No further relevant information available.

12.3 Bioaccumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

Additional ecological information:

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects: No further relevant information available.

## SECTION 13: Disposal Considerations

Dispose of contents/container in accordance with local/regional/national/international regulations.

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

Contaminated packaging: Disposal must be made according to official regulations.

## SECTION 14: Transport Information

UN Number: Not applicable

Proper shipping name: Not applicable

Class: Not applicable

Packing Group: Not applicable

## SECTION 15: Regulatory Information

Health, safety or environmental information is not required on the label (according to Regulation (EC) No 1272/2008)

## SECTION 16: Other Information

16.1 Recommended restrictions on use: None

16.2 Relevant phrases

H319 Causes serious eye irritation.

16.3 Sources of information used to compile this sheet Regulation (EC) No. 1907/2006 of the European Parliament and of the Council concerning the registration, evaluation, authorisation and restriction of chemicals (REACH): Article 31: Requirements for safety data sheets, and Annex II: Guide to the compilation of safety data sheets, OJL, 1 36, 29.52007, pp 35-36 and pp 84-89.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, and amending Directive 67/548/EEC and Regulation (EC) No 1907/2006 (in short CLP).

Commission Decision 2000/532/EC establishing a list of wastes pursuant to Article 1 (a) of Directive 75/442/EEC on Waste and Article (4) of Directive 91/689/EEC on Hazardous Waste. CONSLEG: 2000D0532-01/01/2002, Office for Official Publications of the European Communities.

Approved Supply List (8th edition), Information provided for the classification and labelling of substances and preparations for supply, United Kingdom Health and Safety Commission, 2005 (based on Annex I of 67/548/EEC).

Directive 98/79/EC of the European Parliament and of the Council on in vitro diagnostic medical devices, Annex I, Essential Requirements, OJ L} 331, 7.12.98, p 20.

List of approved workplace exposure limits, Table 1 of EH40/2005, United Kingdom Health and Safety Commission, 2ND edition published 2011, implementing the European Commission's Indicative Occupational Exposure Limit Values Directive 2009/161/EU.

16.4 Changes from previous version
First Version

The above information is based on data available and is believed to be correct. Since the information may be applied under conditions beyond our control and with which we may be unfamiliar, we do not assume any responsibility for the results of its use and all persons receiving it shall make their own determinations of the effects, properties and protections which pertain to their particular conditions,

No representation, warranty or guarantee, expressed or implied (including a warranty of fitness or merchantability for a particular purpose), is made with respect to the material, the accuracy of this information, the results to be obtained from the use thereof, or the hazards connected with the use of the material. Caution should be used in the handling and use of the material.

ISSUED TO MEET THE REQUIREMENTS OF REGULATION (EC) 1907/2006: ARTICLE 31

## SECTION 1: Identification of the substance and of the Company/undertaking

| | | |
|---|---|---|
| Component Identifier:<br>4. **exsig® Mag Wash Buffer 1** | Name: exsig® Mag Oyster Extract | |
| Product Use: Separation and Purification of Nucleic Acid. | | |
| Manufacturer's Name: Primerdesign Limited | | |
| Manufacturer's Address: York House, School Lane, Chandlers Ford, United Kingdom | | |
| Postal Code: S053 4DG | Emergency Telephone:<br>+44 (0) 800 0156 494 | Fax:<br>+44 (0) 8708 362 155 |
| Hours of Operation: 09:00-17:30 UK time | Email: support@primerdesign.co.uk | |

## SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture:

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


GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.


GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.


GHS07

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H336 May cause drowsiness or dizziness

## 2.2 Labelling

Labelling according to Regulation (EC) No 1272/2008:
The product is classified and labelled according to the CLP regulation.

Hazard pictograms:

GHS02 GHS05 GHS07

Signal word: Danger

Hazard-determining components of labelling:
propan-1-ol
guanidinium chloride sodium
N-lauroylsarcosinate

Hazard statements:
H226 Flammable liquid and vapour.
H332 Harmful if inhaled.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.

Precautionary statements:
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

## SECTION 3: Composition/Information on Ingredients

| Components | CAS Number/EC Number | Weight |
|---|---|---|
| propan-1-ol | 71-23-8 | >25-≤50% |
| guanidinium chloride | 50-01-1 | >10-≤25% |
| sodium N-lauroylsarcosinate | 137-16-6 | ≥0.1-≤1% |

## SECTION 4: First aid measures

EYE CONTACT: Rinse opened eye for several minutes under running water. Then consult a doctor.
SKIN CONTACT: Immediately wash with water and soap and rinse thoroughly.
INGESTION: Call for a doctor immediately.
INHALATION: Supply fresh air; consult doctor in case of complaints.

Equipment to be available at the workplace for specific and immediate treatment: Eye-washing and skin-washing facilities.

## SECTION 5: Fire-fighting measures

5.1 Extinguishing media
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture
Can form explosive gas-air mixtures.

5.3. Advice for firefighters
Protective equipment:
Mouth respiratory protective device. Do not inhale explosion gases or combustion gases

## SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation. Avoid breathing vapours, mist or gas.
Keep away from ignition sources.

6.2. Environmental precautions:
Do not allow to enter sewers/ surface or ground water.

6.3. Methods and material for containment and cleaning up:
Absorb with liquid binding material. Ensure adequate ventilation.

Wear appropriate protective clothing and chemically compatible gloves. Place spillage in appropriate container for waste disposal. Wash contaminated clothing before reuse.

## SECTION 7: Handling and storage

7.1. Handling

Keep receptacles tightly sealed. Open and handle receptacle with care.

Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols. Work only in fume cupboard. Use only in well-ventilated areas. Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

Keep ignition sources away - Do not smoke. Fumes can combine with air to form an explosive mixture.

7.2. Storage

Store only in the original receptacle. Store in a cool location.

Store away from oxidising agents. Store away from foodstuffs.

Keep container tightly sealed. Store receptacle in a well-ventilated area

## SECTION 8: Exposure controls/personal Protection

8.1. Exposure Limit Values

71-23-8 propan-1-ol

WEL Short-term value: 625 mg/m³, 250 ppm

WEL Long-term value: 500 mg/m³, 200 ppm Sk

8.2. Exposure Controls

8.2.1 Occupational

Use in a laboratory hood or other ventilated device. Do not inhale gases / fumes / aerosols.

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Avoid contact with the eyes and skin.

OSHA, ACGIH, or NIOSH has not established occupational exposure limits for this substance. Use prudent laboratory practices for handling chemical substances of unknown toxicity.

EYE PROTECTION: Employees should wear safety goggles to prevent eye contact with this substance.

CLOTHING: Employees should wear appropriate protective clothing (laboratory coat with long sleeves) and equipment to prevent skin contact with this material.

GLOVES: Protective gloves

Material of gloves: Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.35 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

## SECTION 9: Physical and chemical properties

9.1 General Information:

| | |
|---|---|
| Appearance: | |
| Form: | Fluid |
| Colour: | Colourless |
| Odour: | Characteristic |
| Odour threshold: | Not determined. |
| | |
| pH-value: | Not determined. |
| Melting point/freezing point: | Undetermined. |
| Initial boiling point and boiling range: | Undetermined. |
| Flash point: | 33 °C |

| | |
|---|---|
| Flammability (solid, gas): | Not applicable. |
| Ignition temperature: | 360 °C |
| Decomposition temperature: | Not determined. |
| Auto-ignition temperature: | Product is not self-igniting. |
| Explosive properties: | Product does not present an explosion hazard. |
| Explosion limits: | |
| Lower: | 2.1 Vol % |
| Upper: | 13.5 Vol % |
| Vapour pressure at 20 °C: | 23 hPa |
| Density: | Not determined. |
| Relative density: | Not determined. |
| Vapour density: | Not determined. |
| Evaporation rate: | Not determined. |
| Solubility in water: | Soluble. |
| Partition coefficient: n-octanol/water: | Not determined. |
| Viscosity: | Not determined |
| Dynamic: | Not determined. |
| Kinematic: | Not determined |

9.2 Other information: No further relevant information available

## SECTION 10: Stability and Reactivity

10.1 Reactivity: No further relevant information available.

10.2 Chemical stability:

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions: Forms explosive gas mixture with air.

