

| | 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING | | | | | | | |
|-------------------------------|--|--|--|--|--|--|--|--|
| 1.1 | Product Identifiers | | | | | | | |
| 1.2 | Product Name: DSCC1 Recombinant Protein Antigen | | | | | | | |
| | Catalog Number: NBP2-58607PEP | | | | | | | |
| | - | | and an ainst | | | | | |
| 1.2 | Relevant identified uses of the substance or mixture and uses advised against | | | | | | | |
| 4.2 | Identified Uses: | For research use only. | | | | | | |
| 1.3 | Details of the supplier of the safety data sheet | | | | | | | |
| | Company: | Novus Biologicals a Bio-Techne Brand 10771 E Easter Ave | Telephone: Fax: | 1-888-506- 1-303-730-1966 | | | | |
| | | Centennial, CO 80112 USA | Internet: | www.novusbio.com | | | | |
| | | . , | Email address: | novus@novusbio.com | | | | |
| | Canada: | 461 North Service Rd West | Telephone: | 1-855-668-8722 | | | | |
| | | Unit B37 | Fax: | 902-827-6402 | | | | |
| | | Oakville, ON L6M 2V5 | Email address: | Canada.inquiries@bio-techne.com | | | | |
| | United Kingdom: | 19 Barton Lane | Telephone: | 44 (0)1235 529449 | | | | |
| | | Abingdon Science Park | Fax: | 44 (0)1235 533420 | | | | |
| | | Abingdon, OX14 3NB | Email address: | info.emea@bio-techne.com | | | | |
| 1.4 | Emergency Telephone | | | | | | | |
| | Emergency Tel: | US: 303-730-1950 or 888-506-6887 / Europ | pe: +44(0)1235-529449 | | | | | |
| 2. | HAZARDS IDENTIFIC | ATION | | | | | | |
| 2.1 | Classification of the s | | ified | | | | | |
| 2.2 | Classification according to the Regulation (EC) No 1272/2008 Not Classified Label Elements | | | | | | | |
| | Labelling according to Regulation (EC) No 1272/2008 Not Regulated | | | | | | | |
| | Labelling according to F | Regulation (EC) No 1272/2008 Not Regulated | | | | | | |
| 2.3 | Labelling according to F Other Hazards | Regulation (EC) No 1272/2008 Not Regulated | | | | | | |
| 2.3 | Other Hazards | | persistent, bioaccumulative | and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0 | | | | |
| | Other Hazards This substance/mixture or higher. | | persistent, bioaccumulative | e and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0 | | | | |
| 3. | Other Hazards This substance/mixture or higher. COMPOSITION/INFO | contains no components considered to be either | persistent, bioaccumulative | e and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0 | | | | |
| 2.3 3. 3.1 | Other Hazards This substance/mixture or higher. COMPOSITION/INFO Substances | contains no components considered to be either | persistent, bioaccumulative | e and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0 | | | | |
| 3. 3.1 | Other Hazards This substance/mixture or higher. COMPOSITION/INFO Substances Not applicable. | contains no components considered to be either | persistent, bioaccumulative | e and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0 | | | | |
| 3. 3.1 | Other Hazards This substance/mixture or higher. COMPOSITION/INFO Substances Not applicable. Mixtures | contains no components considered to be either | - | e and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0 | | | | |
| 3. 3.1 3.2 | Other Hazards This substance/mixture or higher. COMPOSITION/INFO Substances Not applicable. Mixtures | contains no components considered to be either | - | | | | | |
| 3. 3.1 3.2 4. | Other Hazards This substance/mixture or higher. COMPOSITION/INFO Substances Not applicable. Mixtures This product does not c | Contains no components considered to be either | - | | | | | |
| 3. 3.1 3.2 4. | Other Hazards This substance/mixture or higher. COMPOSITION/INFO Substances Not applicable. Mixtures This product does not co FIRST AID MEASUR | Contains no components considered to be either | - | | | | | |
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| 3. 3.1 3.2 4. | Other Hazards This substance/mixture or higher. COMPOSITION/INFO Substances Not applicable. Mixtures This product does not of FIRST AID MEASURI Description of first aid General Advice Consult a doctor and sh If Inhaled | contains no components considered to be either | 1% or greater. This product | t is not known to contain carcinogens at concentrations of 0.1% or greater. | | | | |
| 3. 3.1 3.2 4. | Other Hazards This substance/mixture or higher. COMPOSITION/INFO Substances Not applicable. Mixtures This product does not of FIRST AID MEASURI Description of first aid General Advice Consult a doctor and sh If Inhaled | e contains no components considered to be either ORMATION ON INGREDIENTS contain hazardous chemicals at concentrations of ES d measures now this safety data sheet. d monitor breathing. If breathing becomes difficult | 1% or greater. This product | t is not known to contain carcinogens at concentrations of 0.1% or greater. | | | | |
| 3. 3.1 3.2 4. | Other Hazards This substance/mixture or higher. COMPOSITION/INFO Substances Not applicable. Mixtures This product does not of FIRST AID MEASURI Description of first aid General Advice Consult a doctor and sh if Inhaled Remove to fresh air and In Case of Skin Conta | e contains no components considered to be either | 1% or greater. This product | t is not known to contain carcinogens at concentrations of 0.1% or greater. | | | | |
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5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Suitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NOx)

