

PRODUCT TECHNICAL DOSSIER

D-GLUCOSAMINE HCL DC 95

Product Code:		

Raw Material Full Name:

Glucosamine HCl 95% DC PVP K30

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

2-Amino-2-deoxy-β-D-Glucan-Hydrochloride

This material is Food Grade:

Yes

P07160

Vegan/ Vegetarian suitable:

No

Limit/Range/Specification:

>95%

Identification method:

IR spectrum

CAS Number:

66-84-2

EC/EINECS Number

200-638-1

Molecular Formula for the raw material:

C₆H₁₃NO₅.HCl

Average Molecular weight:

215.64

Product Code: P02076 Version: 1 Page 1 of 14

















Molecular structure:

Solubility in Water:

100% Soluble

Solubility in Alcohol:

Insoluble

Particle Size:

16 Mesh

Percentage passed through:

100%

Bulk Density:

Min 0.6g/ml

Loss on Drying:

Max 2.5%

Residue on Ignition:

Max 1%

Chloride:

15.4 - 16%

рН:

3.0 - 5.0

Residual solvent:

<5000ppm

Country of Origin:

China

Product Code: P07160 Version: 3 Page 2 of 14

















Country	of	Origin	οf	the	Manu	facture:
Country	UI	Oligili	vı	uic	ivialiu	iactui e.

China

Base Source/Start Material:

Shrimp or Crab Shell

Compound Ingredients:

Max 5% PVP K30

Shelf Life from Date of Manufacture:

2 Years

Storage Conditions:

This material is to be stored in a tightly sealed bag/container and to be kept in a cool place away from moisture and direct sunlight

Appearance:

Granular Powder

Colour:

White to off white

Flavour/Taste:

Characteristic

Texture:

Granular

Odour:

Characteristic

Microbiological Test

Total Viable Count:

Max 1,000cfu/g

Yeast & Moulds:

Max 100cfu/g

E.Coli:

Negative

Product Code: P07160 Version: 3 Page 3 of 14

















Negative
Staphylococcus aureus: Negative
Heavy Metals:
Total Heavy Metals: Max 10ppm
Lead (Pb): Max 3ppm
Cadmium (Cd): Max 1ppm
Mercury (Hg): Max 0.1ppm
Arsenic (As): Max 1ppm
Pharmacopeia Standard Used: USP French Arrêté 26 September 2016 list of substances authorized in food supplements.

Product Code: P07160 Version: 3 Page 4 of 14

There are no nuts in this recipe and are no nuts on site, however we cannot guarantee that the raw materials



entering the site are nut free.

Salmonella:















ALLERGENS	Product Free From YES/NO	Listed Item on Site at Manufacturer YES/NO	Where applicable, is there risk of cross- contamination? YES/NO or N/A
Free from Peanuts and Peanut Derivatives (including possible cross contamination)	YES	NO	
Free from other Nut and Nut Derivatives Almond (Amygdalus communis L.), Hazelnut (Corylus avellana), Walnut (Juglans regia), Cashew (Anacardium occidentale), Pecan nut (Carya illinoiesis (Wangenh.) K. Koch), Brazil nut (Bertholletia excelsa), Pistachio nut (Pistacia vera), Macadamia nut and Queensland nut (Macadamia ternifolia)	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 (wheat, wheatgrass, faro, freekeh, spelt, kamut, rye, oats, barley, barley grass)	YES	NO	
Free from Soya and Soya Derivatives	YES	NO	
Free from Lupin and Lupin Derivatives	YES	NO	<u> </u>
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	NO	YES	SHRIMP OR CRAB SHELL
Free from Sulphur Dioxide and Sulphites (E220, E228) at levels > 10mg/kg or 10mg/litre	YES	NO	

Product Code: P07160 Version: 3 Page 5 of 14

















ADDITIVES / CONTAMINANTS / DIETARY REQUIREMENTS	Product Free From YES/NO	Listed Item on Site at Manufacturer YES/NO	Where applicable, is there risk of cross- contamination? YES/NO or N/A
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	YES	Used in production process
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	VEC	NO	
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	

Product Code: P07160 Version: 3 Page 6 of 14

















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".