10.4 Conditions to avoid: No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide.

## SECTION 11: Toxicological Information

11.1 Information on toxicological effects: Acute toxicity

Harmful if inhaled.

LD/LC50 values relevant for classification:

50-01-1 guanidinium chloride

Oral LD50 475 mg/kg (rat)

Primary irritant effect: Causes skin irritation. Causes serious eye damage.

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

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):

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

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

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

STOT-single exposure: May cause drowsiness or dizziness.

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

## SECTION 12: Ecological Information:

Toxicity: No further relevant information available.

Persistence and degradability: No data available

Bio accumulative potential: No data available

Mobility in soil: No data available

Additional ecological information:

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted Other adverse effects: No data available

## SECTION 13: Disposal Considerations

Dispose of contents/container in accordance with local/regional/national/international regulations.

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

Contaminated packaging: Disposal must be made according to official regulations.

## SECTION 14: Transport Information

14.1 UN-Number:

| | |
|---|---|
| ADR, IMDG, IATA | UN1274 |

14.2 UN proper shipping name:

| | |
|---|---|
| ADR | 1274 n-PROPANOL (PROPYL ALCOHOL, NORMAL) solution |
| IMDG | n-PROPANOL (PROPYL ALCOHOL, NORMAL) solution |
| IATA | n-PROPANOL (PROPYL ALCOHOL, NORMAL) solution |

14.3 Transport hazard class(es):

ADR, IMDG, IATA


| | |
|---|---|
| Class: | 3 Flammable liquids. |
| Label: | 3 |

14.4 Packing group:

| | |
|---|---|
| ADR, IMDG, IATA | III |

14.5 Environmental hazards:

| | |
|---|---|
| Marine pollutant: | No |

| | |
|---|---|
| 14.6 Special precautions for user: | Warning: Flammable liquids. |
| Danger code (Kemler): | 30 |
| EMS Number: | F-E,S-E |
| Stowage Category | A |

| | |
|---|---|
| 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| Limited quantities (LQ): | 5L |
| Transport category: | 3 |
| Tunnel restriction code: | D/E |
| UN "Model Regulation": | UN 1274 N-PROPANOL (PROPYL ALCOHOL, NORMAL) SOLUTION, 3, III |

## SECTION 15: Regulatory Information

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

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other Information

16.1 Recommended restrictions on use: None

16.2 Relevant phrases:

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes Serious eye irritation.

H330 Fatal if inhaled.

H332 Harmful if inhaled.

H336 May cause drowsiness or dizziness.

16.3 Sources of information used to compile this sheet Regulation (EC) No. 1907/2006 of the European Parliament and of the Council concerning the registration evaluation, authorisation and restriction of chemicals (REACH): Article 31: Requirements for safety data sheets, and Annex II: Guide to the compilation of safety data sheets, OJLI 136, 29.52007, pp 35-36 and pp 84-89.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, and amending Directive 67/548/EEC and Regulation (EC) No 1907/2006 (in short CLP).

Commission Decision 2000/532/EC establishing a list of wastes pursuant to Article 1 (a) of Directive 75/442/EEC on Waste and Article 1 (4) of Directive 91/689/EEC on Hazardous Waste.

CONSLEG: 2000D0532-01/01/2002, Office for Official Publications of the European Communities.

Approved Supply List (8th edition), Information provided for the classification and labelling of substances and preparations for supply, United Kingdom Health and Safety Commission, 2005 (based on Annex I of 67/548/EEC).

Directive 98/79/EC of the European Parliament and of the Council on in vitro diagnostic medical devices, Annex I, Essential Requirements, OJ L, 331, 7.12.98, p 20.

List of approved workplace exposure limits, Table 1 of EH40/2005, United Kingdom Health and Safety Commission, 2ND edition published 2011, implementing the European Commission's Indicative Occupational Exposure Limit Values Directive 2009/161/EU.

16.4 Changes from previous version

First Version

The above information is based on data available and is believed to be correct. Since the information may be applied under conditions beyond our control and with which we may be unfamiliar, we do not assume any responsibility for the results of its use and all persons receiving it shall make their own determinations of the effects, properties and protections which pertain to their particular conditions.

No representation, warranty or guarantee, expressed or implied (including a warranty of fitness or merchantability for a particular purpose), is made with respect to the material, the accuracy of this information, the results to be obtained from the use thereof, or the hazards connected with the use of the material. Caution should be used in the handling and use of the material.

ISSUED TO MEET THE REQUIREMENTS OF REGULATION (EC) 1907/2006: ARTICLE 31

## SECTION 1: Identification of the substance and of the Company/undertaking

| | | |
|---|---|---|
| Component Identifier:<br>5. **exsig® Mag Wash Buffer 2** | Name: exsig® Mag Oyster Extract | |
| Product Use: Separation and Purification of Nucleic Acid. | | |
| Manufacturer's Name: Primerdesign Limited | | |
| Manufacturer's Address: York House, School Lane, Chandlers Ford, United Kingdom | | |
| Postal Code: S053 4DG | Emergency Telephone:<br>+44 (0) 800 0156 494 | Fax:<br>+44 (0) 8708 362 155 |
| Hours of Operation: 09:00-17:30 UK time | Email: support@primerdesign.co.uk | |

## SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture:

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

GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.

GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.

GHS07

Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H336 May cause drowsiness or dizziness

2.2 Labelling

Labelling according to Regulation (EC) No 1272/2008:

The product is classified and labelled according to the CLP regulation.

Hazard pictograms:

GHS02 GHS05 GHS07

Signal word: Danger

Hazard-determining components of labelling:
propan-1-ol

Hazard statements:
H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.

Precautionary statements:
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

## SECTION 3: Composition/Information on Ingredients

| Components | CAS Number/EC Number | Weight |
|---|---|---|
| propan-1-ol | 71-23-8 | 25-50% |
| guanidinium chloride | 50-01-1 | 10-<20% |

## SECTION 4: First aid measures

EYE CONTACT: Rinse opened eye for several minutes under running water. Then consult a doctor.
SKIN CONTACT: Immediately wash with water and soap and rinse thoroughly.
INGESTION: Call for a doctor immediately.
INHALATION: Supply fresh air; consult doctor in case of complaints.

Equipment to be available at the workplace for specific and immediate treatment: Eye-washing and skin-washing facilities.

## SECTION 5: Fire-fighting measures

5.1 Extinguishing media
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture
Can form explosive gas-air mixtures.

5.3. Advice for firefighters
Protective equipment:
Mouth respiratory protective device. Do not inhale explosion gases or combustion gases

## SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation. Avoid breathing vapours, mist or gas.
Keep away from ignition sources.

6.2. Environmental precautions:
Do not allow to enter sewers/ surface or ground water.

6.3. Methods and material for containment and cleaning up:
Absorb with liquid binding material. Ensure adequate ventilation.

Wear appropriate protective clothing and chemically compatible gloves. Place spillage in appropriate container for waste disposal. Wash contaminated clothing before reuse.

## SECTION 7: Handling and storage

7.1. Handling

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

Keep ignition sources away - Do not smoke. Fumes can combine with air to form an explosive mixture.

7.2. Storage

Store only in the original receptacle.

Store away from oxidising agents. Store away from foodstuffs.

Keep container tightly sealed.

## SECTION 8: Exposure controls/personal Protection

8.1. Exposure Limit Values

71-23-8 propan-1-ol

WEL Short-term value: 625 mg/m³, 250 ppm

WEL Long-term value: 500 mg/m³, 200 ppm Sk

8.2. Exposure Controls

8.2.1 Occupational

Use in a laboratory hood or other ventilated device. Do not inhale gases / fumes / aerosols.

