



## Specification

**Product Name:** Meat Glue / Transglutaminase

**Product Code:** SPEC0043

### Description:

Transglutaminase is also known as Meat Glue is an enzyme with the ability to cross-link proteins. Easy to handle, with no effect on flavour, it is used in the kitchen as a meat and fish glue. Produced by a microbial fermentation of a naturally occurring organism. Various forms of Transglutaminase are found in animal and plant sources. It is packaged in modified atmosphere conditions to ensure freshness and quality.

### Specifications:

| Parameters                                | Units | Specifications        |
|-------------------------------------------|-------|-----------------------|
| Transglutaminase activity                 | U/g   | 65                    |
| Loss on drying                            | %     | < 10%                 |
| Yeast and Moulds                          | cfu/g | < 1 x 10 <sup>2</sup> |
| Total coliform                            | cfu/g | < 30                  |
| E. coli                                   | cfu/g | Absent in 25 grams    |
| Listeria monocytogenes                    | cfu/g | Absent in 25 grams    |
| Salmonella                                | cfu/g | Absent in 25 grams    |
| Arsenic (As <sub>2</sub> O <sub>3</sub> ) | ppm   | <1                    |
| Lead (Pb)                                 | ppm   | <2                    |
| Cadmium (Cd)                              | ppm   | <0,5                  |
| Mercury (Hg)                              | ppm   | <0,5                  |
| Copper (Cu)                               | ppm   | <2                    |

### Ingredients:

Sodium Caseinate (E469), Maltodextrin, Transglutaminase, Sunflower Lecithin (E322).

### **ALLERGEN INFORMATION: CONTAINS MILK**

### Dietary Information:

Non-GMO, Non-Irradiated, Gluten Free.

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**Nutritional Information:**

Based on typical content/100g: Energy: 1647.09kj/393.4kcal, Fat: 0.4g, Of which saturates: 0.02g, Carbohydrates: 44.7g, Of which sugars: 4.3g, Protein: 52.75g, Salt: 3.30g.

**Storage:**

Please store in dry, cool conditions and not in direct sunlight. Use the product as soon as possible after opening. If you have any remaining product ensure you tightly reseal the opened sachet and container, then store below 5 degrees either in the fridge or freezer.

**Packaging:**

| Size | EAN           |
|------|---------------|
| 100g | 5060341114533 |
| 200g | 5060341114540 |
| 500g | 5060341114557 |
| 1kg  | 5060341114564 |
| 5kg  | 5056191008252 |
| 10kg | 5056191008269 |

**Shelf Life:**

48 months from production date.

**Allergen Declaration**

| Allergen                                                                                                    | Contains (Y/N) |
|-------------------------------------------------------------------------------------------------------------|----------------|
| Cereals containing Gluten                                                                                   | N              |
| Crustaceans                                                                                                 | N              |
| Eggs                                                                                                        | N              |
| Fish                                                                                                        | N              |
| Peanuts                                                                                                     | N              |
| Soybeans                                                                                                    | N              |
| Milk                                                                                                        | Y              |
| Nuts                                                                                                        | N              |
| Celery                                                                                                      | N              |
| Mustard                                                                                                     | N              |
| Sesame Seeds                                                                                                | N              |
| Sulphur Dioxide and Sulphites (at concentration of more than 10mg/kg or 10mg/L in terms of Sulphur Dioxide) | N              |
| Lupin                                                                                                       | N              |
| Molluscs                                                                                                    | N              |



## Material Safety Data Sheet

### 1: Substance/Preparation and Company Identification:

#### 1.1 – Product Identifier

Product Form: Meat Glue / Transglutaminase

Product Code: SPEC0043

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

Use in food industry Protein binding enzyme.

#### Uses advised against:

Uses other than those recommended.

#### 1.3 – Suppliers Details

Special Ingredients Ltd, 4 Foxwood View, Chesterfield, S41 9RN. Tel: 0044 (0)1246 906247.