5.3 Precautions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary

6. ACCIDENTIAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover spillage with suitable absorbent material. Hold all material for appropriate disposal as described under section 13 of SDS.

6.4 Reference to other sections

For required PPE see section 8. For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use.

7.3 Specific end uses

Not applicable.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate Engineering Controls

Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

Personal Protective Equipment

Eye / Face Protection

Use appropriate safety glasses.

Skin Protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves must satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. **Body Protection**

Wear appropriate protective clothing.

Respiratory Protection

For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| information on bablo physical and onorme | ai pi opoi lico | | |
|---|--------------------|---------------------------|--------------------|
| Appearance | clear liquid | Vapor Pressure | No data available. |
| Odor | Little to none | Vapor Density | No data available. |
| Odor Threshold | No data available. | Relative Density | No data available. |
| pH | No data available. | Solubility(ies) | No data available. |
| Melting / Freezing Point | No data available. | Partition Coefficient | No data available. |
| Boiling Point / Range | No data available. | Autoignition Temperature | No data available. |
| Flash Point | No data available. | Decomposition Temperature | No data available. |
| Evaporation Rate | No data available. | Viscosity | No data available. |
| Flammability (Solid, Gas) | No data available. | Explosive Properties | No data available. |
| Upper / Lower Flammability or Explosive Limits | No data available. | Oxidizing Properties | No data available. |

9.2 Other safety information

10. STABILITY AND REACTIVITY

- 10.1 Reactivity
- No data available.
- 10.2 Chemical stability
- No data available.
- 10.3 Possibility of hazardous reactions
- No data available.

10.4 Conditions to avoid

No data available.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx). In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

| Chamical Name | LD50 (oral, rat/mouse) | LD50 (dermal, rat/rabbit) | LD50 (inhalation, rat) |
|------------------------------------|------------------------|---------------------------|------------------------|
| Urea | 8.471 mg/kg (Rat) | >2000 mg/kg (Rat) | 4h, > 0,83mg/l (Rat) |
| Disodium hydrogenorthophosphate | > 2000mg/kg (Rat) | >2000 mg/kg (Rat) | 4h, > 0,83mg/l (Rat) |
| Sodium chloride | > 2000mg/kg (Rat) | >10000 mg/kg (Kanin) | 1h, > 42 mg/l (Rat) |

Skin Corrosion / Irritation

Classified based on available data

Serious Eye Damage / Irritation

Classified based on available data

Respiratory or Skin Sensitization

Classified based on available data

Germ Cell Mutagenicity

Classified based on available data

Carcinogenicity

Classified based on available data

Reproductive Toxicity

Classified based on available data

Specific Target Organ Toxicity - Single Exposure

Classified based on available data

Specific Target Organ Toxicity - Repeated Exposure

Classified based on available data

Aspiration Hazard

Classified based on available data

Symptoms / Routes of Exposure

| Inhalation: | There may be irritation of the throat with a feeling of tightness in the chest. |
|---------------------------------|---|
| Ingestion: | There may be irritation of the throat. |
| Skin: | There may be mild irritation at the site of contact. |
| Eyes: | There may be irritation and redness. |
| Delayed / Immediate Effects: | No known symptoms. |

