



Kerry Food Ingredients (Cork) Limited
Kilnagleary,
Carrigaline,
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PRODUCT SPECIFICATION

PRODUCT DETAILS

Product Name BIOFINE CLEAR A3 (250 kgs)
Kerry Code 20104519
Legacy 5B06808

Product Description A purified colloidal solution of silicic acid (SiO₂) in water.

INGREDIENT LISTING

Silicon dioxide (E551)

USAGE / APPLICATION INFORMATION

Rapid sedimentation of yeast and other haze forming particles in beer. The recommended dose rate is usually in the range of 200 - 2,000 ppm. It is advisable to perform a fining trial to determine optimum dose rate. Biofine Clear A3 can be dosed to the beer without pre-diluting direct from the delivery vessel. However, if an existing dosing system is in place for Isinglass finings, Biofine Clear A3 can be diluted 1 in 5 or 1 in 10 and dosed as a dilute solution using the same equipment. Cold brewery water (5 -10°C) should be used when preparing the dilute solution. Sufficient solution is made up for 24 hours production requirements. It is advised to use pre-diluted material rapidly to avoid the risk of bacterial contamination, particularly in warm climates. In large breweries, especially those where beer transfers are occurring on a 24 hour basis, more than one dosing tank may be needed. When deciding on pumps etc for dosing, it should be noted that the viscosity Biofine Clear A3 concentrate is in the region of 5 cps and dilute solution viscosities are similar to water.

The method used for dosing is critical. In order to achieve maximum efficiency the solution Biofine Clear A3 should be dosed into the beer stream during transfer from the Fermentation Tank to the Storage after chiller. The solution should be dosed over the entire run. A variable speed, positive displacement pump should be used. This will cater for different dosing requirements. The actual dosage rate should be determined in the laboratory as per the Biofine Clear A3 Optimisation Method. This rate should be determined for each type of beer and when a significant change is made to the process such as changes in yeast strain and new malt crops.

KEY PARAMETERS

| Test | Min | Max | Units |
|------|-----|------|-------|
| pH | 9 | 11.5 | PH |

MICROBIOLOGICAL DATA

| | |
|--------------------|--------------|
| Total Viable Count | <50000 cfu/g |
| Enterobacteriaceae | <30 cfu/g |
| Yeasts & Moulds | <100 cfu/g |
| E. coli | Absent/25 g |
| Salmonella | Absent/25 g |