Product Code: P07160 Version: 3 Page 7 of 14

















PRODUCT FLOW CHART

Glucosamine HCl Acceptance and testing of chitin biomass according to acceptance criteria Weighing \downarrow Hydrolysis of chitin with HCl (reactor) Cooling Transfer to crystallization tank Crystallization Centrifugation to harvest crude product Dissolution in water and transfer to new tank Decolonization with activated charcoal Filtration of purified, solubilized product Concentration and crystallization under vacuum Centrifugation to harvest crystals Washing with EtOH centrifugation Dry at 90°C to LOD Max 2% Milling and sieving Packing of Glucosamine Hydrochloride crystals Granulating with PVP K30 Finished product

Product Code: P07160 Version: 3 Page 8 of 14

















MATERIAL SAFETY DATA SHEET

Section 1 Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name: D-GLUCOSAMINE HCL DC 95

Product Code: P07160

1.2 Identified uses Used for heath, food and pharmaceutical company

1.3 Supplier details: Cambridge Commodities Limited

78 Lancaster Way, Ely, Cambridgeshire, CB6 3NW.

1.4 Supplier details: Emergency phone number

+44 (0) 7483104766

Section 2 Hazards Identification

2.1 Classification of the substance

The substance is classified as following according to 67/548/EEC and regulation 1272/2008 EC:

1272/2008 EC Hazard classes N/A

67/548/EEC Hazard characteristics N/A

For full test or R-phrases see section 16.

2.2 Label elements

Hazard pictograms: Not used Signal words: No signal word used

Hazard statement: N/A

Precautionary statement: N/A

Section 3 Composition/Information on Ingredients

Components% in ProductCAS NumberFormulaEINECS NumberD-glucosamine HCl9566-84-2C6H13NO5.HCl200-638-1PVP5N/AN/AN/A

Section 4 Emergency and First Aid Measures

4.1 Description of first aid measure:

In all cases of doubt, or when symptoms persist, seek medical attention.

Product Code: P07160 Version: 3 Page 9 of 14

















4.1.1 In case of Inhalation:

Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do not use mouth to mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and suitable mechanical device such as a bag and a mask.

4.1.2 In case of Skin contact:

Flush skin with plenty of water. Wash clothing before reuse.

4.1.3. In case of Eye contact:

Immediately flush eyes with plenty of water for at least 15 minutes. Occasionally lifting the upper and lower eyelids. Get medical attention if infraction occurs.

4.1.4. In case of Ingestion: Flush mouth with water

4.2 Most important symptoms and effects

The product is not classified as harmful to human health effect.

4.3 Indication of any immediate medical attention and special treatment needed.

If skin irritation or rash occurs, get medical advice/attention.

Section 5 Fire-fighting measures

5.1 Extinguishing Media:

Water spray, dry chemical, carbon dioxide, or foam as appropriate for surrounding fire and materials

5.2 Special Hazards

This material is assumed to be combustible. As with all dry powders, it is advisable to ground mechanical equipment in contact with dry material to dissipate the potential build-up of static electricity

5.3 Fire Fighting Procedures

Wear self-contained breathing apparatus (positive pressure if available) and full protective clothing.

Section 6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel: Remove ignition sources. Provide adequate ventilation. Avoid inhalation of vapour or dust. Avoid skin and eye contact. Wear protective gloves, clothing, eye and face protection.

Product Code: P07160 Version: 3 Page 10 of 14

















For emergency responders: Wear an appropriate NIOSH/MSHA approved respirator if mist, vapour or dust is generated.

6.2 Environmental precautions: Do not allowed the material to be released to the environment without proper governmental permits.

6.3 Methods of containment and cleaning up:

If uncontaminated, recover and reuse as product. Consult with environmental regulatory agencies for acceptable disposal procedures. Consult with environmental regulatory agencies for acceptable disposal procedures if product cannot be recovered and reused.

6.5 Additional information:

Wet clean or vacuum up solids.

Don't use a brush or compressed air for cleaning surfaces or clothing.

Section 7 Handling and Storage

7.1 Precautions for safe handling:

Protective measures:

Wash thoroughly after handling. Wash hands before eating. Minimize dust generation and accumulation. Avoid contact with eyes, skin and clothing. Keep container tightly closed. Use with adequate ventilation. Wash clothing before reuse. Avoid all contact and inhalation of dusts, mists and/or vapours associated with the material.

7.1.2. Advice on general occupational hygiene:

Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities:

Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 Exposure Controls/Personal Protection

8.1 Control parameters

Occupational exposure limits: N/A

Additional exposure limits under the conditions of use: N/A

DNEL/DMEL and PNEC-Values: N/A

8.2 Exposure controls

Product Code: P07160 Version: 3 Page 11 of 14

















8.2.1 Appropriate engineering controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower. Use adequate ventilation to keep airborne concentrations low.

8.2.2 Appropriate engineering controls:

Eye Protection Wear safety glasses in compliance with OSHA regulations.

Hand/Body Protection Avoid contact and prolonged or repeated exposure.

Wear resistant gloves. Wash thoroughly after handling.

Protective clothing recommended.

Respiratory Protection Avoid inhalation. 3M Dust respirator No. 8710 or 9900 is recommended

or a NIOSH/MSHA jointly approved dust respirator.

Thermal hazards Wear suitable protective clothing to prevent heat.

