

PRODUCT TECHNICAL DOSSIER

CURCUMIN C3 Complex[®]

Product Code:

P03494

Raw Material Full Name:

Curcumin C3 Complex[®]

Raw Material Full Botanical/Chemical/Latin/Trade Name/Synonyms:

Turmeric / Curcuma Longa

This material is Food Grade

Yes

Vegan / Vegetarian Status

Vegan ✓

Vegetarian ✓

Limit/Range/Specification:

Curcuminoids: not less than 95% and not more than 102%

Curcumin: not less than 75% and not more than 81%

Ratio of Material:

Final extract ratio 64:1-66:1

CAS Number:

84775-52-0

EC/EINECS Number:

283-882-1

Solubility in Water:

Insoluble

Solubility in Alcohol:

Soluble (1g in 30ml)



Particle Size:

20 Mesh

Percentage passed through:

Min 95%

Bulk Density:

0.52 g/ml

Loss on Drying:

Max 2%

Residue on Ignition:

Max 1%

Country of Origin:

India

Country of Origin of the Manufacture:

India

Base Source/Start Material:

Curcuma Longa rhizomes and roots

Origin of Product – Synthetic, Plant, Mineral, Animal, Fish or Fermented:

Plant

Solvents used:

100% Ethyl acetate

Residual solvent:

Complies to EU Directive 2009/32/EC

Compound Ingredients Origin, Function and Percentages:

Tapioca starch 1-2%

Shelf Life from Date of Manufacture:

5 Years

Storage Conditions:

To be stored at room temperature

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Appearance (Fine/Crystals/Crystalline/Hygroscopic):

Granular powder

Colour:

Orange yellow (**)

Flavour/Taste:

Characteristic

Odour:

Characteristic

Do any of the parameters change in different seasons?

(**) This natural product is likely to have minor colour variations due to the geographical and seasonal change.

Microbiological Test

Total Viable Count:

Max 5000 cfu/g

Yeast & Moulds:

Max 100 cfu/g

E.Coli:

Absent/10g

Salmonella:

Absent/10g

Heavy Metals

Lead (Pb):

Max 2ppm

Cadmium (Cd):

Max 1ppm

Mercury (Hg):

Max 0.1ppm

Arsenic (As):

Max 1ppm

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There are no nuts in this recipe, however we cannot guarantee that the raw materials entering the site are nut free.

Please note that surveillance testing may mean that not all the parameters stated on this specification are tested for every batch.



ALLERGENS	Product Free From YES/NO	Listed Item on Site at Manufacturer YES/NO	If YES, Please Comment
Free from Peanuts and Peanut Derivatives (There are no nuts in this recipe, however CCL cannot guarantee that the raw materials entering the site are nut free.)	YES	NO	
Free from other Nut and Nut Derivatives <i>Almond (Amygdalus communis L.), Hazelnut (Corylus avellana), Walnut (Juglans regia), Cashew (Anacardium occidentale), Pecan nut (Carya illinoensis (Wangenh.) K. Koch), Brazil nut (Bertholletia excelsa), Pistachio nut (Pistacia vera), Macadamia nut and Queensland nut (Macadamia ternifolia)</i> (There are no nuts in this recipe, however CCL cannot guarantee that the raw materials entering the site are nut free.)	YES	NO	
Free from Sesame Seeds and Sesame Seed Derivatives	YES	NO	
Free from other Seeds and Seed Derivatives (Poppy Seeds, Cotton Seeds, Sunflower Seeds)	YES	NO	
Free from Milk and Milk Derivatives (including lactose)	YES	NO	
Free from Egg and Egg Derivatives	YES	NO	
Free from Cereals and Derivatives containing OR POTENTIALLY CONTAMINATED WITH Gluten (<i>wheat, wheatgrass, faro, freekeh, spelt, kamut, rye, oats, barley, barley grass</i>)	YES	NO	
Free from Soya and Soya Derivatives	YES	NO	
Free from Lupin and Lupin Derivatives	YES	NO	
Free from Mustard and Mustard Derivatives	YES	NO	
Free from Celery or Celery Derivatives (including Celeriac)	YES	NO	
Free from Fish and Fish Derivatives	YES	NO	
Free from Molluscs and their Derivatives	YES	NO	
Free from Crustaceans and their Derivatives	YES	NO	
Free from Sulphur Dioxide and Sulphites (E220, E228) at levels > 10mg/kg or 10mg/litre	YES	NO	



