

This safety data sheet was created pursuant to the requirements of:  
UK REACH Regulations (SI 2019/758 as amended)

**Supersedes date** 06-Apr-2016

**Revision date** 26-Jan-2026

**Revision Number** 2

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

### 1.1. Product identifier

**Product Code(s)** 14897  
**Safety data sheet number** 14897  
**Product Name** MANNAWAY EVITY 4.0 T  
**Pure substance/mixture** Mixture

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

**Recommended use** Biocatalyst  
Industrial use  
Consumer use  
For further information, see attached Exposure Scenario

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

#### **Supplier**

Univar Solutions UK Ltd  
Aquarius House  
6 Mid Point Business Park  
Bradford  
GBR

For further information, please contact

**E-mail address** SDS.EMEA@univarsolutions.com  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306

### 1.4. Emergency telephone number

**Emergency Telephone** SGS - +32 (0)3 575 55 55 (24h)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Not classified

### 2.2. Label elements

Not classified

#### **Hazard statements**

Not classified  
EUH208 - Contains MANNANASE. May produce an allergic reaction.

**2.3. Other hazards**

Repeated inhalation of enzyme dust or aerosols resulting from improper handling may induce sensitization and may cause allergic type 1 reactions in sensitized individuals. May cause slight skin irritation. May cause slight eye irritation.

**SECTION 3: Composition/information on ingredients****3.1 Substances**

Not applicable

**3.2 Mixtures**

| Chemical name          | Weight-%      | EC No (EU Index No) | UK REACH registration number | Classification according to GB CLP (SI 2020/1567 as amended) | Specific concentration limit (SCL) | M-Factor | M-Factor (long-term) |
|------------------------|---------------|---------------------|------------------------------|--------------------------------------------------------------|------------------------------------|----------|----------------------|
| MANNAASE<br>37288-54-3 | 0.1 - <<br>1% | 253-446-5           | -                            | Resp. Sens. 1 (H334)                                         | -                                  | -        | -                    |

**Full text of H- and EUH-phrases: see section 16**

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (UK REACH Article 59)

**SECTION 4: First aid measures****4.1. Description of first aid measures**

|                                           |                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General advice</b>                     | Show this safety data sheet to the doctor in attendance.                                                                                                                                                                                                                                                                                                         |
| <b>Inhalation</b>                         | Remove to fresh air. If symptoms persist, call a doctor.                                                                                                                                                                                                                                                                                                         |
| <b>Eye contact</b>                        | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor. Remove contact lenses, if present and easy to do. Continue rinsing.                                                                                                                                                                            |
| <b>Skin contact</b>                       | Take off contaminated clothing and wash it before reuse. Wash off immediately with plenty of water. If symptoms persist, call a doctor.                                                                                                                                                                                                                          |
| <b>Ingestion</b>                          | Rinse mouth with water and drink plenty of water. If symptoms persist, call a doctor.                                                                                                                                                                                                                                                                            |
| <b>Self-protection of the first aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 8 for more information. |

**4.2. Most important symptoms and effects, both acute and delayed**

|                   |                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Symptoms</b>   | The product contains a sensitising substance which may provoke an allergic reaction among sensitive individuals.                                                                                                                                                                                                                                                        |
| <b>Inhalation</b> | May cause allergic respiratory reaction. Shortness of breath, wheezing and coughing. The effect of inhalation may be delayed. The product contains a sensitising substance which may provoke an allergic reaction among sensitive individuals. The product contains calcium carbonate, limestone. The raw material may contain trace amounts of crystalline silica also |

known as quartz. Quartz is a suspected carcinogen if inhaled. This product has been formulated to prevent dust formulation. The product contains titanium dioxide. The raw material may contain trace amounts of crystalline silica also known as quartz. Quartz is a suspected carcinogen if inhaled. This product has been formulated to prevent dust formulation.

**Eyes** May cause slight eye irritation.

**Dermal** May cause slight skin irritation.

**Ingestion** May cause irritation

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

**Note to doctors** Treat symptomatically.

### **SECTION 5: Firefighting measures**

#### **5.1. Extinguishing media**

**Suitable Extinguishing Media** Water spray. Alcohol resistant foam. Dry chemical or CO2.

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

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

**Specific hazards arising from the chemical** May cause allergic respiratory reaction.

**Hazardous combustion products** No information available.

#### **5.3. Advice for firefighters**

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

### **SECTION 6: Accidental release measures**

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

**Personal precautions** Avoid formation of dust and aerosols. Ensure adequate ventilation. Use personal protection recommended in Section 8.

**For emergency responders** Use personal protection recommended in Section 8.

#### **6.2. Environmental precautions**

**Environmental precautions** Collect spillage. See Section 12 for additional Ecological Information.

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

**Methods for containment** Avoid formation of dust and aerosols. Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Avoid formation of dust and aerosols. Take up mechanically, placing in appropriate containers for disposal. Flush remainder carefully with plenty of water. Avoid splashing and

high pressure washing (avoid formation of aerosols). Ensure adequate ventilation. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

#### 6.4. Reference to other sections

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

**Advice on safe handling** Avoid generation of dust and aerosols. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using the product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Handle in accordance with good industrial hygiene and safety practice. Remove contaminated clothing and protective equipment before entering eating areas.