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

OSHA, ACGIH, or NIOSH has not established occupational exposure limits for this substance. Use prudent laboratory practices for handling chemical substances of unknown toxicity.

RESPIRATORY PROTECTION: Use suitable respiratory protective device in case of insufficient ventilation. Filter ABEK2-P3

EYE PROTECTION: Employees should wear safety goggles to prevent eye contact with this substance.

CLOTHING: Employees should wear appropriate protective clothing (laboratory coat with long sleeves) and equipment to prevent skin contact with this material.

GLOVES: Protective gloves

Material of gloves: Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.35 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

## SECTION 9: Physical and chemical properties

9.1 General Information:

| | |
|---|---|
| Appearance: | |
| Form: | Fluid |
| Colour: | Light yellow |
| Odour: | Characteristic |
| Odour threshold: | Not determined. |
| | |
| pH-value: | Not determined. |
| Melting point/freezing point: | Undetermined. |
| Initial boiling point and boiling range: | 96 °C |
| Flash point: | 32 °C |
| Flammability (solid, gas): | Not applicable. |
| Ignition temperature: | 360 °C |
| Decomposition temperature: | Not determined. |
| Auto-ignition temperature: | Product is not self-igniting. |
| Explosive properties: | Product does not present an explosion hazard. |
| Explosion limits: | |
| Lower: | 2.1 Vol % |
| Upper: | 13.5 Vol % |
| Vapour pressure at 20 °C: | 23 hPa |
| Density: | Not determined. |
| Relative density: | Not determined. |
| Vapour density: | Not determined. |

9.2 Other information: No further relevant information available

## SECTION 10: Stability and Reactivity

10.1 Reactivity: No further relevant information available.

10.2 Chemical stability:

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions: Reacts with oxidising agents.

10.4 Conditions to avoid: No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide.

## SECTION 11: Toxicological Information

11.1 Information on toxicological effects: Acute toxicity

Harmful if inhaled.

LD/LC50 values relevant for classification:

50-01-1 guanidinium chloride

Oral LD50 475 mg/kg (rat)

Primary irritant effect: Causes skin irritation. Causes serious eye damage.

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

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):

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

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

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

STOT-single exposure: May cause drowsiness or dizziness.

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

## SECTION 12: Ecological Information:

Toxicity: No further relevant information available.

Persistence and degradability: No data available

Bio accumulative potential: No data available

Mobility in soil: No data available

Additional ecological information:

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted Other adverse effects: No data available

## SECTION 13: Disposal Considerations

Dispose of contents/container in accordance with local/regional/national/international regulations.

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

Contaminated packaging: Disposal must be made according to official regulations.

## SECTION 14: Transport Information

14.1 UN-Number:

| | |
|---|---|
| ADR, IMDG, IATA | UN1274 |

14.2 UN proper shipping name:

| | |
|---|---|
| ADR | 1274 n-PROPANOL (PROPYL ALCOHOL, NORMAL) solution |
| IMDG | n-PROPANOL (PROPYL ALCOHOL, NORMAL) solution |
| IATA | n-PROPANOL (PROPYL ALCOHOL, NORMAL) solution |

14.3 Transport hazard class(es):

ADR, IMDG, IATA


| | |
|---|---|
| Class: | 3 Flammable liquids. |
| Label: | 3 |

14.4 Packing group:

| | |
|---|---|
| ADR, IMDG, IATA | III |

14.5 Environmental hazards:

| | |
|---|---|
| Marine pollutant: | No |

| | |
|---|---|
| 14.6 Special precautions for user: | Warning: Flammable liquids. |
| Danger code (Kemler): | 30 |
| EMS Number: | F-E,S-D |
| Stowage Category | A |

| | |
|---|---|
| 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |

| | |
|---|---|
| Limited quantities (LQ): | 5L |
| Transport category: | 3 |
| Tunnel restriction code: | D/E |
| UN "Model Regulation": | UN 1274 N-PROPANOL (PROPYL ALCOHOL, NORMAL) SOLUTION, 3, III |

## SECTION 15: Regulatory Information

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

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other Information

16.1 Recommended restrictions on use: None

16.2 Relevant phrases:

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes Serious eye irritation.

H332 Harmful if inhaled.

H336 May cause drowsiness or dizziness.

16.3 Sources of information used to compile this sheet Regulation (EC) No. 1907/2006 of the European Parliament and of the Council concerning the registration evaluation, authorisation and restriction of chemicals (REACH): Article 31: Requirements for safety data sheets, and Annex II: Guide to the compilation of safety data sheets, OJLI 136, 29.52007, pp 35-36 and pp 84-89.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, and amending Directive 67/548/EEC and Regulation (EC) No 1907/2006 (in short CLP).

Commission Decision 2000/532/EC establishing a list of wastes pursuant to Article 1 (a) of Directive 75/442/EEC on Waste and Article 1 (4) of Directive 91/689/EEC on Hazardous Waste.

CONSLEG: 2000D0532-01/01/2002, Office for Official Publications of the European Communities.

Approved Supply List (8th edition), Information provided for the classification and labelling of substances and preparations for supply, United Kingdom Health and Safety Commission, 2005 (based on Annex I of 67/548/EEC).

Directive 98/79/EC of the European Parliament and of the Council on in vitro diagnostic medical devices, Annex I, Essential Requirements, OJ L, 331, 7.12.98, p 20.

List of approved workplace exposure limits, Table 1 of EH40/2005, United Kingdom Health and Safety Commission, 2ND edition published 2011, implementing the European Commission's Indicative Occupational Exposure Limit Values Directive 2009/161/EU.

16.4 Changes from previous version

First Version

The above information is based on data available and is believed to be correct. Since the information may be applied under conditions beyond our control and with which we may be unfamiliar, we do not assume any responsibility for the results of its use and all persons receiving it shall make their own determinations of the effects, properties and protections which pertain to their particular conditions.

No representation, warranty or guarantee, expressed or implied (including a warranty of fitness or merchantability for a particular purpose), is made with respect to the material, the accuracy of this information, the results to be obtained from the use thereof, or the hazards connected with the use of the material. Caution should be used in the handling and use of the material.

ISSUED TO MEET THE REQUIREMENTS OF REGULATION (EC) 1907/2006: ARTICLE 31

## SECTION 1: Identification of the substance and of the company/undertaking

| | | |
|---|---|---|
| Component Identifier:<br>6. **exsig® Mag Wash Buffer 3** | Name: exsig® Mag Oyster Extract | |
| Product Use: Separation and Purification of Nucleic Acid. | | |
| Manufacturer's Name: Primerdesign Limited | | |
| Manufacturer's Address: York House, School Lane, Chandlers Ford, United Kingdom | | |
| Postal Code: S053 4DG | Emergency Telephone:<br>+44 (0) 800 0156 494 | Fax:<br>+44 (0) 8708 362 155 |
| Hours of Operation: 09:00-17:30 UK time | Email: support@primerdesign.co.uk | |

## SECTION 2: Hazards Identification

2.1 Classifications

Classification of the substance or mixture: Not a hazardous substance or mixture.

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

Classification according to Directive 67/548/EEC or Directive 1999/45/EC: Not a hazardous substance or mixture.

Information concerning particular hazards for human and environment: None

Other hazards that do not result in classification: None

2.2 Labelling

Labelling according to Regulation (EC) No 1272/2008: None

## SECTION 3: Composition/Information on Ingredients

Mixture of substances listed below with non-hazardous additions.

## SECTION 4: First aid measures

EYE CONTACT: Rinse opened eye for several minutes under running water. Then consult a doctor.
SKIN CONTACT: Immediately wash with water and soap and rinse thoroughly.
INGESTION: Call for a doctor immediately.
INHALATION: Supply fresh air; consult doctor in case of complaints.