ADDITIVES / CONTAMINANTS / DIETARY REQUIREMENTS	Product Free From YES/NO	Listed Item on Site at Manufacturer YES/NO	If YES, Please Comment
Free from Additives	YES	NO	
Free from Antioxidants	YES	NO	
Free from Ethylene Oxide	YES	NO	
Free from Gelatine	YES	NO	
Free from Flavourings (Artificial / Nature Identical / Natural / Smoked)	YES	NO	
Free from Maize / Corn and any Derivatives	YES	NO	
Free from Legumes / Pulses	YES	NO	
Free from Rice and Rice Derivatives	YES	NO	
Free from Added Salt	YES	NO	
Free from Added Sugar / artificial or natural sweeteners	YES	NO	
Free from Aspartame	YES	NO	
Free from BHA / BHT (E320 / E321)	YES	NO	
Free from Caffeine	YES	NO	
Free from Colours (Artificial / Nature Identical / Natural / Smoked)	YES	NO	
Free from Dextrose	YES	NO	
Free from Dioxins	YES	NO	
Free from MSG (Added and Naturally Occurring E621) or Glutamates (E620 to E625)	YES	NO	
Free from Nucleotides (E627, E630, E631, E635)	YES	NO	
Free from Polyols (sugar alcohols)	YES	NO	
Free from Benzoates (E210 / E219)	YES	NO	
Free from Sorbic Acid (E200, E203)	YES	NO	
Free from any other Preservatives	YES	NO	
Free from Ethanol	YES	NO	
Free from Honey	YES	NO	
Free from Lactose	YES	NO	
Free from Yeast and Yeast Derivatives	YES	NO	
Free from All Animal Products (Beef, Pork, Poultry or other) and Derivatives (which may include growth/yield hormones, antibiotics etc.)	YES	NO	
Free from Bovine Products or Derivatives (which may include growth/yield hormones, antibiotics etc.)	YES	NO	



NUTRITIONAL DATA

Test	Calculated Value per 100gm
Energy KJ / Kcal	396.17 Kcal
Fat	0.17 g
- Of which saturates	-
Carbohydrate	98.66 g
- Of which sugars	-
Fibre	-
Protein	-
Sodium	842.65 ppm



PRODUCTION FLOW CHART

Dried Turmeric rhizome powder

↓ Extract with Ethyl acetate at 60-65°C
Filter

Ethyl acetate extract

↓ Concentrate at 50-55°C to 1/4th volume
Cool and filter

Turmeric extract

↓ Dry under reduced pressure at 60-65°C
Mill, sift and pack

Final product



CONFIRMATION OF BSE/TSE STATUS

This is to certify that this product complies with all relevant current UK and EU Legislative requirements in regard to Transmissible Spongiform Encephalopathies (TSE) and Bovine Spongiform Encephalopathy (BSE) for human food, and so is free of TSE/BSE.

This is also to certify that, during the course of their manufacture, the above-mentioned product did not come into contact with any materials, which could be derived from TSE/BSE risk materials.

CONFIRMATION OF GM STATUS

This is to certify that this product is not manufactured from GM raw materials and is therefore not subject to labelling under regulations 1829/2003/EC and 1830/2003/EC.

CONFIRMATION OF NON IRRADIATION STATUS

This is to certify that this product, whole or in part, has not been subjected to Ionising Radiation as per European Directives 1999/3/EC.

CONFIRMATION OF NANDROLONE STATUS

This is to certify that this product, whole or in part, has not come into contact with Nandrolone or any of its precursors in any way.

CONFIRMATION OF IOC PRODUCT STATUS

This is to certify that this product, whole or in part, has not come into contact with any product/s, which is banned by the IOC (International Olympics Committee) and or WADA.

CONFIRMATION OF ANIMAL TESTING STATUS

This is to certify that all the products sold by Cambridge Commodities have not been tested on animals in any part of its manufacture in accordance with regulation 86/609/EEC.

CONFIRMATION OF PESTICIDES STATUS

This is to certify that the above-mentioned product complies with the regulation (EC) No.396/2005 of 23rd February 2005 and commission Regulation (EU) No. 559/2011 of 7th June 2011 amending annexes II and III of the above Regulation.

CONFIRMATION OF NANOPARTICLE STATUS

This is to certify that unless otherwise stated, the above-mentioned product is free of nanoparticles. Commission Recommendation 2011/696/EU, defines as follows: "'Nanomaterial' means a natural, incidental or manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50 % or more of the particles in the number size distribution, one or more external dimensions is in the size range 1 nm - 100 nm".