E-mail address: <https://specialingredients.co.uk/pages/contact>, Emergency Telephone

Contact: 07387 330318.

### 2: Hazard Identification:

#### 2.1 – Classification of the substance or mixture

In accordance with Regulation (EC) No 1272/2008:

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

#### 2.2 – Label elements

Labelling in accordance with Regulation (EC) No 1272/2008: Pictograms:



Signal word: Danger

Hazard statements:

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

Precautionary statements:

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

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

P304+P340: IF INHALED – Remove person to fresh air and keep comfortable for breathing.

P342+P311: If experiencing respiratory symptoms – Call a POISON CENTER/doctor/... P501

Dispose of contents/container according to current, local/national legislation.

Contains:

Transglutaminase

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## 2.3 – Other hazards

The mixture does not contain substances classified as PBT.

The mixture does not contain substances classified as vPvB.

The mixture does not contain any endocrine disrupting properties substances.

In normal use conditions and in its original form, the product itself does not involve any other risk for health and the environment.

## 3: Composition and Information on Ingredients:

### 3.1 – Substances Not

Applicable.

### 3.2 – Mixtures

Substances posing a danger to health or the environment in accordance with the Regulation (EC) No. 1272/2008, assigned a Community exposure limit in the workplace, and classified as PBT/vPvB or included in the Candidate List:

| Identifiers                                      | Name             | Concentrate | (*) Classification – Regulation (EC)<br>No 1272/2008 |                                                                        |
|--------------------------------------------------|------------------|-------------|------------------------------------------------------|------------------------------------------------------------------------|
|                                                  |                  |             | Classification                                       | Specifics<br>concentration<br>limits and Acute<br>toxicity<br>estimate |
| Cas No: 80146-85-6<br>Registration No:<br>Exempt | Transglutaminase | 0,5 – 10%   | Resp. Sens. 1,<br>H334                               | -                                                                      |

(\*)The complete text of the H phrases is given in section 16 of this Safety Data Sheet.

## 4: First Aid Measures:

### 4.1 – Description of first aid measures

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

Inhalation: Take the victim into open air; keep them warm and calm. If breathing is irregular or stops, perform artificial respiration.

Eye contact: Remove contact lenses, if present and if it is easy to do. Wash eyes with plenty of clean and cool water for at least 10 minutes while pulling eyelids up, and seek medical assistance. Don't let the person to rub the affected eye.

Skin contact: Remove contaminated clothing. Wash skin vigorously with water and soap or a suitable skin cleaner. NEVER use solvents or thinners.

Ingestion: If accidentally ingested, seek immediate medical attention. Keep calm. NEVER induce vomiting.

### 4.2 – Most important symptoms and effects, both acute and delayed

It may cause an allergic reaction in the respiratory system. Chronic exposure can lead to asthma.



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

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious. If the person vomits, clear the respiratory tract. Keep the person comfortable. Turn him/her over to the left side and stay there while waiting for medical care.

#### **5: Firefighting Measures:**

The product is NOT classified as flammable, in case of fire the following measures should be taken:

##### **5.1 – Extinguishing media**

Suitable extinguishing media: Extinguisher powder or CO<sub>2</sub>. In case of more serious fires, also alcoholresistant foam and water spray.

Unsuitable extinguishing media: Do not use a direct stream of water to extinguish. In the presence of electrical voltage, you cannot use water or foam as extinguishing media.

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

Special risks: Exposure to combustion or decomposition products can be harmful to your health.

##### **5.3 – Advice for firefighters**

Use water to cool tanks, cisterns, or containers close to the heat source or fire. Take wind direction into account. Prevent the products used to fight the fire from going into drains, sewers, or waterways.

Fire protection equipment: According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and boots.

#### **6: Accidental Release Measures:**

**6.1 – Personal precautions, protective equipment and emergency procedures** For exposure control and individual protection measures, see section 8.