Equipment to be available at the workplace for specific and immediate treatment: Eye-washing and skin-washing facilities.

## SECTION 5: Fire-fighting measures

5.1 Extinguishing media
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture

No further relevant information available.

5.3. Advice for firefighters

Protective equipment:
Mouth respiratory protective device. Do not inhale explosion gases or combustion gases.

## SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures: Ensure adequate ventilation.

6.2. Environmental precautions:
Do not allow product to reach sewage system or any water course.

6.3. Methods and material for containment and cleaning up:
Absorb with liquid binding material.
Wear appropriate protective clothing and chemically compatible gloves. Place spillage in appropriate container for waste disposal. Wash contaminated clothing before reuse.

## SECTION 7: Handling and storage

7.1. Handling
Observe all federal, state and local regulations. Keep receptacles tightly sealed.

7.2. Storage
Store only in the original receptacle. Store away from foodstuffs

## SECTION 8: Exposure controls/personal protection

8.1. Exposure Limit Values
None

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2. Exposure Controls

8.2.1. Occupational

Use in a laboratory hood or other ventilated device. OSHA, ACGIH, or NIOSH has not established occupational exposure limits for this substance. Use prudent laboratory practices for handling chemical substances of unknown toxicity.

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Do not inhale gases / fumes / aerosols. Avoid contact with the eyes and skin.

EYE PROTECTION: Employees should wear safety goggles to prevent eye contact with this substance.

CLOTHING: Employees should wear appropriate protective clothing (laboratory coat with long sleeves) and equipment to prevent skin contact with this material.

GLOVES: Protective gloves

Material of gloves: Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.35 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed

## SECTION 9: Physical and Chemical Properties

9.1 General Information:

| | |
|---|---|
| Appearance: | |
| Form: | Fluid |
| Colour: | Colourless |
| Odour: | Characteristic |
| Odour threshold: | Not determined. |
| | |
| pH-value at 20 °C: | 6.5 |
| Melting point/freezing point: | Undetermined. |
| Initial boiling point and boiling range: | 100 °C |
| Flash point: | Not applicable. |
| Flammability (solid, gas): | Not applicable. |
| Ignition temperature: | Not applicable |
| Decomposition temperature: | Not determined. |
| Auto-ignition temperature: | Product is not self-igniting. |
| Explosive properties: | Product does not present an explosion hazard. |
| Explosion limits: | |
| Lower: | Not determined. |
| Upper: | Not determined. |
| Vapour pressure: | Not determined. |
| Density: | Not determined. |
| Relative density: | Not determined. |
| Vapour density: | Not determined. |
| Evaporation rate: | Not determined. |
| Solubility in water: | Fully miscible. |
| Partition coefficient: n-octanol/water: | Not determined. |
| Viscosity: | Not Determined |
| Dynamic: | Not determined. |
| Kinematic: | Not determined |

9.2 Other information: No further relevant information available

## SECTION 10: Stability and Reactivity

10.1. Stability:
Stable under recommended storage conditions.

10.2. Materials/Conditions to avoid:
No data available

10.3. Incompatible Materials:
No data available

10.4. Hazardous decomposition products:
No dangerous decomposition products known.

## SECTION 11: Toxicological Information

11.1 Information on toxicological effects:

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

Primary irritant effect:

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

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

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

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):

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

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

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

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

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

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

## SECTION 12: Ecological Information:

12.1 Toxicity:

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability: No further relevant information available.

12.3 Bioaccumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

Additional ecological information:

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects: No further relevant information available.

## SECTION 13: Disposal Considerations

Dispose of contents/container in accordance with local/regional/national/international regulations.

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

Contaminated packaging: Disposal must be made according to official regulations.

## SECTION 14: Transport Information

UN Number: Not applicable

Proper shipping name: Not applicable

Class: Not applicable

Packing Group: Not applicable

## SECTION 15: Regulatory Information

Health, safety or environmental information is not required on the label (according to Regulation (EC) No 1272/2008)

## SECTION 16: Other Information

16.1 Recommended restrictions on use: None

16.2 Sources of information used to compile this sheet Regulation (EC) No. 1907/2006 of the European Parliament and of the Council concerning the registration, evaluation, authorisation and restriction of chemicals (REACH): Article 31: Requirements for safety data sheets, and Annex II: Guide to the compilation of safety data sheets, OJL, 1 36, 29.52007, pp 35-36 and pp 84-89.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, and amending Directive 67/548/EEC and Regulation (EC) No 1907/2006 (in short CLP).

Commission Decision 2000/532/EC establishing a list of wastes pursuant to Article 1 (a) of Directive 75/442/EEC on Waste and Article (4) of Directive 91/689/EEC on Hazardous Waste. CONSLEG: 2000D0532-01/01/2002, Office for Official Publications of the European Communities.

Approved Supply List (8th edition), Information provided for the classification and labelling of substances and preparations for supply, United Kingdom Health and Safety Commission, 2005 (based on Annex I of 67/548/EEC).

Directive 98/79/EC of the European Parliament and of the Council on in vitro diagnostic medical devices, Annex I, Essential Requirements, OJ L} 331, 7.12.98, p 20.

List of approved workplace exposure limits, Table 1 of EH40/2005, United Kingdom Health and Safety Commission, 2ND edition published 2011, implementing the European Commission's Indicative Occupational Exposure Limit Values Directive 2009/161/EU.

16.3 Changes from previous version
First Version

The above information is based on data available and is believed to be correct. Since the information may be applied under conditions beyond our control and with which we may be unfamiliar, we do not assume any responsibility for the results of its use and all persons receiving it shall make their own determinations of the effects, properties and protections which pertain to their particular conditions,

No representation, warranty or guarantee, expressed or implied (including a warranty of fitness or merchantability for a particular purpose), is made with respect to the material, the accuracy of this information, the results to be obtained from the use thereof, or the hazards connected with the use of the material. Caution should be used in the handling and use of the material.

ISSUED TO MEET THE REQUIREMENTS OF REGULATION (EC) 1907/2006:
ARTICLE 31

## SECTION 1: Identification of the substance and of the company/undertaking

| | | |
|---|---|---|
| Component Identifier:<br>7. **exsig® Mag Elution Buffer** | Name: exsig® Mag Oyster Extract | |
| Product Use: Separation and Purification of Nucleic Acid. | | |
| Manufacturer's Name: Primerdesign Limited | | |
| Manufacturer's Address: York House, School Lane, Chandlers Ford, United Kingdom | | |
| Postal Code: S053 4DG | Emergency Telephone:<br>+44 (0) 800 0156 494 | Fax:<br>+44 (0) 8708 362 155 |
| Hours of Operation: 09:00-17:30 UK time | Email: support@primerdesign.co.uk | |

## SECTION 2: Hazards Identification

2.1 Classifications

Classification of the substance or mixture: Not a hazardous substance or mixture.

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

Classification according to Directive 67/548/EEC or Directive 1999/45/EC: Not a hazardous substance or mixture.

Information concerning particular hazards for human and environment: None

Other hazards that do not result in classification: None

2.2 Labelling

Labelling according to Regulation (EC) No 1272/2008: None

## SECTION 3: Composition/Information on Ingredients

| Components | CAS Number/EC Number | Weight |
|---|---|---|
| 2-amino-2-methylpropanol | 124-68-5 | >2.5-≤10% |

## SECTION 4: First aid measures

EYE CONTACT: Rinse opened eye for several minutes under running water. Then consult a doctor.

SKIN CONTACT: Immediately wash with water and soap and rinse thoroughly.

INGESTION: Call for a doctor immediately.

INHALATION: Supply fresh air; consult doctor in case of complaints.

Equipment to be available at the workplace for specific and immediate treatment: Eye-washing and skin-washing facilities.

## SECTION 5: Fire-fighting measures

5.1 Extinguishing media

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture

No further relevant information available.