MATERIAL SAFETY DATA SHEET**1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION**

Product name: Curcumin C3 Complex[®]
Product code: P03494
Botanical Name: Curcuma longa
Supplier: Cambridge Commodities Limited
Lancaster Way, Ely, Cambridgeshire, CB6 3NX
Tel: 01353 667258
Email: qa@c-c-l.com

Relevant identified uses of the substance or mixture and uses advised against

Identified Use Nutraceutical – Antioxidant, Anti-Inflammatory.
Recommended Dose Nutraceutical - Orally: 250 to 500 mg three times a day

2. HAZARDS IDENTIFICATION

This substance is not classified as dangerous according to Directive 67/548/EEC

2.1 Classification of the substance or mixture

Classification EC 1272/2008 : Non-Hazardous according to the criteria of the dangerous substances regulations.
Physical & Chemical Hazards: Not classified
Human Health : Not classified
Environment : Not classified

2.2 Label elements

EC No. : 283-882-1
Contains : Curcuminoids
Label In Accordance With
EC No. 1272/2008 : Not classified

2.3 Other hazards : None under normal conditions.



3. COMPOSITION/ INFORMATION ON INGREDIENTS

<u>Substance name</u>	<u>Standardization</u>	<u>Value(s)</u>	<u>CAS No.</u>	<u>EC No.</u>	<u>Impurities & Stabilizing Additives</u>	<u>REACH</u>	<u>Certificate</u>
Curcumin C ³ complex [®] (Curcuma longa extract)	Total Curcuminoids Bisdemethoxycurcumin Demethoxycurcumin Curcumin	95.0% to 102.0% 2.2% to 6.5% 15.0% to 19.0% 75.0% to 81.0%	84775-52-0	283-882-1	Not Present	-	Non-Toxic, Non-Hazardous

Classification (EC1272/2008) : Not classified
Classification (67/548/EEC) : Not classified

Other information

This product is considered to be Non-Toxic and Non-Hazardous.

The full text for all R-Phrases & Hazard Statements is displayed in Section 16

4. FIRST AID MEASURES

4.1 Description of first aid measures

- Inhalation : Move the exposed person to fresh air at once. Get medical attention if discomfort continues.
- Ingestion : Rinse mouth thoroughly. Never give liquid to an unconscious person. Get medical attention if any discomfort continues.
- Skin Contact : Remove contaminated clothing. Wash skin thoroughly with soap & water. Get medical attention promptly if any symptoms occur after washing.
- Eye Contact : Important, immediately rinse with water for at least 15 minutes. Hold eyelids apart. Get medical attention if any discomfort continues.

4.2 Most important symptoms and effects, both acute and delayed

- General Information : The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
This material may produce an allergic reaction.

4.3 Indication of any immediate medical attention and special treatment needed: None



SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing media : Water spray, Dry powder or Carbon dioxide.
Unsuitable Extinguishing Media : Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Special hazards arising from the substance or mixture

Hazardous Combustion Products.

Fire or High Temperatures Create : Carbon dioxide (CO₂) & Carbon monoxide (CO).
Special Hazards : Risk of dust explosion.

5.3 Advice for fire-fighters

Special Fire Fighting Procedures : Water spray should be used to cool containers.
Protective equipment for fire fighters.
Self contained breathing apparatus and full protective clothing must be worn in case of fire.

5.4 Further Information : No data available.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate the area. Remove sources of ignition. Ensure suitable personal protection (Including respiratory protection) during removal of spillages in a confined area.

6.2 Environmental precautions : Avoid discharge into drains, water courses or on to the ground.

6.3 Methods and material for containment and cleaning up

Ventilate well. Avoid dust formation. Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into closed container. Wash contaminated area with water & detergent.

6.4 Reference to other sections : For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Provide good ventilation. Avoid handling which leads to dust formation. Avoid inhalation of dust and contact with skin and eyes. Do not eat, drink or smoke when using this product. Wash hands after handling. Wash contaminated clothing before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Store the material in tightly closed original container. Store this container in a cool, dry and well ventilated place. Protect against direct sunlight. Avoid heat, flames & other sources of ignition. Avoid contact with strong oxidisers.



7.3 Specific end use(s) : No data available.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Ingredient comments.

No exposure limits noted for this ingredient(s).

8.2 Exposure controls

Protective Equipment:

- Gloves
- Safety glasses
- Mask
- Protective clothing

Process conditions provide eye wash station. Engineering measures provide adequate ventilation.

Respiratory equipment : In case of inadequate ventilation use suitable respiratory equipment with particle filter, type P1.

Hand protection : Wear protective gloves.

Eye protection : Wear approved safety goggles.

Other protection : Wear suitable protective clothing.

Hygiene measures : When using does not eat, drink or smoke. Wash hands after handling.
Wash contaminated clothing before reuse.

Environmental exposure controls : Avoid discharge into drains, water courses or on to the ground.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance : Orange yellow powder.

Color : Orange yellow.

Odor : Characteristic

Solubility : Soluble in Acetone, Glacial acetic acid, Insoluble in water

Melting Point : 172- 178°C

Flash Point : No information available.

