



## SAFETY DATA SHEET

NDB3 100TU

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Compilation date: 28/07/2014

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Revision No: 4

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

#### 1.1. Product identifier

**Product name:** NDB3 100TU

**Product code:** NDB3100TU

**Synonyms:** LIQUID PAPAIN  
XTRASE

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

**Use of substance / mixture:** Beverage Processing Aids and Other Usages

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

**Company name:** Murphy and Son Ltd

Alpine Street

Nottingham

Nottinghamshire

NG6 0HQ

United Kingdom

**Tel:** 0115 978 5494

**Email:** [technical@murphyandson.co.uk](mailto: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.

**Signal words:** Danger

**Hazard pictograms:** GHS07: Exclamation mark

GHS08: Health hazard

[cont...]

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**Precautionary statements:** P261: Avoid breathing dust/fumes/gas/mist/vapours/spray.  
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.  
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+313: If eye irritation persists: Get medical advice/attention.  
P304+341: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P342+311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor.

## 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:

PAPAIN

EINECS	CAS	PBT / WEL	CLP Classification	Percent
232-627-2	9001-73-4	-	Eye Irrit. 2: H319; STOT SE 3: H335; Skin Irrit. 2: H315; Resp. Sens. 1: H334	10-30%

## 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

**Eye contact:** Remove contact lenses, if present and easy to do. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

**Ingestion:** Wash out mouth with water. Call a poison center or doctor/physician if you feel unwell.

**Inhalation:** Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor. Persons developing hypersensitivity reactions must receive immediate medical attention.

### 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.

[cont...]

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

**Inhalation:** May cause mucous membrane irritation with cough and rhinitis.

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

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

**Immediate / special treatment:** Treat symptomatically.

## 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. Carbon dioxide. Water spray. Water fog.

### 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:** Do not discharge into drains or rivers. Contain the spillage using bunding.

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

**Clean-up procedures:** Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

### 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:** Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air.

### 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. Keep away from direct sunlight. Store 2 - 8 Degrees Centigrade

[cont...]

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## 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:** No data available.

### DNEL/PNEC Values

**DNEL / PNEC** No data available.

### 8.2. Exposure controls

**Engineering measures:** The floor of the storage room must be impermeable to prevent the escape of liquids.  
Ensure there is exhaust ventilation of the area.

**Respiratory protection:** If dust concentration is above occupational exposure limits then a respiratory filter / face mask to EN 149:2001 FFP1 minimum should be worn.

**Hand protection:** Impermeable gloves.

**Eye protection:** Safety glasses with side-shields.

**Skin protection:** Protective clothing.

## Section 9: Physical and chemical properties

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

**State:** Liquid

**Colour:** Yellow-brown

**Odour:** Pungent

**Evaporation rate:** No data available.

**Oxidising:** No data available.

**Solubility in water:** Miscible in all proportions

**Viscosity:** No data available.

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

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

**Flammability limits %: lower:** Not applicable.

**upper:** Not applicable.

**Flash point°C:** Not applicable.

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

**Autoflammability°C:** Not applicable.

**Vapour pressure:** No data available.

**Relative density:** 1.1-1.3

**pH:** 4-6

**VOC g/l:** Not applicable.

### 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.

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## 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

**Hazardous ingredients:**

**PAPAIN**

ORL	MUS	LD50	12500	mg/kg
ORL	RAT	LD50	>4	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. Harmful

**Inhalation:** May cause mucous membrane irritation with cough and rhinitis.

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

## Section 12: Ecological information

### 12.1. Toxicity

**Ecotoxicity values:** No data available.

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## 12.2. Persistence and degradability

**Persistence and degradability:** Not biodegradable.

## 12.3. Bioaccumulative potential

**Bioaccumulative potential:** Bioaccumulation potential.

## 12.4. Mobility in soil

**Mobility:** Readily absorbed into soil.

## 12.5. Results of PBT and vPvB assessment

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

## 12.6. Other adverse effects

**Other adverse effects:** Toxic to aquatic organisms. Toxic to soil organisms.

## 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:** 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:** 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.

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

DNEL = derived no effect level

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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  
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.