5.3. Advice for firefighters

Protective equipment:

Mouth respiratory protective device. Do not inhale explosion gases or combustion gases.

## SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures: Ensure adequate ventilation.

6.2. Environmental precautions:

Do not allow product to reach sewage system or any water course.

6.3. Methods and material for containment and cleaning up:

Absorb with liquid binding material.

Wear appropriate protective clothing and chemically compatible gloves. Place spillage in appropriate container for waste disposal. Wash contaminated clothing before reuse.

## SECTION 7: Handling and storage

7.1. Handling

Observe all federal, state and local regulations. Keep receptacles tightly sealed.

7.2. Storage

Store only in the original receptacle. Store away from foodstuffs

## SECTION 8: Exposure controls/personal protection

8.1. Exposure Limit Values
None

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2. Exposure Controls

8.2.1. Occupational

Use in a laboratory hood or other ventilated device. OSHA, ACGIH, or NIOSH has not established occupational exposure limits for this substance. Use prudent laboratory practices for handling chemical substances of unknown toxicity.

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Do not inhale gases / fumes / aerosols. Avoid contact with the eyes and skin.

EYE PROTECTION: Employees should wear safety goggles to prevent eye contact with this substance.

CLOTHING: Employees should wear appropriate protective clothing (laboratory coat with long sleeves) and equipment to prevent skin contact with this material.

GLOVES: Protective gloves

Material of gloves: Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.35 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed

## SECTION 9: Physical and Chemical Properties

9.1 General Information:

| | |
|---|---|
| Appearance: | |
| Form: | Fluid |
| Colour: | Clear |
| Odour: | Characteristic |
| Odour threshold: | Not determined. |
| | |
| pH-value at 20 °C: | Not determined. |
| Melting point/freezing point: | Undetermined. |
| Initial boiling point and boiling range: | 100 °C |
| Flash point: | Not applicable. |
| Flammability (solid, gas): | Not applicable. |
| Ignition temperature: | Not applicable |
| Decomposition temperature: | Not determined. |
| Auto-ignition temperature: | Product is not self-igniting. |
| Explosive properties: | Product does not present an explosion hazard. |
| Explosion limits: | |
| Lower: | Not determined. |
| Upper: | Not determined. |
| Vapour pressure at 20 °C: | 23 hPa |
| Density: | Not determined. |
| Relative density: | Not determined. |
| Vapour density: | Not determined. |
| Evaporation rate: | Not determined. |
| Solubility in water: | Fully miscible. |
| Partition coefficient: n-octanol/water: | Not determined. |
| Viscosity: | Not Determined |
| Dynamic: | Not determined. |
| Kinematic: | Not determined |

9.2 Other information: No further relevant information available

## SECTION 10: Stability and Reactivity

10.1. Stability:
Stable under recommended storage conditions.

10.2. Materials/Conditions to avoid:
No data available

10.3. Incompatible Materials:
No data available

10.4. Hazardous decomposition products:
No dangerous decomposition products known.

## SECTION 11: Toxicological Information

11.1 Information on toxicological effects:

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

Primary irritant effect:

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

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

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

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):

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

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

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

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

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

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

## SECTION 12: Ecological Information:

12.1 Toxicity:

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability: No further relevant information available.

12.3 Bioaccumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

Additional ecological information:

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects: No further relevant information available.

## SECTION 13: Disposal Considerations

Dispose of contents/container in accordance with local/regional/national/international regulations.

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

Contaminated packaging: Disposal must be made according to official regulations.

## SECTION 14: Transport Information

UN Number: Not applicable

Proper shipping name: Not applicable

Class: Not applicable

Packing Group: Not applicable

## SECTION 15: Regulatory Information

Health, safety or environmental information is not required on the label (according to Regulation (EC) No 1272/2008)

## SECTION 16: Other Information

16.1 Recommended restrictions on use: None

16.2 Relevant phrases

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H412 Harmful to aquatic life with long lasting effects.

16.3 Sources of information used to compile this sheet Regulation (EC) No. 1907/2006 of the European Parliament and of the Council concerning the registration, evaluation, authorisation and restriction of chemicals (REACH): Article 31: Requirements for safety data sheets, and Annex II: Guide to the compilation of safety data sheets, OJL, 1 36, 29.52007, pp 35-36 and pp 84-89.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, and amending Directive 67/548/EEC and Regulation (EC) No 1907/2006 (in short CLP).

Commission Decision 2000/532/EC establishing a list of wastes pursuant to Article 1 (a) of Directive 75/442/EEC on Waste and Article (4) of Directive 91/689/EEC on Hazardous Waste. CONSLEG: 2000D0532-01/01/2002, Office for Official Publications of the European Communities.

Approved Supply List (8th edition), Information provided for the classification and labelling of substances and preparations for supply, United Kingdom Health and Safety Commission, 2005 (based on Annex I of 67/548/EEC).

Directive 98/79/EC of the European Parliament and of the Council on in vitro diagnostic medical devices, Annex I, Essential Requirements, OJ L} 331, 7.12.98, p 20.

List of approved workplace exposure limits, Table 1 of EH40/2005, United Kingdom Health and Safety Commission, 2ND edition published 2011, implementing the European Commission's Indicative Occupational Exposure Limit Values Directive 2009/161/EU.

16.4 Changes from previous version
First Version

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No representation, warranty or guarantee, expressed or implied (including a warranty of fitness or merchantability for a particular purpose), is made with respect to the material, the accuracy of this information, the results to be obtained from the use thereof, or the hazards connected with the use of the material. Caution should be used in the handling and use of the material.

ISSUED TO MEET THE REQUIREMENTS OF REGULATION (EC) 1907/2006:
ARTICLE 31

## SECTION 1: Identification of the substance and of the company/undertaking

| | | |
|---|---|---|
| Component Identifier:<br>8. **No.1 Proteinase K** | Name: exsig® Mag Oyster Extract | |
| Product Use: Separation and Purification of Nucleic Acid. | | |
| Manufacturer's Name: Primerdesign Limited | | |
| Manufacturer's Address: York House, School Lane, Chandlers Ford, United Kingdom | | |
| Postal Code: S053 4DG | Emergency Telephone:<br>+44 (0) 800 0156 494 | Fax:<br>+44 (0) 8708 362 155 |
| Hours of Operation: 09:00-17:30 UK time | Email: support@primerdesign.co.uk | |

## SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture:

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

GHS08 Danger

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

GHS07 Harmful

Skin Irrit. 2 H315 Causes skin irritation
Eye Irrit. 2 H319 Causes serious eye irritation.

## 2.2 Labelling

Labelling according to Regulation (EC) No 1272/2008:
The product is classified and labelled according to the CLP regulation.

Hazard pictograms:

GHS08 GHS07

Signal word: Danger

Hazard-determining components of labelling:
Proteinase K

Hazard statements:

Signal word: DANGER
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H315 Causes skin irritation
H319 Causes serious eye irritation.

Precautionary statements:
P261sh, P284, P342+311, P501 Avoid breathing dust/vapours. [In case of inadequate ventilation] wear respiratory protection. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. Dispose of contents/container to regulated waste treatment.

## SECTION 3: Composition/Information on Ingredients

| Components | CAS Number/EC Number | Weight |
|---|---|---|
| Proteinase K | 39450-01-6 | 90-<100% |

## SECTION 4: First aid measures

EYE CONTACT: Rub dust with teardrops from eyes or: After contact with the eyes rinse thoroughly under running water with the eyelid wide open with eye washing bottle, eye douche or running water (protect intact eye).

SKIN CONTACT: Remove dust with wetted tissue. Remove contaminated clothing. Rinse the affected skin or mucous membrane thoroughly under running water.

INGESTION: After oral intake lots of water should be drunk after it has been ingested.

