

**Section 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product name: TRIZYME

Product code: TRIZ

**1.2. Relevant identified uses of the substance or mixture and uses advised against****1.3. Details of the supplier of the safety data sheet**

Company name: Murphy and Son Ltd  
Murphy & Son Ltd  
Alpine St, Old Basford  
Nottingham  
NG6 0HQ  
United Kingdom

Tel: (+44) 115 978 5494

Email: technical@murphyandson.co.uk

**1.4. Emergency telephone number**

Emergency tel: (+44) 115 978 5494  
(office hours only)

**Section 2: Hazards identification****2.1. Classification of the substance or mixture**

Classification under CLP: STOT SE 3: H335; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315

**Most important adverse effects:** Causes skin irritation. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation.

**2.2. Label elements****Label elements under CLP:**

**Hazard statements:** H315: Causes skin irritation.  
H319: Causes serious eye irritation.  
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335: May cause respiratory irritation.

**Hazard pictograms:** GHS07: Exclamation mark  
GHS08: Health hazard



**Signal words:** Danger

# SAFETY DATA SHEET

TRIZYME

Page: 2

**Precautionary statements:** P261: Avoid breathing vapours.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P285: In case of inadequate ventilation wear respiratory protection.  
P302+352: IF ON SKIN: Wash with plenty of soap and water.  
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P304+341: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P342+311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor.  
P321: Specific treatment (see instructions on this label).  
P501: Dispose of contents/container to comply with all local, regional, national and international regulations.

## 2.3. Other hazards

**PBT:** This product is not identified as a PBT/vPvB substance.

## Section 3: Composition/information on ingredients

### 3.2. Mixtures

#### Hazardous ingredients:

AMYLASE, ALPHA-

EINECS	CAS	PBT / WEL	CLP Classification	Percent
232-565-6	9000-90-2	-	Resp. Sens. 1: H334	10-30%

BETA-GLUCANASE

263-462-4	62213-14-3	-	Resp. Sens. 1: H334	10-30%
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PROTEASE

-	9001-92-7	-	STOT SE 3: H335; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315	1-10%
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PROPAN-2-OL

200-661-7	67-63-0	-	Flam. Liq. 2: H225; Eye Irrit. 2: H319; STOT SE 3: H336	1-10%
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## Section 4: First aid measures

### 4.1. Description of first aid measures

**Skin contact:** Wash immediately with plenty of soap and water. Remove all contaminated clothes and footwear immediately unless stuck to skin. Obtain medical attention if ill effect or irritation develops

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# SAFETY DATA SHEET

TRIZYME

Page: 3

**Eye contact:** Bathe the eye with running water for 15 minutes. Remove contact lenses, if present and easy to do. Obtain medical attention if pain, blinking, tears or redness persist.

**Ingestion:** Larger doses may irritate gastrointestinal tract. Seek medical attention if ill effect develops

**Inhalation:** If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Move to fresh air in case of accidental inhalation of vapours. Obtain medical attention if breathing difficulty and / or other complaints appear. The effect of inhalation may be delayed. May cause allergic respiratory reaction

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

**Skin contact:** There may be mild irritation at the site of contact.

**Eye contact:** There may be irritation and redness.

**Ingestion:** There may be irritation of the throat.

**Inhalation:** There may be a feeling of tightness in the chest with shortness of breath. Onset of symptoms may be delayed by a few hours.

**Delayed / immediate effects:** Delayed effects can be expected after short-term exposure.

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

**Immediate / special treatment:** Eye bathing equipment should be available on the premises.

## Section 5: Fire-fighting measures

### 5.1. Extinguishing media

**Extinguishing media:** Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

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

**Exposure hazards:** In combustion emits toxic fumes.

### 5.3. Advice for fire-fighters

**Advice for fire-fighters:** Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

## Section 6: Accidental release measures

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

**Personal precautions:** Refer to section 8 of SDS for personal protection details. Turn leaking containers leak-side up to prevent the escape of liquid. Mark out the contaminated area with signs and prevent access to unauthorised personnel.

### 6.2. Environmental precautions

**Environmental precautions:** Split preparation should be removed promptly to avoid formation of dust from dried preparation. Shovel or sweep the spilled material in marked, tightly covered containers for proper disposal. Prevent powder contaminating drains and watercourses.

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# SAFETY DATA SHEET

TRIZYME

Page: 4

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

**Clean-up procedures:** Use mechanical handling equipment. Avoid generation and spreading of dust. Transfer to a closable, labelled salvage container for disposal by an appropriate method. Wash the spillage site with large amounts of water.

## 6.4. Reference to other sections

**Reference to other sections:** Refer to section 8 of SDS.

## Section 7: Handling and storage

### 7.1. Precautions for safe handling

**Handling requirements:** Ensure there is sufficient ventilation of the area.

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

**Storage conditions:** Store in cool, well ventilated area. Keep container tightly closed. The floor of the storage room must be impermeable to prevent the escape of liquids.