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

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep at temperatures between 0 and 25 °C. Protect from direct sunlight.

### 7.3. Specific end use(s)

**Specific use(s)**  
See section 1 for more information.

**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

## **SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

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

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

**Derived No Effect Level (DNEL) - General Public** No information available.

**Predicted No Effect Concentration (PNEC)**

| Chemical name | Freshwater | Freshwater<br>(intermittent release) | Marine water | Marine water<br>(intermittent release) | Air |
|---------------|------------|--------------------------------------|--------------|----------------------------------------|-----|
|---------------|------------|--------------------------------------|--------------|----------------------------------------|-----|

| Chemical name           | Freshwater | Freshwater<br>(intermittent release) | Marine water | Marine water<br>(intermittent release) | Air |
|-------------------------|------------|--------------------------------------|--------------|----------------------------------------|-----|
| MANNANASE<br>37288-54-3 | 55.5 µg/L  | 555 µg/L                             | 5.55 µg/L    |                                        |     |

| Chemical name           | Freshwater<br>sediment | Marine sediment | Sewage treatment | Soil       | Food chain |
|-------------------------|------------------------|-----------------|------------------|------------|------------|
| MANNANASE<br>37288-54-3 |                        |                 | 65 mg/L          | 6.64 µg/kg |            |

## 8.2. Exposure controls

**Engineering controls** Ensure adequate ventilation.

### Personal protective equipment

**Eye/face protection** Wear safety glasses with side shields (or goggles). Use eye protection according to EN ISO 16321-1.

**Hand protection** Wear suitable gloves. Gloves must conform to standard EN 374.

**Skin and body protection** Wear appropriate clothing to prevent reasonably probable skin contact.

**Respiratory protection** In case of inadequate ventilation wear respiratory protection. Use respiratory equipment with particle filter, type P3.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using the product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Handle in accordance with good industrial hygiene and safety practice. Remove contaminated clothing and protective equipment before entering eating areas.

**Environmental exposure controls** Local authorities should be advised if significant spillages cannot be contained. Ensure all waste water is collected and treated via a waste water treatment plant.

## SECTION 9: Physical and chemical properties

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

**Physical state** Solid  
**Appearance** granules  
**Colour** Off-white  
**Odour** Slight fermentation odour.  
**Odour threshold** No information available

**Property**  
**Melting point / freezing point**  
**Initial boiling point and boiling range**  
**Flammability**  
**Flammability Limit in Air**  
**Upper flammability or explosive limits**  
**Lower flammability or explosive**

#### Values

**Remarks • Method**  
 No information available.  
 No information available.  
 No information available.  
 No information available.

|                            |                          |                           |
|----------------------------|--------------------------|---------------------------|
| limits                     |                          |                           |
| Flash point                |                          | No information available. |
| Autoignition temperature   |                          | No information available. |
| Decomposition temperature  |                          | No information available. |
| pH                         |                          | No information available. |
| pH (as aqueous solution)   |                          | No information available. |
| Kinematic viscosity        |                          | No information available. |
| Dynamic viscosity          |                          | No information available. |
| Water solubility           | Soluble in water         | No information available. |
| Solubility(ies)            |                          | No information available. |
| Partition coefficient      |                          | No information available. |
| Vapour pressure            |                          | No information available. |
| Relative density           |                          | No information available. |
| Bulk density               | 1.05 g/mL                | No information available. |
| Liquid Density             | No information available | No information available. |
| Relative vapour density    |                          | No information available. |
| Particle characteristics   |                          | No information available. |
| Particle Size              | No information available |                           |
| Particle Size Distribution | No information available |                           |
| Explosive properties       | No data available        |                           |
| Oxidising properties       | No data available        |                           |

## 9.2. Other information

# SECTION 10: Stability and reactivity

## 10.1. Reactivity

Reactivity No information available.

## 10.2. Chemical stability

Stability Stable under normal conditions.

## Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

## 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

## 10.4. Conditions to avoid

Conditions to avoid Avoid generation of dust. Keep at temperatures between 0 and 25 °C. Protect from direct sunlight.

## 10.5. Incompatible materials

Incompatible materials None known based on information supplied.

## 10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

# SECTION 11: Toxicological information

## 11.1. Information on toxicological effects

**Information on likely routes of exposure****Product Information**

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | The product contains a sensitising substance which may provoke an allergic reaction among sensitive individuals. The product contains calcium carbonate, limestone. The raw material may contain trace amounts of crystalline silica also known as quartz. Quartz is a suspected carcinogen if inhaled. This product has been formulated to prevent dust formulation. The product contains titanium dioxide. The raw material may contain trace amounts of crystalline silica also known as quartz. Quartz is a suspected carcinogen if inhaled. This product has been formulated to prevent dust formulation. Specific test data for the substance or mixture is not available. |
| <b>Eye contact</b>  | Specific test data for the substance or mixture is not available. May cause slight eye irritation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Skin contact</b> | May cause slight skin irritation. Specific test data for the substance or mixture is not available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Ingestion</b>    | May cause irritation. Specific test data for the substance or mixture is not available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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

|                 |                                                                                                                  |
|-----------------|------------------------------------------------------------------------------------------------------------------|
| <b>Symptoms</b> | The product contains a sensitising substance which may provoke an allergic reaction among sensitive individuals. |
|-----------------|------------------------------------------------------------------------------------------------------------------|