8.2.3 Environmental exposure:

Avoid discharge into the environment. According to local regulations, Federal and official regulations.

Section 9 Physical and Chemical Properties

Appearance: Powder crystal

Physical state Powder

Colour White to off white Formula C6H14NO5.HCl

Boiling point 449.9°C at 760 mmHg

Flash point 225.9°C Water solubility at 20°C Easily soluble

Section 10 Stability and Reactivity

Reactivity The substance is stable under normal storage and handling conditions.

Chemical stability Stable at room temperature in closed containers under normal

storage and handling conditions.

Hazardous reactions Not dangerous reactions known.

Conditions to avoid Incompatible materials. Avoid exposure to moisture.

Incompatible materials: Not available

Hazardous decomposition products: When heated to decomposition, material emits toxic fumes.

Product Code: P07160 Version: 3 Page 12 of 14

















Section 11 Toxicological Information

Information on toxicological effects: Not Data Available

Section 12 Ecological Information

Eco-toxicity: No Data Available

Other adverse effects: Do not empty into drains

Section 13 Disposal Considerations

13.1 Waste treatments methods: Chemical waste generations must determine whether a

discarded chemical is classified as hazardous waste. Additionally waste generators must consult state and local hazardous waste

regulations to ensure complete and accurate classification.

13.2 Product/ Packaging disposal: If empty container retains product residues, all label precautions

must be observed. Return for reuse or dispose according to

national or local regulations.

Section 14 Transport Information

UN-Number: Not regulated for Land transport (ADR/RID), sea transport (IMDG) or air transport. **UN Proper shipping name**: Not regulated for Land transport (ADR/RID), sea transport (IMDG) or air Transport.

Transport hazard class: Not regulated for Land transport (ADR/RID), sea transport (IMDG) or air transport **Packaging group**: Not regulated for Land transport (ADR/RID), sea transport (IMDG) or air transport **Environmental hazards**: Not regulated for Land transport (ADR/RID), sea transport (IMDG) or air transport

Special precautions for user: Not regulated for Land (ADR/RID), sea (IMDG) or air transport

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:

Not regulated for Land transport (ADR/RID), sea transport (IMDG) or air transport

Section 15 Regulatory Information

Relevant information regarding authorization/ restrictions: Not applicable

Other EU regulations: Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.

Chemical Safety Assessments has been carried out? No

Product Code: P07160 Version: 3 Page 13 of 14

















Section 16 Other Information

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

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 Specification

To be used as per local legislation

Change History

Version	Change	Customer Notification required Yes / No
1	First Issue	N/A
2	Updated format and flow chart	Yes
	Molecular structure added	
	Particle size changed from 20 mesh to 16 Mesh 100% passed through	
	Bulk Density from Min 0.5 g/ml to Min 0.6 g/ml	
	Complies with the French Arrêté 26/09/2016	
3	Molecular formula amended due supplier clerical error	No

Document Approval

Originator Job Title	Quality Specialist	Approver Job Title	Quality Specialist
Lucia Valle (Apr 13, 2017)		Shannon McKenna (Apr 13,	2017)

Product Code: P07160 Version: 3 Page 14 of 14

















Glucosamine (D) HCL DC95 - P07160 - Technical Dossier

Adobe Sign Document History

04/13/2017

Created: 04/13/2017

By: Lucia Valle (Lucia.Valle@c-c-l.com)

Status: Signed

Transaction ID: CBJCHBCAABAA2gWxMs4nWF9SBiRLPvTVbCFsW0rJtDoB

"Glucosamine (D) HCL DC95 - P07160 - Technical Dossier" H istory

- Document uploaded by Lucia Valle (Lucia.Valle@c-c-l.com) from Acrobat 04/13/2017 4:33:46 AM PDT- IP address: 81.145.42.226
- Document signed in Acrobat by Lucia Valle (Lucia.Valle@c-c-l.com)

 Signature Date: 04/13/2017 4:34:19 AM PDT Time Source: server- IP address: 81.145.42.226
- Document emailed to Shannon McKenna (shannon.mckenna@c-c-l.com) for signature 04/13/2017 4:34:20 AM PDT
- Document viewed by Shannon McKenna (shannon.mckenna@c-c-l.com) 04/13/2017 6:06:31 AM PDT- IP address: 81.145.42.226
- Document e-signed by Shannon McKenna (shannon.mckenna@c-c-l.com)

 Signature Date: 04/13/2017 6:07:16 AM PDT Time Source: server- IP address: 81.145.42.226
- Signed document emailed to Lucia Valle (Lucia.Valle@c-c-l.com) and Shannon McKenna (shannon.mckenna@c-c-l.com)

04/13/2017 - 6:07:16 AM PDT