##### **6.2 – Environmental precautions**

Product not classified as hazardous for the environment, avoid spillage as much as possible.

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

Contain and collect spillage with inert absorbent material (earth, sand, vermiculite, Kieselguhr...) and clean the area immediately with a suitable decontaminant.

Deposit waste in closed and suitable containers for disposal, in compliance with local and national regulations (see section 13).

##### **6.4 Reference to other sections**

For exposure control and individual protection measures, see section 8.

For later elimination of waste, follow the recommendations under section 13.

#### **7: Handling And Storage:**

**7.1 – Precautions for safe handling**

For personal protection, see section 8.

In the application area, smoking, eating, and drinking must be prohibited.

Follow legislation on occupational health and safety.

Never use pressure to empty the containers. They are not pressure-resistant containers. Keep the product in containers made of a material identical to the original.

**7.2 – Conditions for safe storage, including any incompatibilities**

Store according to local legislation. Observe indications on the label. Store the containers between 5 and 35 °C, in a dry and well-ventilated place, far from sources of heat and direct solar light. Keep far away from ignition points. Keep away from oxidising agents and from highly acidic or alkaline materials. Do not smoke. Prevent the entry of non-authorised persons. Once the containers are open, they must be carefully closed and placed vertically to prevent spills. The product is not affected by Directive 2012/18/EU (SEVESO III).

**7.3 – Specific end use(s)**

None

**8: Exposure Controls:****8.1 – Control parameters**

The product does NOT contain substances with Professional Exposure Environmental Limit Values.

The product does NOT contain substances with Biological Limit Values.

**8.2 – Exposure controls**

Measures of a technical nature:

Provide adequate ventilation, which can be achieved by using good local exhaust-ventilation and a good general exhaust system.

|                              |                                                                                                                                          |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Concentration:</b>        | <b>100%</b>                                                                                                                              |
| <b>Uses:</b>                 | Industrial Use<br>Use in Food Industry<br>Protein binding enzyme                                                                         |
| <b>Breathing protection:</b> |                                                                                                                                          |
| PPE:                         | Particle filter mask                                                                                                                     |
| Characteristics:             | «CE» marking, category III. Made of filtering material, it covers nose, mouth and chin.                                                  |
| CEN standards:               | EN 149                                                                                                                                   |
| Maintenance:                 | Check for any tears, defects, etc before use. Since it is a disposable individual protection equipment, it should be replaced after use. |
| Observations:                | Does not protect worker unless properly adjusted. Follow the manufacture's instructions regarding suitable use of the equipment. P2      |
| Filter Type needed:          |                                                                                                                                          |
| <b>Hand protection:</b>      |                                                                                                                                          |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                          |                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <p>PPE: Protective gloves against chemicals.</p> <p>Characteristics: «CE» marking, category III.</p> <p>CEN standards: EN 374-1, En 374-2, EN 374-3, EN 420</p> <p>Maintenance: Keep in a dry place, away from any sources of heat, and avoid exposure to sunlight as much as possible.</p> <p>Do not make any changes to the gloves that may alter their resistance, or apply paints, solvents or adhesives.</p> <p>Observations: Gloves should be of the appropriate size and fit the user's hand well, not being too loose or too tight.</p> <p>Always use with clean, dry hands.</p>                                                          |                                                                                                                                                                                                                                                          |  |
| Material: PVC (polyvinyl chloride)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Breakthrough time (min): > 480                                                                                                                                                                                                                           | Material Thickness (mm): 0,35                                                       |
| <b>Eye protection:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                          |                                                                                     |
| <p>PPE: Protective goggles against particle impacts.</p> <p>Characteristics: «CE» marking, category II. Eye protector against dust and smoke.</p> <p>CEN standards: EN 165, EN 166, EN 167, EN 168</p> <p>Maintenance: Visibility through lenses should be ideal. Therefore, these parts</p>                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                       |                                                                                     |
| Observations:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>should be cleaned daily. Protectors should be disinfected periodically following the manufacturer's instructions.</p> <p>Some signs of wear and tear include: yellow colouring of the lenses, superficial scratching of the lenses, scraping etc.</p> |                                                                                     |
| <b>Skin Protection:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                          |                                                                                     |
| <p>PPE: Protective clothing.</p> <p>Characteristics: «CE» marking, category II. Protective clothing should not be too tight or loose in order not to obstruct the user's movements.</p> <p>CEN standards: EN 340</p> <p>Maintenance: In order to guarantee uniform protection, follow the washing and maintenance instructions provided by the manufacturer.</p> <p>Observations: The protective clothing should offer a level of comfort in line with the level of protection provided in terms of the hazard against which it protects, bearing in mind environmental conditions, the users terms of activity and the expected time of use.</p> |                                                                                                                                                                                                                                                          |                                                                                     |
| <p>PPE: Work footwear.</p> <p>Characteristics: «CE» marking, category II.</p> <p>CEN standards: EN ISO 13287, EN 20347</p> <p>Maintenance: This product adapts to the first user's foot shape. That is why, as well as for hygienic reasons, it should not be used by other people.</p> <p>Observations: Work footwear for professional use includes protection elements aimed at protecting users against any injury resulting from an accident.</p>                                                                                                                                                                                             |                                                                                                                                                                                                                                                          |                                                                                     |