INHALATION: Administer a Dexamethasone spray as soon as possible. Ensure quiet, warmth, and provide resuscitation if necessary. In the event of respiratory distress ensure that the patient inhales oxygen. Secure the breathing, heart and circulatory function. After inhalation of dust fresh air should be inhaled

Equipment to be available at the workplace for specific and immediate treatment: Eye-washing and skin-washing facilities.

May cause allergy or asthma symptoms or breathing difficulties if inhaled. Chronic effects: Repeated contact, even in small amounts, can lead to sensitization.

## SECTION 5: Fire-fighting measures

5.1 Extinguishing media
Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like foam, water spray, dry powder, carbon dioxide can be used.

5.2 Special hazards arising from the substance or mixture
No data available.

5.3. Advice for firefighters
No data available.

## SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Avoid dusting. Do not breathe dust. Regular staff training is necessary, indicating hazards and precautions on the basis of operating instructions. Restrictions on activity must be observed.

6.2. Environmental precautions:
PBT: not applicable

vPvB: not applicable

6.3. Methods and material for containment and cleaning up:

Remove remaining dust with a vacuum cleaner. If there is no vacuum cleaner, wet dust well and remove mechanical (Inhalation protection). And dispose in accordance with local regulations for the disposal of hazardous chemicals. Clean any contaminated equipment and floors with plenty of water.

## SECTION 7: Handling and storage

7.1. Handling

Avoid dusting. Use only in well-ventilated working areas.

Keep original product packages tightly closed.

7.2. Storage

Store only in the original receptacle.

Keep container tightly sealed.

## SECTION 8: Exposure controls/personal Protection

8.1. Exposure Limit Values

39450-01-6 proteinase K

SUVA(CH) MAK value: 0,00006 15min mg/m³

8.2. Exposure Controls

8.2.1 Occupational

The highest level of cleanliness must be maintained at the workplace.

Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes and clothing. Rinse any clothing on which the substance has been spilled and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating, and then apply protective skin cream.

OSHA, ACGIH, or NIOSH has not established occupational exposure limits for this substance. Use prudent laboratory practices for handling chemical substances of unknown toxicity.

RESPIRATORY PROTECTION: Use for open access of these substances for example a protection filter, class A/AX. No additional recommendations.

EYE PROTECTION: Employees should wear safety glasses EN 166 with integrated side shields or wrap-around protection.

CLOTHING: Employees should wear appropriate protective clothing (laboratory coat with long sleeves) and equipment to prevent skin contact with this material.

GLOVES: Protective gloves

EN 374 (permeation time >30 min - level 2), consist of PVC (f.ex. from Ansell or KCL).

## SECTION 9: Physical and chemical properties

9.1 General Information:

| | |
|---|---|
| Appearance: | |
| Form: | Solid (lyophilized) |
| Colour: | Slightly grey |
| Odour: | Odourless |
| Odour threshold: | No data available |
| | |
| pH-value: | No data available |
| Melting point/freezing point: | No data available |
| Initial boiling point and boiling range: | No data available |
| Flash point: | No data available |
| Flammability (solid, gas): | No data available |
| Decomposition temperature: | No data available |
| Explosion limits: | |
| Lower: | No data available |
| Upper: | No data available |
| Kinematic viscosity: | No data available |
| Solubility in water: | ca. 40 mg/mL |
| Dispersion coefficient (K o/w): | No data available |
| Vapour pressure at 20 °C: | No data available |
| Specific gravity: | No data available |
| Relative vapour density (air=1): | No data available |
| Particle size: | No data available |

9.2 Other information: No further relevant information available

## SECTION 10: Stability and Reactivity

10.1 Reactivity: No further relevant information available.

10.2 Chemical stability: Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions: No further data available.

10.4 Conditions to avoid: No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: In the original package all parts/all reagents are safety and separated stored. Decompositions are not observed during the expiration period under recommended conditions.

## SECTION 11: Toxicological Information

11.1 Information on the hazard classes according to regulation (EC) 1272/2008

The following information is valid for pure substances. Quantitative data on the toxicity of this product are not available.

proteinase K (39450-01-6)

TSCA Inventory: listed (CAS 102925-54-2)

Japan CSCL/PRTR: not listed

Japan ISHL: not listed

Korea Exist.Chem.Inventory: not listed

Acute Effects: Cause after impairments of health when ingested in small quantities.

Chronic Effects: May cause sensitization by skin contact, also in repeated contact of small amounts. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Avoid inhalation of dust.

11.2 Other hazards

Possible endocrine disrupting effects: No data available

Other information: No additional data available

## SECTION 12: Ecological Information:

Toxicity:

Substance name: proteinase K CAS 39450-01-6

Water hazard class (DE): 1

Storage class (VCI): 13

Persistence and degradability: No data available

Bio accumulative potential: No data available

Mobility in soil: No data available

Additional ecological information:

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
Other adverse effects: No data available

## SECTION 13: Disposal Considerations

Dispose of contents/container in accordance with local/regional/national/international regulations.

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

Contaminated packaging: Disposal must be made according to official regulations.

## SECTION 14: Transport Information

UN Number: Not applicable

Proper shipping name: Not applicable. Not dangerous goods

Class: Not applicable

Packing Group: Not applicable

## SECTION 15: Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
Dangerous Substances Protection Act (DE: Chemikaliengesetz - ChemG), Aug 2013, Stand: Okt 2020
Ordinance on protection against dangerous substances (E: Gefahrstoffverordnung - GefStoffV), Nov 2010, Stand: Mrz 2017
TRGS 201, Classification and labeling of activities involving hazardous substances, Feb 2017
TRGS 220, National aspects when preparing safety data sheets, Jan 2017
TRGS 400, Risk assessment for activities involving hazardous substances, Jul 2017
BekGS 408, Application of the GefStoffV and the TRGS with the entry into force of the CLP regulation, December 2009, status: Jan
2012
Wasserhaushaltsgesetz - WHG, Section 3 Handling substances hazardous to water, Jul 2009, status: Aug 2016
If necessary, observe other country-specific regulations.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other Information

16.1 Recommended restrictions on use:

Only for professional user.

Look about employee restrictions for young people (f. ex. 94/33/EC or DE § 22 JArbSchG)

Look about employee restrictions for pregnant women and nursing women (f.ex. 92/85/EEC or for DE §§ 11-13 MuSchG 2017)

An individual package of this product or test kit has a moderate hazardous potential.

16.2 Relevant phrases:

H315 Causes skin irritation.

H319 Causes serious eye irritation

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

P261sh Avoid breathing dust/vapours.

P284 [In case of inadequate ventilation] wear respiratory protection.

P342+311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

P501 Dispose of contents/container to regulated waste treatment.

16.3 Sources of information used to compile this sheet Regulation (EC) No. 1907/2006 of the European Parliament and of the Council concerning the registration evaluation, authorisation and restriction of chemicals (REACH): Article 31: Requirements for safety data sheets, and Annex II: Guide to the compilation of safety data sheets, OJLI 136, 29.52007, pp 35-36 and pp 84-89.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, and amending Directive 67/548/EEC and Regulation (EC) No 1907/2006 (in short CLP).

Commission Decision 2000/532/EC establishing a list of wastes pursuant to Article 1 (a) of Directive 75/442/EEC on Waste and Article 1 (4) of Directive 91/689/EEC on Hazardous Waste.

CONSLEG: 2000D0532-01/01/2002, Office for Official Publications of the European Communities.

Approved Supply List (8th edition), Information provided for the classification and labelling of substances and preparations for supply, United Kingdom Health and Safety Commission, 2005 (based on Annex I of 67/548/EEC).

Directive 98/79/EC of the European Parliament and of the Council on in vitro diagnostic medical devices, Annex I, Essential Requirements, OJ L, 331, 7.12.98, p 20.

List of approved workplace exposure limits, Table 1 of EH40/2005, United Kingdom Health and Safety Commission, 2ND edition published 2011, implementing the European Commission's Indicative Occupational Exposure Limit Values Directive 2009/161/EU.