Additional Information

Classified based on available data

12. ECOLOGICAL INFORMATION

Toxicity to fish flow-through test LC50 - Lepomis macrochirus (Bluegill) - 5.840 mg/l - 96 h (Sodium chloride) Remarks: (ECHA) No data available semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96 h (Disodium hydrogenorthophosphate) (OECD Test Guideline 203) semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96 h (Urea) (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates static test LC50 - Daphnia magna (Water flea) - 4.136 mg/l - 48 h (Sodium chloride) (OECD Test Guideline 202) static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (Disodium hydrogenorthophosphate) (OECD Test Guideline 202) static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (Disodium hydrogenorthophosphate) (OECD Test Guideline 202) static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (Disodium hydrogenorthophosphate) (OECD Test Guideline 202) static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (Disodium hydrogenorthophosphate) (OECD Test Guideline 202) static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (Disodium hydrogenorthophosphate) (OECD Test Guideline 202) static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (Disodium hydrogenorthophosphate) (OECD Test Guideline 202) static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (Disodium hydrogenorthophosphate) (OECD Test Guideline 202) static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (Disodium hydrogenorthophosphate) (OECD Test Guideline 202) static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (Disodium hydrogenorthophosphate) (OECD Test Guideline 202) static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (Disodium hydrogenorthophosphate) (OECD Test Guideline 202) static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (Disodium hydrogenorthophosphate) (OECD Test Guideline 202) static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (Disodium hydrogenorthophosphate) (OECD Test Guideline 202) static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (Disodium hydrogenorthophosphate) (DECD Test Guideline 202) static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (Disodium hydrogenorthophosphate) (DECD Test Guideline 202) static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (Disodium hydrogenorthophosphate) (DECD Test Guideline

Toxicity to algae static test EC50 - Nitzschia sp. - 2.430 mg/l - 120 h (Sodium chloride) (OECD Test Guideline 201) static test ErC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (Disodium hydrogenorthophosphate) (OECD Test Guideline 201) static test ErC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 48 h (Urea) (OECD Test Guideline 201)

Toxicity to bacteria static test EC50 - activated sludge - > 1.000 mg/l - 3 h (Disodium hydrogenorthophosphate) (OECD Test Guideline 209) static test EC50 - activated sludge - > 1.000 mg/l - 3 h (Urea) (OECD Test Guideline 209)

12.2 Persistence and degradability

No data available.

- 12.3 Bioaccumulative potential
- No data available.
- 12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

No data available Discharge into the environment must be avoided. Discharge into the environment must be avoided. No data available Discharge into the environment must be avoided. Depending on the concentration, phosphates may contribute to the eutrophication of water supplies. Discharge into the environment must be avoided.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

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

Contaminated Packaging

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with national, regional, or local legislation.

14. TRANSPORT INFORMATION

Not regulated for Land Transport (ADR/RID), for Sea Transport (IMDG) or for Air Transport (IATA).

14.1 UN-Number

Does not meet the criteria for classification as hazardous for transport.

14.2 UN proper shipping name

Does not meet the criteria for classification as hazardous for transport.

14.3 Transport hazard class(es)

Does not meet the criteria for classification as hazardous for transport.

14.4 Packaging group

Does not meet the criteria for classification as hazardous for transport.

14.5 Environmental hazards

Does not meet the criteria for classification as hazardous for transport.

14.6 Special precautions for users

Does not meet the criteria for classification as hazardous for transport.

Additional Transport Information

Does not meet the criteria for classification as hazardous for transport.

15. REGULATORY INFORMATION

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

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

TSCA (Toxic Substances Control Act) : Not applicable.

SARA 313 : Not applicable.

SARA 311/312 : Not applicable.

CERCLA Reportable Quantity : Not applicable.

California Proposition 65 : Not applicable.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been made for this product.

16. OTHER INFORMATION

Further Information

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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet