



**MATERIAL SAFETY DATA SHEET**  
according to EC Directive 2001/58/EC  
**ORLA 18 protein solution**

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING**

<b>Product name</b>	Orla 18 protein solution
<b>COMPANY NAME</b>	Orla Protein Technologies
<b>Address</b>	Nanotechnology Centre, Herschel Building, Newcastle Upon Tyne, NE1 7RU
<b>Telephone</b>	++ 44 (0)191 243 0683
<b>Telefax</b>	++ 44 (0)191 222 3528
<b>Emergency telephone number</b>	++ 44 (0)191 243 0683
<b>Use of the Substance/Preparation</b>	

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical nature of the preparation :

CAS	Chemical Name	% Weight	EINECS*	Classification
N/A	Orla protein 18	< 1 %	N/A	N/A
1185-53-1	Tris Hydrochloride	< 1 %	214-684-5	N/A
29836-26-8	n-octylglucoside	1 %		N/A
60-00-4	ethylenediaminetetraacetic acid	< 1 %	200-449-4	N/A

\* EINECS - EINECS

Symbol(s) :

R -phrase(s) :

S -phrase(s) :

**3. HAZARDS IDENTIFICATION**

Most important hazards : Generally considered non hazardous

**4. FIRST AID MEASURES**

<b>Inhalation</b>	N/A
<b>Eye contact</b>	N/A
<b>Skin contact</b>	N/A

<b>Ingestion</b>	N/A
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**5. FIRE-FIGHTING MEASURES**

<b>Suitable extinguishing media</b>	Not applicable
<b>Extinguishing media which must not be used for safety reasons</b>	Not applicable
<b>Specific methods</b>	Not applicable
<b>Special protective equipment for firefighters</b>	Not applicable
<b>Specific hazards</b>	Not applicable

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal precautions</b>	Splash goggles. Gloves. Protective clothing
<b>Environmental precautions</b>	Absorb with an inert material and put the spilled material in an appropriate waste disposal.
<b>Methods for cleaning up</b>	Dilute with water and absorb with an inert dry material and place in an appropriate waste disposal container.

**7. HANDLING AND STORAGE**

**Storage :**

<b>Technical measures/Precautions</b>	Store at room temperature.
<b>Incompatible products</b>	N/A
<b>Specific use(s)</b>	Store at room temperature.

**Handling :**

<b>Technical measures/Precautions</b>	Avoid strong oxidizing agents.
<b>Safe handling advice</b>	Avoid inhalation; avoid contact with eye skin and clothing. Avoid prolonged exposure

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Occupational exposure controls :**

<b>Engineering measures</b>	N/A
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**Exposure Limit Values :**

CAS	Chemical Name	% Weight	ACGIH*
N/A	Orla protein 18	< 1 %	N/A
1185-53-1	Tris Hydrochloride	< 1 %	N/A

\* ACGIH - Occupational Exposure Limits - TWAs

**Personal protective equipment :**

Eye protection	Safety goggles
Hand protection	Protective gloves
Respiratory protection	Not necessary
Skin and body protection	Lab coat
Environmental exposure controls	Follow local rules

**9. PHYSICAL AND CHEMICAL PROPERTIES****General Information :**

Form	Liquid
Colour	colourless
Odour	N/A

Boiling point/range	N/A
Flash point	N/A
Vapour pressure	N/A
Vapour density	N/A
Partition coefficient	N/A
pH	8
Water solubility	Aqueous buffer
Evaporation Rate	N/A
Oxidizing properties	N/A
Explosive properties	N/A
Melting Point/Range	N/A
Density	N/A
Viscosity	N/A
Flammability	Non flammable

**10. STABILITY AND REACTIVITY**

Conditions to avoid	Excess heat.
Materials to avoid	Strong oxidizing agents.
Hazardous decomposition products	N/A

**11. TOXICOLOGICAL INFORMATION**

The toxicological properties of this particular composition have not been thoroughly investigated.

**Acute toxicity :**

**Product Information :**

LD50/oral/rat	N/A
LD50/dermal/rabbit	N/A
LC50/inhalation/8h/rat	N/A
Eye irritation	N/A
Skin irritation	N/A
mutagenic effects	N/A
Reproductive toxicity	N/A

**12. ECOLOGICAL INFORMATION**

**Ecological information :**

Toxicity to fish	N/A
EC50/48h/daphnia	N/A
EC50/72h/algae	N/A

**Mobility :** N/A

**Persistence and degradability :** N/A

**Bioaccumulative potential :** N/A

**13. DISPOSAL CONSIDERATIONS**

Waste from residues / unused products	Waste must be disposed of in accordance with local regulations.
Contaminated packaging	Waste must be disposed of in accordance with local regulations.

**14. TRANSPORT INFORMATION**

**Road transport :** non hazardous

**Sea transport :** non hazardous

**Air transport :** non hazardous

**15. REGULATORY INFORMATION**

Not hazardous according to Directive 67/548/EEC

**16. OTHER INFORMATION**

**Further information for the safety data sheet :**

The chemical, physical and toxicological properties of this particular composition have not been thoroughly investigated. The above information is believed to be correct for one or more constituents of the mixture and does not purport to be all inclusive and shall be used only as guide.

The information in this document is based on the current state of knowledge and is applicable to the product with regard to appropriate safety precautions.

It does not represent any guarantee of the properties of the product.

Orla Protein Technologies Ltd does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. All materials may present unknown hazards and should be used with caution. Hazards other than those described herein may exist.

**End of Safety Data Sheet**