16.4 Changes from previous version

First Version

The above information is based on data available and is believed to be correct. Since the information may be applied under conditions beyond our control and with which we may be unfamiliar, we do not assume any responsibility for the results of its use and all persons receiving it shall make their own determinations of the effects, properties and protections which pertain to their particular conditions.

No representation, warranty or guarantee, expressed or implied (including a warranty of fitness or merchantability for a particular purpose), is made with respect to the material, the accuracy of this information, the results to be obtained from the use thereof, or the hazards connected with the use of the material. Caution should be used in the handling and use of the material.

ISSUED TO MEET THE REQUIREMENTS OF REGULATION (EC) 1907/2006: ARTICLE 31

## SECTION 1: Identification of the substance and of the company/undertaking

| | | |
|---|---|---|
| Component Identifier:<br>9. **No.1a Proteinase K buffer** | Name: exsig® Mag Oyster Extract | |
| Product Use: Separation and Purification of Nucleic Acid. | | |
| Manufacturer's Name: Primerdesign Limited | | |
| Manufacturer's Address: York House, School Lane, Chandlers Ford, United Kingdom | | |
| Postal Code: S053 4DG | Emergency Telephone:<br>+44 (0) 800 0156 494 | Fax:<br>+44 (0) 8708 362 155 |
| Hours of Operation: 09:00-17:30 UK time | Email: support@primerdesign.co.uk | |

## SECTION 2: Hazards Identification

2.1 Classifications

Classification of the substance or mixture: Not a hazardous substance or mixture.

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

Classification according to Directive 67/548/EEC or Directive 1999/45/EC: Not a hazardous substance or mixture.

Information concerning particular hazards for human and environment: None

Other hazards that do not result in classification: None

2.2 Labelling

Labelling according to Regulation (EC) No 1272/2008: None

## SECTION 3: Composition/Information on Ingredients

| Components | CAS Number/EC Number | Weight |
|---|---|---|
| Glycerol | 56-81-5/200-289-5 | 25-50% |

## SECTION 4: First aid measures

EYE CONTACT: Rinse opened eye for several minutes under running water

SKIN CONTACT: Generally, the product does not irritate the skin

INGESTION: If the patient feels unwell or is concerned, obtain medical advice.

INHALATION: If the patient feels unwell or is concerned, obtain medical advice.

Equipment to be available at the workplace for specific and immediate treatment: Eye-washing facilities.

## SECTION 5: Fire-fighting measures

5.1 Extinguishing media
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture
None known to exist

5.3. Advice for firefighters
No special advice

## SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Not required.

6.2. Environmental precautions:
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

6.3. Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Wear appropriate protective clothing and chemically compatible gloves. Place spillage in appropriate container for waste disposal. Wash contaminated clothing before reuse.

## SECTION 7: Handling and storage

7.1. Handling
No special measures required. Observe all federal, state and local regulations.

7.2. Storage

Store at -20$^0$C. Use prudent laboratory practices for handling and storage of chemical substances of unknown toxicity.

## SECTION 8: Exposure controls/personal Protection

8.1. Exposure Limit Values

56-81-5 - glycerol
WEL Long-term value: 10 mg/m$^3$

8.2. Exposure Controls

8.11. Occupational

OSHA, ACGIH, or NIOSH has not established occupational exposure limits for this substance. Use prudent laboratory practices for handling chemical substances of unknown toxicity.

EYE PROTECTION: Not required.
CLOTHING: Employees should wear appropriate protective clothing (laboratory coat with long sleeves).
GLOVES: Select the glove material considering penetration time, rate of diffusion and degradation time.
Material of gloves:
Gloves impermeable to the specific chemical substance.
Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves
with care to avoid skin contamination.
The selection of suitable gloves depends not only on the material, but also on additional quality marks and varies from manufacturer to manufacturer. Because the product is a preparation for some substances, the resistance of the glove material cannot be calculated in advance so it must be checked before application.

## SECTION 9: Physical and chemical properties

| | |
|---|---|
| Appearance: | |
| Form: | Fluid |
| Colour: | Colourless |
| Odour: | Not determined |
| Odour threshold: | Not determined |

| | |
|---|---|
| pH-value at 20 °C: | 7.4 |
| Melting point/freezing point: | Undetermined |
| Initial boiling point and boiling range: | 100 °C |
| Flash point: | 160 °C |
| Flammability (solid, gaseous) | Not applicable |
| Ignition temperature: | 400 °C |
| Decomposition temperature: | Not determined |
| Auto-ignition temperature: | Product is not self-igniting |
| Explosive properties: | Product does not present an explosion hazard |
| Explosion limits: | |
| Lower: | 0.9 Vol % |
| Upper: | 0.0 Vol % |
| Vapour pressure at 20 °C: | <0.1 hPa |
| Density at 20 °C: | 1.154 g/cm³ |
| Relative density: | Not determined |
| Vapour density: | Not determined |
| Evaporation rate: | Not determined |
| Solubility in / Miscibility with Water: | Fully miscible |
| Partition coefficient: n-octanol/water: | Not determined |
| Viscosity: | |
| dynamic: | Not determined |
| kinematic: | Not determined |
| Solvent separation test | |
| Organic solvents: | 50.0 % |
| Water: | 48.3 % |
| Solids content: | 1.5 % |

9.2 Other information: No further relevant information available

## SECTION 10: Stability and Reactivity

10.1 Stability: Stable under recommended storage conditions.

10.2 Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications

10.3 Materials/Conditions to avoid: No further relevant information available

10.4 Incompatible Materials: No further relevant information available

10.5 Hazardous decomposition products: No dangerous decomposition products known

## SECTION 11: Toxicological Information

11.1 Acute toxicity:

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

| LD/LC50 values relevant for classification: | | |
|---|---|---|
| 56-81-5 glycerol | | |
| Oral | LD50 | 1,200 mg/kg (Rat) |

11.2 Primary irritant effect:

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

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

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

11.3 Additional toxicological information:

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

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

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

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

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

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

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

## SECTION 12: Ecological Information:

Toxicity: Not harmful for the aquatic environment

Persistence and degradability: No data available

Bio accumulative potential: No data available

Mobility in soil: No data available

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted Other adverse effects: No data available

## SECTION 13: Disposal Considerations

Dispose of according to any local, national or regional regulations.

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

Contaminated packaging: Disposal must be made according to official regulations.

## SECTION 14: Transport Information

UN Number: Not applicable

Proper shipping name: Not applicable

Class: Not applicable

Packing Group: Not applicable

## SECTION 15: Regulatory Information

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

Directive 2012/18/EU
Named dangerous substances - ANNEX I None of the ingredients is listed.

Classification according to VbF: Not applicable

| Class | Share in % |
|---|---|
| Wasser | 48.3 |
| NK | 50.0 |

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other Information

16.1. Recommended restrictions on use: None

16.2. Sources of information used to compile this sheet Regulation (E C) No. 1907/2006 of the European Parliament and of the Council concerning the registration, evaluation, authorisation and restriction of chemicals (REACH): Article 31: Requirements for safety data sheets, and Annex II: Guide to the compilation of safety data sheets, OJL, 1 36, 29.5.2007, pp 35-36 and pp 84-89.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, and amending Directive 67/548/EEC and Regulation (EC) No 1907/2006 (in short CLP).Commission Decision 2000/532/EC establishing a list of wastes pursuant to Article 1 (a) of Directive 75/442/EEC on Waste and Article 1 (4) of Directive 91/689/EEC on Hazardous Waste. CONSLEG: 2000D0532-01/01/2002, Office for Official Publications of the European Communities.

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Directive 98/79/EC of the European Parliament and of the Council on in vitro diagnostic medical devices, Annex I, 'Essential Requirements, OJ L | 331, 7.1298, p 20.

