

**ENZYMES**

NDB3100 TU

TECHNICAL DATA SHEET

Description

NDB3100 (papain) is a solution of proteolytic enzymes extracted from the fruit of the papaya tree. It protects the beer against chill and permanent haze and extends shelf life.

Benefits

- Naturally occurring enzyme
- Increases filterability
- Reduces chill and permanent haze formation
- Improves beer shelf life
- Ideal for use in packaged beers

PRODUCT CODE

NDB3100

COMMODITY CODE

35079090

PACKAGING (kg)

5 & 25 kg

STORAGE

Keep in original container.
Keep containers sealed when not in use.

Temperature

Recommended storage temperature is 1°C - 5°C.

Do not allow the product to freeze.

Location

Store in cool conditions away from direct sunlight.

Shelf Life

At the recommended storage conditions, two years from date of manufacture.

Application & Rates of Use

NDB3100 (papain) can be added to the mash, applied in the fermenter, or used during the post-fermentation stage. Adding it between post-fermentation and chilling provides the benefits of improved filterability, reduced chill haze formation, and enhanced beer shelf life. A smaller dose can also be added later in the process, such as in the conditioning tank.

Optimal Conditions:

- **pH Range:** 5–7
- **Temperature:** 50–70°C

Dosage Recommendations:

- **All-Malt Mash:** Add 0.5–0.7 liters per tonne of dry grist
- **With Barley Adjuncts:** Use 5–8 liters per tonne of dry goods
- **Post-Fermentation:** Add 4–6 mL per hectolitre of beer

Guidelines For Use

- Check that the product is within its shelf life before use
- Experiment with additions to determine the minimum effective rates
- Read the Safety Data Sheet prior to use
- Care should be taken to avoid unnecessary skin contact during handling

TECHNICAL SUPPORT

+44 (0) 115 978 5494 | techsupport@murphyandson.co.uk

REGULATORY COMPLIANCE INFORMATION

Refer to the '**Product Specification Sheet**' or contact us on:
+44 (0) 115 978 5494 | compliance@murphyandson.co.uk

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