

SUPERKLEER**1 DESCRIPTION**

The product is an concentrated dry powder auxiliary finings for use with isinglass finings in cask conditioned beers.

- ◆ Dry product to be dissolved into water before use
- ◆ Shipping costs minimised with a powder formulation
- ◆ Provides the extra clarification required for cask beers

2 STORAGE AND SHELF LIFE

- Store in cool conditions, away from direct sunlight
- Keep containers sealed when not in use

- Maximum storage temperature (solution) - 20°C
- Recommended storage temperature (powder and solution) - 10° to 15°C
- Minimum storage temperature (solution) - 1°C
- Do not allow the solution to freeze

- The shelf life of the powder product at the recommended storage temperature is indefinite
- The shelf life of the dissolved product at the recommended storage temperature is 3 months
- A precipitate may form on standing; this does not affect the performance of the product
- The solution may take on an opaque appearance when stored for a long time, again this does not adversely affect its performance although the solution should be discarded if it starts to gel

3 PACKAGING

2.4 kg Pack
(makes 25 litres)

4 USING THE PRODUCT**(a) How to dilute and mix the product**

Before it can be used, the product must be dissolved in water 24 hours before it is required.

- Prepare 25 litres of water at a temperature of between 12° and 15°C
- Add the contents of PACK A and stir until dissolved
- Add the contents of PACK B and stir until dissolved
- Allow to stand at between 12° and 15°C for 24 hours
- Add the contents of PACK C and stir until dissolved
- The Superkleer solution is then ready to use as auxiliary finings

(b) How much of the product to add

Most cask conditioned beers will require an addition of auxiliary finings at rates between ½ pint and 1½ pints per barrel. For the most commonly used containers, these addition rates are shown below:-

SUPERKLEER (solution)	9 gallon (Firkin)		18 gallon (Kilderkin)		36 gallon (Barrel)	
½ pint per barrel	⅛ pint	0.07 litres	¼ pint	0.14 litres	½ pints	0.28 litres
1 pint per barrel	¼ pint	0.14 litres	½ pints	0.28 litres	1 pints	0.57 litres
1½ pints per barrel	½ pint	0.28 litres	1 pints	0.57 litres	1½ pints	0.85 litres

(c) Where to add auxiliary finings

Auxiliary finings can be added at one of several points. See also below '*Using auxiliary finings with isinglass*':-

- **Into the fermentation vessel**

In order to avoid the difficulties of mixing auxiliary and isinglass finings in cask, the auxiliary can be added to the fermentation vessel. The addition should be made at the end of fermentation, just as the vessel goes onto chill. In most case, the residual fermentation and convection currents on cooling are sufficient to mix the product. With larger vessels, it is recommended to recirculate the tank contents if possible or to rouse with CO₂ from the tank bottom.

- **Into the beer main feeding the racking heads**

This method is combined with proportional metering to ensure the correct rate of addition. Typically, the auxiliary is added first and a static mixer should be positioned between the addition point and the isinglass addition point downstream. If the distance to the racking head is short, another static mixer should be used after the isinglass.

- **Into the cask before it is filled**

The appropriate quantity of auxiliary is put into the cask before filling. If the filling rate is fast and turbulent, isinglass can then be added towards the end of the fill or after.

(d) Using auxiliary finings with isinglass

With many cask conditioned beers, the best clarity is achieved by using an isinglass fining product such as **Caskleer**, **Allkleer**, **Tankleer** or **Kompactikleer** in combination with an auxiliary. The auxiliary products enhance the action of the isinglass. Isinglass can be added at one of several points:-

- **Into the beer main feeding the racking heads**

This method is combined with proportional metering to ensure the correct rate of addition. If the distance to the racking head is short, a static mixer should be used.

- **Into the cask as part of the racking process**

Ready-for-use isinglass is metered into the beer as it fills the cask. The turbulence of the filling process ensures good mixing.

- **Into the cask before the cask is filled**

The appropriate quantity of ready-for-use isinglass is put into the cask before filling. Mixing can be poor if the filling rate is slow and further agitation is then recommended.

- **Into the cask after it has been filled**

The least reliable method as mixing is then totally dependent on agitation or rolling of the cask after filling. With full casks and little headspace, effective mixing of the isinglass takes much more agitation than is generally realised.

5 GUIDELINES FOR USE

DO

- Check that the product is within its shelf life before use
- Ensure that auxiliary finings are well mixed to the beer before adding isinglass
- Carry out optimisation trials to determine the correct rate of use

DO NOT

- Mix auxiliary and isinglass finings before they are added to beer
- Add isinglass finings before auxiliary finings - it rarely works
- Add too much auxiliary finings. Tank bottoms will be very loose with high beer losses
- Allow the product to have prolonged contact with mild steel, galvanised steel, stainless steel and aluminium

6 TECHNICAL SUPPORT

For Health & Safety information on this product, please see the Materials Safety Data Sheet (MSDS)

For support and advice on the use of this product, please call or e-mail our Technical Administrator:-

Telephone:- + 44 (0)115 978 5494

E-Mail:- laboratory@murphyandson.co.uk

7 SPECIFICATION

Composition	A stabilised acidic solution of an inorganic silicate sol	
Appearance	White crystalline powders	
Odour	Free from odour	
<u>Maximum Limits of Impurities</u>		
As (ppm)		3
Pb (ppm)		10
Cu (ppm)		50
Zn (ppm)		25
Cu + Zn (ppm)		50

This product is classed as acceptable for use in food by the MAFF document 'Report on the Review of Additives and Processing Aids used in the Production of Beer' (FAC/REP/26).

8 REFERENCE

Product	Superkleer
Authorised by	C.J. Fleming
Issue No.	1.0

Product Code	SK
Formulation	BM02
Date	04/02/04