**Acute toxicity****Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

**Component Information**

| Chemical name | Oral LD50          | Dermal LD50 | Inhalation LC50                        |
|---------------|--------------------|-------------|----------------------------------------|
| MANNANASE     | > 3320 mg/kg (Rat) | -           | > 0.45 mg/L (Rat) (4 h)<br>(Dust/mist) |

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

|                                  |                           |
|----------------------------------|---------------------------|
| <b>Skin corrosion/irritation</b> | No information available. |
|----------------------------------|---------------------------|

## MANNANASE (37288-54-3)

| Method   | Species | Exposure route | Effective dose | Exposure time | Results        |
|----------|---------|----------------|----------------|---------------|----------------|
| OECD 404 | Rabbit  | Dermal         |                |               | Not classified |

|                                          |                           |
|------------------------------------------|---------------------------|
| <b>Serious eye damage/eye irritation</b> | No information available. |
|------------------------------------------|---------------------------|

## MANNANASE (37288-54-3)

| Method   | Species | Exposure route | Effective dose | Exposure time | Results        |
|----------|---------|----------------|----------------|---------------|----------------|
| OECD 405 | Rabbit  | eye            |                |               | Not classified |

|                                          |                                                                                                                  |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Respiratory or skin sensitisation</b> | The product contains a sensitising substance which may provoke an allergic reaction among sensitive individuals. |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------|

## MANNANASE (37288-54-3)

| Method | Species        | Exposure route | Results                     |
|--------|----------------|----------------|-----------------------------|
|        | Human evidence | Inhalation     | May cause allergy or asthma |

|  |  |  |                                               |
|--|--|--|-----------------------------------------------|
|  |  |  | symptoms or breathing difficulties if inhaled |
|--|--|--|-----------------------------------------------|

**Germ cell mutagenicity** No information available.

Component Information  
MANNANASE (37288-54-3)

| Method                     | Species | Results        |
|----------------------------|---------|----------------|
| OECD 471 OECD 473 OECD 476 |         | Not classified |

**Carcinogenicity** The product contains calcium carbonate, limestone. The raw material may contain trace amounts of crystalline silica also known as quartz. Quartz is a suspected carcinogen if inhaled. This product has been formulated to prevent dust formulation. The product contains titanium dioxide. The raw material may contain trace amounts of crystalline silica also known as quartz. Quartz is a suspected carcinogen if inhaled. This product has been formulated to prevent dust formulation.

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

Component Information  
MANNANASE (37288-54-3)

| Method   | Species | Exposure route | Effective dose  | Exposure time | Results              |
|----------|---------|----------------|-----------------|---------------|----------------------|
| OECD 408 | Rat     | Oral           | 1277 mg/kg bw/d | 90 days       | NOAEL Not classified |

**Aspiration hazard** No information available.

**Other adverse effects** No information available.

## SECTION 12: Ecological information

### 12.1. Toxicity

**Ecotoxicity** The environmental impact of this product has not been fully investigated.

MANNANASE (37288-54-3)

| Method                                                        | Species   | Endpoint type | Effective dose | Exposure time | Results |
|---------------------------------------------------------------|-----------|---------------|----------------|---------------|---------|
| OECD Test No. 202: Daphnia sp., Acute Immobilisation Test     | Crustacea | EC0           | > 55.5 mg/L    | 48 hours      |         |
| OECD Test No. 203: Fish, Acute Toxicity Test                  | Fish      | LC0           | > 55.5 mg/L    | 96 hours      |         |
| OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth | Algae     | EC0           | > 55.5 mg/L    | 72 hours      |         |

|                                                                               |       |      |          |          |                |
|-------------------------------------------------------------------------------|-------|------|----------|----------|----------------|
| Inhibition Test                                                               |       |      |          |          |                |
| OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test | Algae | NOEC | > 1 mg/L | 72 hours | Not classified |

**12.2. Persistence and degradability**

**Persistence and degradability** No information available.

MANNANASE (37288-54-3)

| Method                                                                    | Exposure time | Value                | Results               |
|---------------------------------------------------------------------------|---------------|----------------------|-----------------------|
| OECD Test No. 301B: Ready Biodegradability: CO2 Evolution Test (TG 301 B) | 29 days       | 73.7% Biodegradation | Readily biodegradable |

**12.3. Bioaccumulative potential**

**Bioaccumulation** No information available.

**Component Information**

| Chemical name | Partition coefficient |
|---------------|-----------------------|
| MANNANASE     | -1.3                  |

**12.4. Mobility in soil**

**Mobility in soil** No information available.

**12.5. Results of PBT and vPvB assessment**

**PBT and vPvB assessment** The product does not contain any substance(s) classified as PBT or vPvB.

| Chemical name | PBT and vPvB assessment         |
|---------------|---------------------------------|
| MANNANASE     | The substance is not PBT / vPvB |

**12.6. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

**Waste from residues/unused products** Waste to be treated as controlled waste. Disposal to licensed waste disposal site in accordance with local Waste Disposal Authority.