List of approved workplace exposure limits, Table 1 of EH40/2005, United Kingdom Health and Safety Commission, 2ND edition published 2011, implementing the European Commission's Indicative Occupational Exposure Limit Values Directive 2009/161/EU.

16.3. Changes from previous version
Second Version – Update to SDS template

The above information is based on data available and is believed to be correct. Since the information may be applied under conditions beyond our control and with which we may be unfamiliar, we do not assume any responsibility for the results of its use and all persons receiving it shall make their own determinations of the effects, properties and protections which pertain to their particular conditions.

No representation, warranty or guarantee, expressed or implied (including a warranty of fitness or merchantability for a particular purpose), is made with respect to the material the accuracy of this information, the results to be obtained from the use thereof, or the hazards connected with the use of the material. Caution should be used in the handling and use of the material.

ISSUED TO MEET THE REQUIREMENTS OF REGULATION (EC) 1907/2006:
ARTICLE 31

## SECTION 1: Identification of the substance and of the company/undertaking

| | | |
|---|---|---|
| Component Identifier:<br>10. **Sample Prep Buffer** | Name: exsig® Mag Oyster Extract | |
| Product Use: Separation and Purification of Nucleic Acid. | | |
| Manufacturer's Name: Primerdesign Limited | | |
| Manufacturer's Address: York House, School Lane, Chandlers Ford, United Kingdom | | |
| Postal Code: S053 4DG | Emergency Telephone:<br>+44 (0) 800 0156 494 | Fax:<br>+44 (0) 8708 362 155 |
| Hours of Operation: 09:00-17:30 UK time | Email: support@primerdesign.co.uk | |

## SECTION 2: Hazards Identification

2.1 Classifications

Classification of the substance or mixture: Not a hazardous substance or mixture.

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

Classification according to Directive 67/548/EEC or Directive 1999/45/EC: Not a hazardous substance or mixture.

Information concerning particular hazards for human and environment: None

Other hazards that do not result in classification: None

2.2 Labelling

Labelling according to Regulation (EC) No 1272/2008: None

## SECTION 3: Composition/Information on Ingredients

| Components | CAS Number/EC Number | Weight |
|---|---|---|
| Potassium chloride | 7447-40-7 | <0.1% |
| Sodium chloride | 7647-14-5 | <0.1% |

## SECTION 4: First aid measures

EYE CONTACT: Rinse opened eye for several minutes under running water. Then consult a doctor.

SKIN CONTACT: Immediately wash with water and soap and rinse thoroughly.

INGESTION: Call for a doctor immediately.

INHALATION: Supply fresh air; consult doctor in case of complaints.

Equipment to be available at the workplace for specific and immediate treatment: Eye-washing and skin-washing facilities.

## SECTION 5: Fire-fighting measures

5.1 Extinguishing media

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture

No further relevant information available.

5.3. Advice for firefighters

Protective equipment:

Mouth respiratory protective device. Do not inhale explosion gases or combustion gases.

## SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures: Ensure adequate ventilation.

6.2. Environmental precautions:

Do not allow product to reach sewage system or any water course.

6.3. Methods and material for containment and cleaning up:

Absorb with liquid binding material.

Wear appropriate protective clothing and chemically compatible gloves. Place spillage in appropriate container for waste disposal. Wash contaminated clothing before reuse.

## SECTION 7: Handling and storage

7.1. Handling

Observe all federal, state and local regulations. Keep receptacles tightly sealed.

7.2. Storage

Store only in the original receptacle. Store away from foodstuffs

## SECTION 8: Exposure controls/personal protection

8.1. Exposure Limit Values
None

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2. Exposure Controls

8.2.1. Occupational

Use in a laboratory hood or other ventilated device. OSHA, ACGIH, or NIOSH has not established occupational exposure limits for this substance. Use prudent laboratory practices for handling chemical substances of unknown toxicity.

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Do not inhale gases / fumes / aerosols. Avoid contact with the eyes and skin.

EYE PROTECTION: Employees should wear safety goggles to prevent eye contact with this substance.

CLOTHING: Employees should wear appropriate protective clothing (laboratory coat with long sleeves) and equipment to prevent skin contact with this material.

GLOVES: Protective gloves

Material of gloves: Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.35 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed

## SECTION 9: Physical and Chemical Properties

9.1 General Information:

| | |
|---|---|
| Appearance: | |
| Form: | Liquid |
| Colour: | Clear |
| Odour: | No data available |
| Odour threshold: | Not determined. |
| | |
| pH-value at 20 °C: | Not determined. |
| Melting point/freezing point: | Undetermined. |
| Initial boiling point and boiling range: | No data available |
| Flash point: | Not applicable. |
| Flammability (solid, gas): | Not applicable. |
| Ignition temperature: | Not applicable |
| Decomposition temperature: | Not determined. |
| Auto-ignition temperature: | No data available |
| Explosive properties: | No data available |
| Explosion limits: | |
| Lower: | Not determined. |
| Upper: | Not determined. |
| Vapour pressure at 20 °C: | No data available |
| Density: | Not determined. |
| Relative density: | Not determined. |
| Vapour density: | Not determined. |
| Evaporation rate: | Not determined. |
| Solubility in water: | No data available |
| Partition coefficient: n-octanol/water: | Not determined. |
| Viscosity: | Not Determined |
| Dynamic: | Not determined. |
| Kinematic: | Not determined |

9.2 Other information: No further relevant information available

## SECTION 10: Stability and Reactivity

10.1. Stability:
Stable under recommended storage conditions.

10.2. Materials/Conditions to avoid:
No data available

10.3. Incompatible Materials:
No data available

10.4. Hazardous decomposition products:
No dangerous decomposition products known.

## SECTION 11: Toxicological Information

11.1 Information on toxicological effects:

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

Primary irritant effect:

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

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

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

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):

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

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

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

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

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

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

## SECTION 12: Ecological Information:

12.1 Toxicity:

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability: No further relevant information available.

12.3 Bioaccumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

Additional ecological information:

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects: No further relevant information available.

## SECTION 13: Disposal Considerations

Dispose of contents/container in accordance with local/regional/national/international regulations.

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

Contaminated packaging: Disposal must be made according to official regulations.

## SECTION 14: Transport Information

UN Number: Not applicable

Proper shipping name: Not applicable

Class: Not applicable

Packing Group: Not applicable

## SECTION 15: Regulatory Information

Health, safety or environmental information is not required on the label (according to Regulation (EC) No 1272/2008)

## SECTION 16: Other Information

16.1 Recommended restrictions on use: None

16.2 Sources of information used to compile this sheet Regulation (EC) No. 1907/2006 of the European Parliament and of the Council concerning the registration, evaluation, authorisation and restriction of chemicals (REACH): Article 31: Requirements for safety data sheets, and Annex II: Guide to the compilation of safety data sheets, OJL, 1 36, 29.52007, pp 35-36 and pp 84-89.

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Commission Decision 2000/532/EC establishing a list of wastes pursuant to Article 1 (a) of Directive 75/442/EEC on Waste and Article (4) of Directive 91/689/EEC on Hazardous Waste. CONSLEG: 2000D0532-01/01/2002, Office for Official Publications of the European Communities.

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Directive 98/79/EC of the European Parliament and of the Council on in vitro diagnostic medical devices, Annex I, Essential Requirements, OJ L} 331, 7.12.98, p 20.

List of approved workplace exposure limits, Table 1 of EH40/2005, United Kingdom Health and Safety Commission, 2ND edition published 2011, implementing the European Commission's Indicative Occupational Exposure Limit Values Directive 2009/161/EU.

16.3 Changes from previous version
First Version

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No representation, warranty or guarantee, expressed or implied (including a warranty of fitness or merchantability for a particular purpose), is made with respect to the material, the accuracy of this information, the results to be obtained from the use thereof, or the hazards connected with the use of the material. Caution should be used in the handling and use of the material.