Kerry Code 20104519
Spec Version: 001
Spec Status: Commercialised Kerry Approved

Issue date: 02/11/2017
Revision Date: 13/12/2017



| ALLERGEN DATA | |
|--|---------------------------|
| Allergen | Present Yes/No |
| Beef and products thereof | No |
| Carrot and products thereof | No |
| Celery and products thereof | No |
| Cereals containing gluten(1) | No |
| Chicken meat and products thereof | No |
| Cocoa and products thereof | No |
| Coriander and products thereof | No |
| Corn/maize and products thereof | No |
| Crustaceans and products thereof | No |
| Egg and products thereof | No |
| Fish and products thereof (3) | No |
| Glutamate and products thereof | No |
| Milk and products thereof (including lactose) | No |
| Mustard and products thereof | No |
| Nuts (other than peanuts) and products thereof(2) | No |
| Molluscs and products thereof | No |
| Legumes and products thereof | No |
| Lupin and products thereof | No |
| Peanuts and products thereof | No |
| Pork and products thereof | No |
| Sesame Seeds and products thereof | No |
| Soybeans and products thereof | No |
| Sulphur Dioxide/Sulphites > 10ppm | No |
| Wheat and products thereof(4) | No |
| Definitions conform with EU Regulation (EU) No 1169/2011 as amended, US Food Allergen Labelling and Consumer Protection Act (FALCP) and ALBA-list. (1) i.e. wheat, rye, barley, oats, spelt, kamut or their hybridised strain (2) Nut allergens: Almond <i>Prunus dulcis</i> (Rosaceae) Beech nut <i>Fagus</i> spp. (Fagaceae), Brazil nut <i>Bertholletia excelsa</i> (Lecythidaceae), Butternut <i>Juglans cinerea</i> (Juglandaceae), Cashew <i>Anacardium occidentale</i> (Anacardiaceae), Chestnut (Chinese, American, European, Seguin) <i>Castanea</i> spp.(Fagaceae), Chinquapin <i>Castanea pumila</i> (Fagaceae), Coconut <i>Cocos nucifera</i> L. (Arecaceae (alt. Palmae)), Fibert/Hazelnut <i>Corylus</i> spp. (Betulaceae), Ginko nut <i>Ginkgo biloba</i> L.(Ginkgoaceae), Hickory nut <i>Carya</i> spp.(Juglandaceae), Lichee nut <i>Litchi chinensis</i> Sonn. (Sapindaceae), Macadamia nut/Bush nut <i>Macadamia</i> spp.(Proteaceae), Pecan <i>Carya illinoiesis</i> (Juglandaceae), Pine nut/Pinon nut <i>Pinus</i> spp. (Pineaceae), Pili nut <i>Canarium ovatum</i> (Burseraceae), Pistachio <i>Pistacia vera</i> L. (Anacardiaceae), Sheanut <i>Vitellaria paradoxa</i> (Sapotaceae), Walnut (English, Persian, Black, Japanase, California), Heartnut, <i>Juglans</i> spp.(Juglandaceae) (3) Isinglass is used as a fining agent in beer and wine. It is exempt from declaration, as defined in Annex II of Regulation (EU) No 1169/2011 as amended. (4) i.e. common wheat, durum wheat, club wheat, spelt, semolina, Einkorn,emmer, kamut and triticale | |



| SUITABILITY DATA | Yes = Suitable, No = Unsuitable | Comment/Certification Status |
|-------------------------|--|-------------------------------------|
| Vegetarian (Ova-lacto) | No | |
| Vegan | No | |
| | Certified / Not Certified | Comment |
| Halal | Not Certified | Suitable |
| Kosher | Not Certified | Suitable |

| NUTRITION INFORMATION | | |
|--|----------------------|-------------|
| Nutrient | Typical Value | Unit |
| Energy | 0 | kJ/100 g |
| Energy | 0 | kCal/100 g |
| Total Carbohydrates | 0 | g/100 g |
| Total Fat | 0 | g/100 g |
| Protein | 0 | g/100 g |
| Moisture | 75 | g/100 g |
| Ash | 25 | g/100 g |
| Data Source | | |
| Values quoted are typical and should be used for guidance purposes only. | | |

| PROCESS SUMMARY |
|---|
| Kerry has implemented and maintains food hygiene standards and HACCP Plans in line with the requirements of food legislation. The Carrigaline, Co Cork site is certified against the requirements of FSSC22000 and ISO14001. |

| RECOMMENDED SHELF-LIFE & STORAGE | |
|---|---|
| Transport & Storage Conditions: | Store in cool, dry conditions above 5°C and do not allow the product to freeze during transport or storage. |
| Shelf life (original package): | 365 days (12 months) |

| PACKAGING | |
|------------------|-------------|
| Pack Size (Net) | Kg |
| Pack Type Inner | Polydrum |
| Pack Type Outer | Fibre Drums |

| HEALTH & SAFETY DATA |
|---|
| As per Safety Data Sheet (SDS). SDS available on request. |



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LEGISLATION & WARRANTY STATEMENT

We warrant that the product is manufactured in accordance with the specification and is manufactured and packaged in compliance with all EU food and food safety legislation applicable to products of this nature at time of manufacture and sale by us.

We make no further warranty in relation to the product or as to the suitability of the product for any specific purpose or application. The user should satisfy itself as to the suitability of the product as an ingredient in a specific application or for any use whatsoever. The information supplied in this specification sheet is in accordance with our product formulation, is also based on manufacturing plant data and on data provided by our raw material suppliers and is accurate to the best of our knowledge at the date of issue of this specification. Local national regulations should also be consulted by user in relation any specific application and in relation to appropriate ingredient declarations as legislation may vary from country to country.

CONFIDENTIALITY

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