**Contaminated packaging** Do not reuse empty containers.

**SECTION 14: Transport information****IATA**

|                                 |                |
|---------------------------------|----------------|
| 14.1 UN number or ID number     | Not regulated  |
| 14.2 UN proper shipping name    | Not regulated  |
| 14.3 Transport hazard class(es) | Not regulated  |
| 14.4 Packing group              | Not regulated  |
| 14.5 Environmental hazards      | Not applicable |

**14.6 Special precautions for user**

|                           |      |
|---------------------------|------|
| <b>Special Provisions</b> | None |
|---------------------------|------|

**IMDG**

|                                                                     |                          |
|---------------------------------------------------------------------|--------------------------|
| <b>14.1 UN number or ID number</b>                                  | Not regulated            |
| <b>14.2 UN proper shipping name</b>                                 | Not regulated            |
| <b>14.3 Transport hazard class(es)</b>                              | Not regulated            |
| <b>14.4 Packing group</b>                                           | Not regulated            |
| <b>14.5 Environmental hazards</b>                                   | Not applicable           |
| <b>14.6 Special precautions for user</b>                            |                          |
| <b>Special Provisions</b>                                           | None                     |
| <b>14.7 Maritime transport in bulk according to IMO instruments</b> | No information available |

**RID**

|                                          |                |
|------------------------------------------|----------------|
| <b>14.1 UN number or ID number</b>       | Not regulated  |
| <b>14.2 UN proper shipping name</b>      | Not regulated  |
| <b>14.3 Transport hazard class(es)</b>   | Not regulated  |
| <b>14.4 Packing group</b>                | Not regulated  |
| <b>14.5 Environmental hazards</b>        | Not applicable |
| <b>14.6 Special precautions for user</b> |                |
| <b>Special Provisions</b>                | None           |

**ADR**

|                                          |                |
|------------------------------------------|----------------|
| <b>14.1 UN number or ID number</b>       | Not regulated  |
| <b>14.2 UN proper shipping name</b>      | Not regulated  |
| <b>14.3 Transport hazard class(es)</b>   | Not regulated  |
| <b>14.4 Packing group</b>                | Not regulated  |
| <b>14.5 Environmental hazards</b>        | Not applicable |
| <b>14.6 Special precautions for user</b> |                |
| <b>Special Provisions</b>                | None           |

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Authorisations and/or restrictions on use:**

This product does not contain substances subject to authorisation (UK REACH - Annex XIV).  
 This product does not contain substances subject to restriction (UK REACH - Annex XVII).

**Persistent Organic Pollutants**

Not applicable

**Export Notification requirements**

Not applicable

**Named dangerous substances per COMAH Regulations 2015 (as amended)**

Not applicable

**The Ozone-Depleting Substances Regulations 2015**

Not applicable

**The Biocidal Products Regulations 2001 (as amended)**

Not applicable

**The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)**

Not applicable

**Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)**

Not applicable

**International Inventories**

|                      |                                                  |
|----------------------|--------------------------------------------------|
| <b>TSCA</b>          | Contact supplier for inventory compliance status |
| <b>DSL/NDL</b>       | Contact supplier for inventory compliance status |
| <b>EINECS/ELINCS</b> | Contact supplier for inventory compliance status |
| <b>ENCS</b>          | Contact supplier for inventory compliance status |
| <b>IECSC</b>         | Contact supplier for inventory compliance status |
| <b>KECI</b>          | Contact supplier for inventory compliance status |
| <b>PICCS</b>         | Contact supplier for inventory compliance status |
| <b>AIIC</b>          | Contact supplier for inventory compliance status |
| <b>NZIoC</b>         | Contact supplier for inventory compliance status |

**Legend:**

|                      |                                                                                                    |
|----------------------|----------------------------------------------------------------------------------------------------|
| <b>TSCA</b>          | - United States Toxic Substances Control Act Section 8(b) Inventory                                |
| <b>DSL/NDL</b>       | - Canadian Domestic Substances List/Non-Domestic Substances List                                   |
| <b>EINECS/ELINCS</b> | - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances |
| <b>ENCS</b>          | - Japan Existing and New Chemical Substances                                                       |
| <b>IECSC</b>         | - China Inventory of Existing Chemical Substances                                                  |
| <b>KECL</b>          | - Korean Existing and Evaluated Chemical Substances                                                |
| <b>PICCS</b>         | - Philippines Inventory of Chemicals and Chemical Substances                                       |
| <b>AIIC</b>          | - Australian Inventory of Industrial Chemicals                                                     |
| <b>NZIoC</b>         | - New Zealand Inventory of Chemicals                                                               |

