

Kerry Food Ingredients (Cork) Limited

Kilnagleary, Carrigaline, Cork Ireland

Phone: +353214376400 Fax: +353214376480

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 A 3 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
pН	9	11.5	PH
SiO2	24.2	25.2	%

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

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Nο

No

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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

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

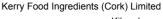
Sulphur Dioxide/Sulphites > 10ppm

Wheat and products thereof(4)

- (2) Nut allergens: Almond Prunus dulcis (Rosaceae) Beech nut Fagus spp. (Fagaceae), Brazil nut Bertholletia excelsa (Lecythidaceae), Butternut Juglans cinerea (Juglandaceae), Cashew Anacardium occidentale (Anacardiaceae), Chesnut (Chinese, American, European, Seguin) Castanea spp. (Fagaceae), Chinquapin Castanea pumila (Fagaceae), Coconut Cosos nucifera L. (Arecaceae (alt. Palmae)), Fibert/Hazelnut Corylus spp. (Betulaceae), Ginko nut Ginkgo biloba L.(Ginkgoaceae), Hickory nut Carya spp.(Juglandaceae), Lichee nut Litchi chinensis Sonn. (Sapindaceae), Macadamia nut/Bush nut Macadamia spp.(Proteaceae), Pecan Carya illinoiesis (Juglandaceae), Pine nut/Pinon nut Pinus spp. (Pineaceae), Pili nut Canarium ovatum (Burseraceae), Pistachio Pistacia vera L. (Anacardiaceae), Sheanut Vitellaria paradoxa (Sapotaceae), Walnut (English, Persian, Black, Japanase, California), Heartnut, Juglans 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

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SUITABILITY DATA

Yes = Suitable, Comment/Certification Status

No = Unsuitable

Vegetarian (Ova-lacto) Yes Vegan Yes

Certified / Not Certified Comment

Halal Certified Kosher Certified

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) 250 Kg
Pack Type Inner Polydrum

Pack Type Outer

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

This document and the information contained within it remains the property of Kerry Group and must not be disclosed to any third party without prior written permission of the company.

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