## 9: Physical and Chemical Properties:

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

Physical state: Solid - Dust

Colour: White cream

Odour: Not applicable/Not available due to the nature/properties of the product

Odour threshold: Not applicable/Not available due to the nature/properties of the product

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Melting point: Not applicable/Not available due to the nature/properties of the product  
Freezing point: Not applicable/Not available due to the nature/properties of the product  
Boiling point or initial boiling point and boiling range: Not applicable/Not available due to the nature/properties of the product  
Flammability: Not applicable/Not available due to the nature/properties of the product  
Lower explosion limit: Not applicable/Not available due to the nature/properties of the product  
Upper explosion limit: Not applicable/Not available due to the nature/properties of the product  
Flash point: Not applicable/Not available due to the nature/properties of the product  
Auto-ignition temperature: Not applicable/Not available due to the nature/properties of the product  
Decomposition temperature: Not applicable/Not available due to the nature/properties of the product  
pH: Not applicable/Not available due to the nature/properties of the product  
Kinematic viscosity: Not applicable/Not available due to the nature/properties of the product  
Solubility: soluble en agua  
Hydrosolubility: soluble en agua  
Liposolubility: Not applicable/Not available due to the nature/properties of the product  
Partition coefficient n-octanol/water (log value): Not applicable/Not available due to the nature/properties of the product  
Vapour pressure: Not applicable/Not available due to the nature/properties of the product  
Absolute density: Not applicable/Not available due to the nature/properties of the product  
Relative density: 1,581 (Estimation based on the indication of the Regulation (CE) N°1272/2008.)  
Relative vapour density: Not applicable/Not available due to the nature/properties of the product  
Particle characteristics: Not applicable/Not available due to the nature/properties of the product

## 9.2 – Other information

Viscosity: Not applicable/Not available due to the nature/properties of the product  
Explosive properties: Not applicable/Not available due to the nature/properties of the product  
Oxidizing properties: Not applicable/Not available due to the nature/properties of the product  
Dropping point: Not applicable/Not available due to the nature/properties of the product  
Blink: Not applicable/Not available due to the nature/properties of the product

## 10: Stability and Reactivity:

### 10.1 – Reactivity

The product does not present hazards by their reactivity.

### 10.2 – Chemical stability

Stable under the recommended handling and storage conditions (see section 7).

### 10.3 – Possibility of hazardous reactions

The product does not present possibility of hazardous reactions.

### 10.4 – Conditions to avoid

Avoid any improper handling.

**10.5 – Incompatible materials**

Keep away from oxidising agents and from highly alkaline or acidic materials in order to prevent exothermic reactions.