**15.2. Chemical safety assessment**

|                               |                                                                                                      |
|-------------------------------|------------------------------------------------------------------------------------------------------|
| <b>Chemical Safety Report</b> | A Chemical Safety Assessment has been carried out for one or more substances present in the material |
|-------------------------------|------------------------------------------------------------------------------------------------------|

**SECTION 16: Other information****Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

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

**Legend**

SVHC: Substances of Very High Concern for Authorisation:

**Legend Section 8: Exposure controls/personal protection**

|                |                             |             |                                  |
|----------------|-----------------------------|-------------|----------------------------------|
| <b>TWA</b>     | TWA (time-weighted average) | <b>STEL</b> | STEL (Short Term Exposure Limit) |
| <b>Ceiling</b> | Maximum limit value         | <b>*</b>    | Skin designation                 |
| <b>+</b>       | Sensitisers                 |             |                                  |

Revision Note **SDS sections updated 1 2 3 4 5 6 7 8 9 10 11 12 13 15 16****Classification procedure**

|                                                                 |                    |
|-----------------------------------------------------------------|--------------------|
| Classification according to Regulation (EC) No. 1272/2008 [CLP] | Method Used        |
| Acute oral toxicity                                             | Calculation method |
| Acute dermal toxicity                                           | Calculation method |
| Acute inhalation toxicity - gas                                 | Calculation method |
| Acute inhalation toxicity - vapour                              | Calculation method |
| Acute inhalation toxicity - dust/mist                           | Calculation method |
| Skin corrosion/irritation                                       | Calculation method |
| Serious eye damage/eye irritation                               | Calculation method |
| Respiratory sensitisation                                       | Calculation method |
| Skin sensitisation                                              | Calculation method |

|                          |                    |
|--------------------------|--------------------|
| Mutagenicity             | Calculation method |
| Carcinogenicity          | Calculation method |
| Reproductive toxicity    | Calculation method |
| STOT - single exposure   | Calculation method |
| STOT - repeated exposure | Calculation method |
| Acute aquatic toxicity   | Calculation method |
| Chronic aquatic toxicity | Calculation method |
| Aspiration hazard        | Calculation method |
| Ozone                    | Calculation method |

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA\_RAC)  
European Chemicals Agency (ECHA) (ECHA\_API)  
Environmental Protection Agency  
Acute Exposure Guideline Level(s) (AEGL(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
National Institute of Technology and Evaluation (NITE)  
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
U.S. National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme  
Organisation for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

**Prepared By** N Bajaj  
**Supersedes date** 06-Apr-2016  
**Revision date** 26-Jan-2026

**This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)**  
**Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work**

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** NON-PROTEOLYTIC ENZYME  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR

**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306

**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Formulation & (re)packing of substances and mixtures  
**Type** Worker  
**Main user group** Industrial uses: Uses of substances as such or in preparations at industrial sites  
**Environmental release category(ies)** ERC2 - Formulation of preparations (mixtures)  
**Process category(ies)** PROC1 - Use in closed process, no likelihood of exposure  
 PROC2 - Use in closed, continuous process with occasional controlled exposure  
 PROC3 - Use in closed batch process (synthesis or formulation)  
 PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises  
 PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)  
 PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities  
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities  
 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)  
 PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising  
 PROC15 - Use as laboratory reagent  
**Product category(ies)** PC0 - Other Products PC21 - Laboratory chemicals PC35 - Washing and cleaning products (including solvent based products) PC37 - Water treatment chemicals PC39 - Cosmetics, personal care products  
**Sector(s) of use** SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC2 - Formulation of preparations (mixtures)

##### Amounts used

|       |                       |
|-------|-----------------------|
| Type  | Daily amount per site |
| Value | 1,000                 |
| Units | tonnes                |

|       |                        |
|-------|------------------------|
| Type  | Annual amount per site |
| Value | 10000                  |
| Units | t(ons)/year            |

##### Conditions and measures related to municipal sewage treatment plant

|                                              |               |
|----------------------------------------------|---------------|
| Type                                         | Municipal STP |
| Assumed domestic sewage treatment plant flow | 2000 m3/d     |
| Removal efficiency fraction (offsite;        | 99.99 %       |

|                  |                                             |
|------------------|---------------------------------------------|
| STP)             |                                             |
| Sludge treatment | Controlled application to agricultural soil |

**Environmental factors not influenced by risk management**

|                                            |             |
|--------------------------------------------|-------------|
| Receiving water dilution (fresh or marine) | 18,000 m3/d |
|--------------------------------------------|-------------|

**Conditions and measures related to external treatment of waste for disposal**

|          |                                                                                                          |
|----------|----------------------------------------------------------------------------------------------------------|
| Disposal | External treatment and disposal of waste should comply with applicable local and/or national regulations |
|----------|----------------------------------------------------------------------------------------------------------|