Partition Coefficient n-Octanol /Water : No information available.

9.2 Other information:

Density (Tapped) : Between 0.50g/ml and 0.90g/ml

Loss on Drying : Not more than 2.0%w/w (Dried at 105°C).

pH (1% w/v suspension in water) : No information available

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Acid insoluble substances : No information available

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity : No specific reactivity hazards associated with this product.
 10.2 Chemical stability : Stable under the prescribed storage conditions.
 10.3 Possibility of hazardous reactions: None under normal conditions.
 Hazardous Polymerization : Will not occur.
 10.4 Conditions to avoid : Protect from moisture & direct sunlight.
 Avoid heat, flames & other sources of ignition.
 10.5 Incompatible materials (Material to avoid): Strong oxidising agents.
 10.6 Hazardous Decomposition Products: Fire or high temperature create Carbon monoxide(CO) and Carbon dioxide(CO₂).

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity (Oral LD50) : 2000 mg/kg of body weight.
 Acute Toxicity (Dermal LD50) : No information available
 Acute Toxicity (Inhalation LC50) : No information available.
 Respiratory Sensitisation : No information available.
 Skin Sensitisation : No information available.
 General Information : No information available.
 Skin Corrosion/Irritation : No information available
 Teratogenicity & Genotoxicity : No information available

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity:

Eco toxicity : There are no data on the Eco toxicity of this product.
 Acute Toxicity (Fish) : No data available.
 Acute Toxicity (Aquatic Invertebrates) : No information available.
 Acute Toxicity (Aquatic Plants) : No information available.

12.2 Persistence & degradability : There are no data on the degradability of this product.

12.3 Bioaccumulative potential : No data available on bioaccumulation.
 Partition Coefficient : Not available.

12.4 Mobility in soil : Not available.

12.5 Results of PBT and PVB assessment: No information available.

12.6 Other adverse effects : No data available.

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SECTION 13. DISPOSAL CONSIDERATIONS

General Information : Waste is classified as hazardous waste. Dispose the material into licensed waste disposal site, in accordance with the Local Waste Disposal Authority.
13.1 Waste treatment methods : Dispose of waste & residues in accordance with local authority requirements

SECTION 14. TRANSPORT INFORMATION

General Information : The product is not covered by International Regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).
14.1 UN No : Not applicable.
14.2 UN proper shipping name : Not dangerous goods.
14.3 Transport hazard class(es) : Material is Non-Hazardous. Transport warning sign is not required.
14.4 Packing group : Not applicable.
14.5 Environmental hazards : Not recorded.
Marine Pollutant : No.
14.6 Special precaution for user : No data available.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

EU Legislation:

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation & Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/ EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labeling & packaging of substances & mixtures, amending and repealing Directives 67/548/EEC & 1999/45/EC, and amending Regulation (EC) No. 1907/2006 with amendments.

15.2 Chemical Safety Assessment : No chemical safety assessment has been carried out.



SECTION 16. OTHER INFORMATION

This is natural product, extracted from Curcuma longa roots. This product belongs to class of Non-Hazardous substances or mixture according to regulations (EC) number 1272/2008.

National Fire Protection Association (NFPA) Rating:

Health : 2
 Flammability : 1
 Reactivity : 0

This advice is given by Cambridge Commodities Ltd who accept no legal liability for it. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties. Individuals working with chemicals should consider all chemicals to be potentially hazardous even if their individual hazards may be uncharacterised or unknown.

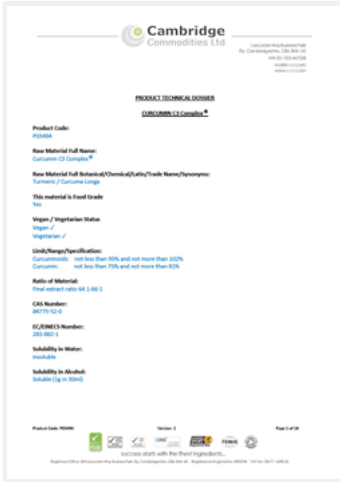
We confirm that the information above is sourced from the original manufacturers/suppliers Material Safety Data Sheet.

Change History

Version	Change	Customer Notification required Yes / No
1	First Issue	N/A
2	Product name has been changed from Curcumin C3 to Curcumin C3 Complex [®] The format has been updated	No

Document Approval

Originator Job Title	QC Technician	Approver Job Title	R&D Nutritionist
<i>Casey Chung</i> Casey Chung (Apr 29 2016)		<i>Emma Cattell</i>	











P03494 - Curcumin C3 Complex (R) - Technical Dossier

Adobe Document Cloud Document History

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