**Suitable packaging:** Must only be kept in original packaging.

### 7.3. Specific end use(s)

**Specific end use(s):** No data available.

## Section 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Workplace exposure limits:

#### Respirable dust

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	999mg/m <sup>3</sup>	1250mg/m <sup>3</sup>	-	-

#### Hazardous ingredients:

#### PROPAN-2-OL

#### Workplace exposure limits:

#### Respirable dust

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	999 mg/m <sup>3</sup>	1250 mg/m <sup>3</sup>	-	-

### DNEL/PNEC Values

**DNEL / PNEC** No data available.

### 8.2. Exposure controls

**Engineering measures:** Ensure there is exhaust ventilation of the area.

**Respiratory protection:** Particle filter class P3SL (EN143).

**Hand protection:** Protective gloves.

**Eye protection:** Safety glasses. Ensure eye bath is to hand.

**Skin protection:** Protective clothing. Ensure safety shower is to hand.

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# SAFETY DATA SHEET

TRIZYME

Page: 5

## Section 9: Physical and chemical properties

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

**State:** Liquid

**Colour:** Brown

**Odour:** Characteristic odour

**Evaporation rate:** No data available.

**Oxidising:** No data available.

**Solubility in water:** No data available.

**Viscosity:** No data available.

**Boiling point/range°C:** No data available.

**Flammability limits %: lower:** No data available.

**Flash point°C:** No data available.

**Autoflammability°C:** No data available.

**Relative density:** No data available.

**VOC g/l:** No data available.

**Melting point/range°C:** No data available.

**upper:** No data available.

**Part.coeff. n-octanol/water:** No data available.

**Vapour pressure:** No data available.

**pH:** No data available.

### 9.2. Other information

**Other information:** No data available.

## Section 10: Stability and reactivity

### 10.1. Reactivity

**Reactivity:** Stable under recommended transport or storage conditions.

### 10.2. Chemical stability

**Chemical stability:** Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

**Hazardous reactions:** Hazardous reactions will not occur under normal transport or storage conditions.

Decomposition may occur on exposure to conditions or materials listed below.

### 10.4. Conditions to avoid

**Conditions to avoid:** Heat.

### 10.5. Incompatible materials

**Materials to avoid:** Strong oxidising agents. Strong acids.

### 10.6. Hazardous decomposition products

**Haz. decomp. products:** In combustion emits toxic fumes.

## Section 11: Toxicological information

### 11.1. Information on toxicological effects

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# SAFETY DATA SHEET

TRIZYME

Page: 6

## Hazardous ingredients:

### AMYLASE, ALPHA-

ORAL	MUS	LD50	>15	g/kg
ORAL	RAT	LD50	>17500	mg/kg

### PROPAN-2-OL

IVN	RAT	LD50	1088	mg/kg
ORL	MUS	LD50	3600	mg/kg
ORL	RAT	LD50	5045	mg/kg
SCU	MUS	LDLO	6	gm/kg

## Relevant hazards for substance:

Hazard	Route	Basis
Skin corrosion/irritation	DRM	Hazardous: calculated
Serious eye damage/irritation	OPT	Hazardous: calculated
Respiratory/skin sensitisation	INH	Hazardous: calculated
STOT-single exposure	INH	Hazardous: calculated

## Symptoms / routes of exposure

**Skin contact:** There may be mild irritation at the site of contact.

**Eye contact:** There may be irritation and redness.

**Ingestion:** There may be irritation of the throat.

**Inhalation:** There may be a feeling of tightness in the chest with shortness of breath. Onset of symptoms may be delayed by a few hours.

**Delayed / immediate effects:** Delayed effects can be expected after short-term exposure.

## Section 12: Ecological information

### 12.1. Toxicity

**Ecotoxicity values:** No data available.

### 12.2. Persistence and degradability

**Persistence and degradability:** Biodegradable.

### 12.3. Bioaccumulative potential

**Bioaccumulative potential:** No bioaccumulation potential.

### 12.4. Mobility in soil

**Mobility:** No data available.

### 12.5. Results of PBT and vPvB assessment

**PBT identification:** This product is not identified as a PBT/vPvB substance.

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# SAFETY DATA SHEET

TRIZYME

Page: 7

## 12.6. Other adverse effects

## Section 13: Disposal considerations

### 13.1. Waste treatment methods

**Disposal operations:** Transfer to a suitable container and arrange for collection by specialised disposal company.

**NB:** The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

## Section 14: Transport information

**Transport class:** This product does not require a classification for transport.

## Section 15: Regulatory information

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

**Specific regulations:** Not applicable. A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

### 15.2. Chemical Safety Assessment

## Section 16: Other information

### Other information

**Other information:** This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

\* indicates text in the SDS which has changed since the last revision.

**Phrases used in s.2 and s.3:** H225: Highly flammable liquid and vapour.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

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

H335: May cause respiratory irritation.

H336: May cause drowsiness or dizziness.

**Legend to abbreviations:** PNEC = predicted no effect concentration

DNEL = derived no effect level

LD50 = median lethal dose

LC50 = median lethal concentration

LDLO = lethal dose low

EC50 = median effective concentration

IC50 = median inhibitory concentration

dw = dry weight

bw = body weight

cc = closed cup

oc = open cup

[cont...]

## SAFETY DATA SHEET

TRIZYME

Page: 8

MUS = mouse

GPG = guinea pig

RBT = rabbit

HAM = hamster

HMN = human

MAM = mammal

PGN = pigeon

IVN = intravenous

SCU = subcutaneous

SKN = skin

DRM = dermal

OCC = ocular/corneal

OPT = optical

INH = inhalation

PCP = physico-chemical properties

**Legal disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.