**Control of worker exposure**

|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)<br>PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises |
| Title                                                                                  | Mixing operations (open systems) Mixing operations (closed systems)                                                                                                                                                                                                                                                                                                                                                                   |
| Covers concentrations up to                                                            | 15 %                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Physical form of product                                                               | Liquid or granules                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Exposure duration                                                                      | Covers use up to 12 h/d                                                                                                                                                                                                                                                                                                                                                                                                               |
| Technical conditions and measures to control dispersion from source towards the worker | HEPA Filtration<br>Provide extract ventilation to points where emissions occur<br>Avoid splashing                                                                                                                                                                                                                                                                                                                                     |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop                                                    |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented Ensure operatives are trained to minimise exposures Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                                                                                                                                                                                               |

|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities                                                                                                                                                                                                                                                  |
| Title                                                                                  | Material transfers                                                                                                                                                                                                                                                                                                                                                                 |
| Covers concentrations up to                                                            | 15 %                                                                                                                                                                                                                                                                                                                                                                               |
| Physical form of product                                                               | Liquid or granules                                                                                                                                                                                                                                                                                                                                                                 |
| Exposure duration                                                                      | Covers use up to 12 h/d                                                                                                                                                                                                                                                                                                                                                            |
| Technical conditions and measures to control dispersion from source towards the worker | HEPA Filtration<br>Provide extract ventilation to points where emissions occur<br>Avoid splashing                                                                                                                                                                                                                                                                                  |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented Ensure operatives are trained to minimise exposures Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                                                                                                                                            |

|                             |                                                                                                                               |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)       | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities |
| Title                       | Material transfers                                                                                                            |
| Covers concentrations up to | 30 %                                                                                                                          |
| Physical form of product    | Liquid or granules                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Exposure duration                                                                      | Covers use up to 12 h/d                                                                                                                                                                                                                                                                                                                                                            |
| Technical conditions and measures to control dispersion from source towards the worker | HEPA Filtration<br>Provide extract ventilation to points where emissions occur<br>Use in semi-automated and predominantly enclosed filling lines<br>Avoid splashing                                                                                                                                                                                                                |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented Ensure operatives are trained to minimise exposures Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                                                                                                                                                                                                    |
| Title                                                                                  | Drum and small package filling                                                                                                                                                                                                                                                                                                                                                     |
| Covers concentrations up to                                                            | 0.5 %                                                                                                                                                                                                                                                                                                                                                                              |
| Physical form of product                                                               | Liquid or granules                                                                                                                                                                                                                                                                                                                                                                 |
| Exposure duration                                                                      | Covers use up to 12 h/d                                                                                                                                                                                                                                                                                                                                                            |
| Technical conditions and measures to control dispersion from source towards the worker | HEPA Filtration<br>Provide extract ventilation to points where emissions occur<br>Avoid splashing                                                                                                                                                                                                                                                                                  |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented Ensure operatives are trained to minimise exposures Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising                                                                                                                                                                                                                                                                                  |
| Title                                                                                  | Tabletting, compression, extrusion or pelletisation                                                                                                                                                                                                                                                                                                                                |
| Covers concentrations up to                                                            | 0.5 %                                                                                                                                                                                                                                                                                                                                                                              |
| Physical form of product                                                               | granules                                                                                                                                                                                                                                                                                                                                                                           |
| Exposure duration                                                                      | Covers use up to 12 h/d                                                                                                                                                                                                                                                                                                                                                            |
| Technical conditions and measures to control dispersion from source towards the worker | HEPA Filtration<br>Provide extract ventilation to points where emissions occur<br>Avoid splashing                                                                                                                                                                                                                                                                                  |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Assumes a good basic standard of occupational hygiene is implemented Ensure operatives are trained to minimise exposures Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                                                                                                                                            |

|                                                                                        |                                                                                              |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC15 - Use as laboratory reagent                                                           |
| Title                                                                                  | Laboratory activities                                                                        |
| Covers concentrations up to                                                            | 15 %                                                                                         |
| Physical form of product                                                               | Liquid or granules                                                                           |
| Exposure duration                                                                      | Covers use up to 12 h/d                                                                      |
| Technical conditions and measures to control dispersion from source towards the worker | HEPA Filtration<br>Handle in a fume cupboard or under extract ventilation<br>Avoid splashing |

|                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conditions and measures related to personal protection, hygiene and health evaluation | Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop |
| Organisational measures to prevent /limit releases, dispersion and exposure           | Assumes a good basic standard of occupational hygiene is implemented Ensure operatives are trained to minimise exposures Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                                                                                                                                            |

### Section 3 - Exposure estimation

#### Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)

##### Predicted No Effect Concentration (PNEC)

|                            |            |
|----------------------------|------------|
| Freshwater                 | 27.3 ug/l  |
| Marine water               | 2.73 ug/l  |
| Soil                       | 3.26 ug/l  |
| Impact on Sewage Treatment | 65000 ug/l |

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | <0.00026 mg/l            | <0.05                             |
| Marine water                | <0.000026 mg/l           | <0.05                             |
| STP: Sewage Treatment Plant | 0.001 mg/l               | <0.01                             |
| Soil                        | <1.0E-11 mg/kg           | <0.01                             |