**10.6 – Hazardous decomposition products** No decomposition if used for the intended uses.

**11: Toxicological Information:****11.1 – Hazardous decomposition products** There

are no tested data available on the product. a)

acute toxicity;

Not conclusive data for classification. b)

skin corrosion/irritation;

Not conclusive data for classification.

c) serious eye damage/irritation; Not

conclusive data for classification. d)

respiratory or skin sensitisation;

Product classified:

Respiratory sensitiser, Category 1: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

e) germ cell mutagenicity;

Not conclusive data for classification. f)

carcinogenicity;

Not conclusive data for classification. g)

reproductive toxicity;

Not conclusive data for classification. h)

STOT-single exposure;

Not conclusive data for classification. i)

STOT-repeated exposure;

Not conclusive data for classification. j)

aspiration hazard;

Not conclusive data for classification.

**11.2 – Information on other hazards**

Endocrine disrupting properties: This product does not contain components with endocrinedisrupting properties with effects on human health.

Other information: There is no information available on other adverse health effects.

**12: Ecological Considerations:****12.1 – Toxicity**

No information is available regarding the ecotoxicity of the substances present.

**12.2 – Persistence and degradability**

No information is available regarding the biodegradability of the substances present.

No information is available on the degradability of the substances present.

No information is available about persistence and degradability of the product.

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**12.3 – Bioaccumulative potential**

No information is available regarding the bioaccumulation of the substances present.

**12.4 – Mobility in soil**

No information is available about the mobility in soil.

The product must not be allowed to go into sewers or waterways. Prevent penetration into the ground.

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

No information is available about the results of PBT and vPvB assessment of the product.

**12.6 – Endocrine disrupting properties**

This product doesn't contain components with environmental endocrine disrupting properties.

**12.7 – Other adverse effects**

No information is available about other adverse effects for the environment.

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

Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local/national legislation.

Follow the provisions of Directive 2008/98/EC regarding waste management.

**14: Transport Information:**



Transportation is not dangerous. In case of road accident causing the product's spillage, proceed in accordance with point 6.

**14.1 – UN number**

Transportation is not dangerous.

**14.2 – Proper Shipping Name Description:**

ADR/RID: Not classified as hazardous for transport.

IMDG: Not classified as hazardous for transport.

ICAO/IATA: Not classified as hazardous for transport.

**14.3 – Transport hazard class(es)** Transportation

is not dangerous.

**14.4 – Packing group**

Transportation is not dangerous.

**14.5 – Environmental hazards**

Transportation is not dangerous.

Transport by ship, FEm – Emergency sheets (F – Fire, S - Spills): Not applicable.

**14.6 – Special precautions for user** Transportation

is not dangerous.

**14.7 – Maritime transport in bulk according to IMO instruments** Transportation

is not dangerous.

**15: Regulatory Information:****15.1 – Safety, health and environmental national regulations specific for the product**

The product is not affected by the Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer. Product classification according to Annex I of Directive 2012/18/EU (SEVESO III): N/A

The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.

The product is not affected by the procedure established Regulation (EU) No 649/2012, concerning the export and import of dangerous chemicals.

**15.2 – Chemical safety assessment**

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

**16: Other Information:**

Complete text of the H phrases that appear in section 3:

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

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Classification codes:

Resp. Sens. 1 : Respiratory sensitiser, Category 1

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Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Physical hazards On basis of test data

Health hazards Calculation method

Environmental hazards Calculation method

It is advisable to carry out basic training with regard to health and safety at work in order to handle this product correctly.

Abbreviations and acronyms used:

CEN: European Committee for Standardization.

PPE: Personal protection equipment.

Key literature references and sources for data:

<http://eur-lex.europa.eu/homepage.html>

<http://echa.europa.eu/> Regulation

(EU) 2020/878.

Regulation (EC) No 1907/2006.

Regulation (EC) No 1272/2008.

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