##### Derived No Effect Level (DNEL):

Worker - inhalative, long-term - local 60 ng/m<sup>3</sup>

##### Calculation method

Workplace measurements

##### Remarks

Dermal exposure : Qualitative approach used to conclude safe use

| Process category(ies)                                                                                                                                                                                                                                                                                                                                                                                                              | Exposure route                         | predicted exposure level | Risk characterisation ratio (RCR) |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------------------------|-----------------------------------|
| PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises | Worker - inhalative, long-term - local | <20 ng/m <sup>3</sup>    | <0.33                             |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                                                                                                                    | Worker - inhalative, long-term - local | <10 ng/m <sup>3</sup>    | <0.17                             |

|                                                                                                                 |                                           |                       |      |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------|------|
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) | Worker - inhalative, long-term<br>- local | <6 ng/m <sup>3</sup>  | <0.1 |
| PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising               | Worker - inhalative, long-term<br>- local | <30 ng/m <sup>3</sup> | <0.5 |
| PROC15 - Use as laboratory reagent                                                                              | Worker - inhalative, long-term<br>- local | <6 ng/m <sup>3</sup>  | <0.1 |

#### **Section 4 - Guidance to check compliance with the exposure scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** NON-PROTEOLYTIC ENZYME  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR

**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306

**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Consumer use : Laundry and dish washing products  
**Type** Consumer  
**Main user group** Consumer uses: Private households (= general public = consumers)  
**Environmental release category(ies)** ERC8a - Wide dispersive indoor use of processing aids in open systems  
**Product category(ies)** PC35 - Washing and cleaning products (including solvent based products)  
**Sector(s) of use** SU21 - Consumer uses

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC8a - Wide dispersive indoor use of processing aids in open systems

##### Amounts used

|       |                                       |
|-------|---------------------------------------|
| Type  | Daily amount for wide dispersive uses |
| Value | 0.0000055                             |
| Units | tonnes                                |

##### Conditions and measures related to municipal sewage treatment plant

|                                              |                                             |
|----------------------------------------------|---------------------------------------------|
| Type                                         | Municipal STP                               |
| Assumed domestic sewage treatment plant flow | 2000 m3/d                                   |
| Removal efficiency fraction (offsite; STP)   | 99.99 %                                     |
| Sludge treatment                             | Controlled application to agricultural soil |

##### Environmental factors not influenced by risk management

|                                            |             |
|--------------------------------------------|-------------|
| Receiving water dilution (fresh or marine) | 18,000 m3/d |
|--------------------------------------------|-------------|

##### Control of consumer exposure

|                             |                                                                         |
|-----------------------------|-------------------------------------------------------------------------|
| Product categories [PC]     | PC35 - Washing and cleaning products (including solvent based products) |
| Covers concentrations up to | 0.5 %                                                                   |
| Physical form of product    | Liquid or granules                                                      |
| Amounts used                | 290 g/event                                                             |
| Exposure duration           | 0.1 hr/event                                                            |

### Section 3 - Exposure estimation

**Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems**

**Predicted No Effect Concentration (PNEC)**

|                            |            |
|----------------------------|------------|
| Freshwater                 | 1.7 ug/l   |
| Marine water               | 0.17 ug/l  |
| Soil                       | 568 Ug/l   |
| Impact on Sewage Treatment | 65000 ug/l |

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | <0.00026 mg/l            | <0.05                             |
| Marine water                | <0.000026 mg/l           | <0.05                             |
| STP: Sewage Treatment Plant | <0.00001 mg/l            | <0.01                             |
| Soil                        | <1.0E-11 mg/kg           | <0.01                             |

**Derived No Effect Level (DNEL):**

Inhalation 60 ng/m<sup>3</sup>

| Product category(ies)                                                   | Exposure route                            | predicted exposure level | Risk characterisation ratio (RCR) |
|-------------------------------------------------------------------------|-------------------------------------------|--------------------------|-----------------------------------|
| PC35 - Washing and cleaning products (including solvent based products) | Consumer - inhalative, long-term - local  | <3 ng/m <sup>3</sup>     | <0.2                              |
| PC35 - Washing and cleaning products (including solvent based products) | Consumer - combined, long-term - systemic | 0 mg/kg/day              | <0.01                             |

**Section 4 - Guidance to check compliance with the exposure scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** NON-PROTEOLYTIC ENZYME  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR

**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306

**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Hand dishwashing detergents ( Consumer use )  
**Type** Worker  
**Main user group** Consumer uses: Private households (= general public = consumers)  
**Environmental release category(ies)** ERC8a - Wide dispersive indoor use of processing aids in open systems  
**Product category(ies)** PC35 - Washing and cleaning products (including solvent based products)  
**Sector(s) of use** SU21 - Consumer uses

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC8a - Wide dispersive indoor use of processing aids in open systems

##### Amounts used

|       |                                                                    |
|-------|--------------------------------------------------------------------|
| Type  | Daily amount for wide dispersive uses<br>( Daily amount per site ) |
| Value | 0.0000055                                                          |
| Units | tonnes                                                             |

##### Conditions and measures related to municipal sewage treatment plant

|                                              |               |
|----------------------------------------------|---------------|
| Type                                         | Municipal STP |
| Assumed domestic sewage treatment plant flow | 2000 m3/d     |
| Removal efficiency fraction (offsite; STP)   | 99.99 %       |

##### Conditions and measures related to external treatment of waste for disposal

|          |                                                                                                          |
|----------|----------------------------------------------------------------------------------------------------------|
| Disposal | External treatment and disposal of waste should comply with applicable local and/or national regulations |
|----------|----------------------------------------------------------------------------------------------------------|

##### Control of consumer exposure

|                             |                                                                         |
|-----------------------------|-------------------------------------------------------------------------|
| Product categories [PC]     | PC35 - Washing and cleaning products (including solvent based products) |
| Covers concentrations up to | 0.015 %                                                                 |
| Physical form of product    | Liquid                                                                  |
| Amounts used                | 10 g/event                                                              |
| Exposure duration           | 0.1 hr/event<br>60 minutes per day                                      |

### Section 3 - Exposure estimation

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems

**Predicted No Effect Concentration (PNEC)**

|                            |            |
|----------------------------|------------|
| Freshwater                 | 27.3 ug/l  |
| Marine water               | 2.73 ug/l  |
| Soil                       | 3.26 ug/l  |
| Impact on Sewage Treatment | 65000 ug/l |

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | <0.00026 mg/l            | <0.05                             |
| Marine water                | <0.000026 mg/l           | <0.05                             |
| STP: Sewage Treatment Plant | 0.001 mg/l               | <0.01                             |
| Soil                        | <1.0E-11 mg/kg           | <0.01                             |

**Derived No Effect Level (DNEL):**

Inhalation 60 ng/m<sup>3</sup>

**Calculation method** The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated  
Inhalation exposure : measured exposure level

| Product category(ies)                                                   | Exposure route                           | predicted exposure level | Risk characterisation ratio (RCR) |
|-------------------------------------------------------------------------|------------------------------------------|--------------------------|-----------------------------------|
| PC35 - Washing and cleaning products (including solvent based products) | Consumer - inhalative, long-term - local | <3 ng/m <sup>3</sup>     | <0.2                              |

**Section 4 - Guidance to check compliance with the exposure scenario**

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** NON-PROTEOLYTIC ENZYME  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR

**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306

**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Automatic dishwashing detergents - household use  
**Type** Worker  
**Main user group** Consumer uses: Private households (= general public = consumers)  
**Environmental release category(ies)** ERC8a - Wide dispersive indoor use of processing aids in open systems  
**Product category(ies)** PC35 - Washing and cleaning products (including solvent based products)  
**Sector(s) of use** SU21 - Consumer uses

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC8a - Wide dispersive indoor use of processing aids in open systems

##### Amounts used

|       |                                                                    |
|-------|--------------------------------------------------------------------|
| Type  | Daily amount for wide dispersive uses<br>( Daily amount per site ) |
| Value | 0.0000055                                                          |
| Units | tonnes                                                             |

##### Conditions and measures related to municipal sewage treatment plant

|                                              |               |
|----------------------------------------------|---------------|
| Type                                         | Municipal STP |
| Assumed domestic sewage treatment plant flow | 2000 m3/d     |
| Removal efficiency fraction (offsite; STP)   | 99.99 %       |

##### Conditions and measures related to external treatment of waste for disposal

|          |                                                                                                          |
|----------|----------------------------------------------------------------------------------------------------------|
| Disposal | External treatment and disposal of waste should comply with applicable local and/or national regulations |
|----------|----------------------------------------------------------------------------------------------------------|

##### Control of consumer exposure

|                             |                                                                         |
|-----------------------------|-------------------------------------------------------------------------|
| Product categories [PC]     | PC35 - Washing and cleaning products (including solvent based products) |
| Covers concentrations up to | 0.5 %                                                                   |
| Physical form of product    | Liquid or granules                                                      |
| Amounts used                | Covers use up to 50 g/event                                             |
| Exposure duration           | 0.1 hr/event                                                            |

### Section 3 - Exposure estimation

**Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems**

**Predicted No Effect Concentration (PNEC)**

|                            |            |
|----------------------------|------------|
| Freshwater                 | 27.3 ug/l  |
| Marine water               | 2.73 ug/l  |
| Soil                       | 3.26 ug/l  |
| Impact on Sewage Treatment | 65000 ug/l |

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | <0.00026 mg/l            | <0.05                             |
| Marine water                | <0.000026 mg/l           | <0.05                             |
| STP: Sewage Treatment Plant | 0.001 mg/l               | <0.01                             |
| Soil                        | <1.0E-11 mg/kg           | <0.01                             |

**Derived No Effect Level (DNEL):**

**Inhalation** 60 ng/m<sup>3</sup>

**Calculation method** The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated  
Inhalation exposure : measured exposure level

| Product category(ies)                                                   | Exposure route                           | predicted exposure level | Risk characterisation ratio (RCR) |
|-------------------------------------------------------------------------|------------------------------------------|--------------------------|-----------------------------------|
| PC35 - Washing and cleaning products (including solvent based products) | Consumer - inhalative, long-term - local | <3 ng/m <sup>3</sup>     | <0.2                              |

**Section 4 - Guidance to check compliance with the exposure scenario**