Part 1: Product Details and Contact Details

Part 1.1 Product description and contact

Product Name:	Handlink Select		
Product Type:	Edible Collagen Casing		
Species:	Bovine (derived from bovine hides)		
Manufacturer: Address	Gartferry Road, Moodiesburn, Chryston, Glasgow, Scotland, G69 0JE	Tel No:	+44 (0) 1236 872261
		e-mail:	Technical.Support@devro.com
		Website:	www.devro.com
Country of Manufacture:	Scotland	Site Approval Number	GBMD040

Part 1.2 Quality and Certification:

ISO 9001	X	FSSC 22000	X	ISO 14001	X	BRC Food Safety	X

Note: Specifications can change. Please contact us for updated version at least annually.

Part 1.3 Composition:

Component:	Approximate Proportion	INS, E-Number	Function / Note	Origin
Collagen (Bovine)	60-70 %	-	**Functional** - Collagen is the Base Material	UK & Eire
Water	16-22 %	-	**Functional** - Water provides moisture to the casings to keep them supple during manufacture. **Not Functional in final Foodstuff (sausage)**	UK
Vegetable Glycerol (potentially sourced from Rapeseed or Sunflower.	15-21 %	E 422	**Additive Functional -** Glycerol allows the casings to be humidified during manufacture. **Not Functional in final Foodstuff (sausage)**	Germany, France, Hungary, Luxembourg, Czech Republic Poland, the Baltics (Estonia, Latvia & Lithuania), The Netherlands, Belgium & UK
Vegetable Oil (High Oleic Rapeseed Oil)	3-9 %		**Processing Aid** - The oil aids shirring and de-shirring of the casing. **Not Functional in final Foodstuff (sausage)**	Sweden, UK & France
Calcium Acetate	<4 %	E 263	**Additive Functional -** Acidity regulator	The Netherlands, Canada
Sodium Carboxymethyl Cellulose (Wood (sustainable))	<3 %	E 466	**Processing Aid** - The CMC aids the chemical drying of the casings during manufacture. **Not Functional in final Foodstuff (sausage)**	Germany, France, Italy

Note: This is a naturally derived product the colour of which may vary. This colour variation does not affect the quality or performance of the casing.

Ingredient Declaration: Bovine Collagen, Water, Glycerol, Processing Aid: High Oleic Rapeseed Oil, Acidity Regulator: Calcium Acetate, Processing Aid: Sodium Carboxymethyl Cellulose

Part 1.4 Storage and Packaging:

	Composition	Food Contact Approved
Packaging:	Products packed in hermetically sealed boxes under controlled atmosphere. Modified Atmosphere (CO_2 40%: N_2 60%) Boxes/Spacers – Outer/Inner layer virgin board (white / brown), corrugation recycled (brown) (Recyclable) Liners – Blue PP / PE or white paper (Recyclable) Labels - PP Top White (Recyclable) Outer-wrap – Thermoforming Film (PET/PE-EVOH-PE, PA/PE/PA/PE) (Non-recyclable) Shipping Cartons – Corrugated Board (Recyclable)	Regulation as amended. 1935/2004/EC 10/2011/EU 2023/2006/EC 1169/2011/EC 2025/40 EU
Storage conditions:	Store closed (unopened) in dry odourless warehouses; avoid direct sunlight and extreme temperatures. Once individual pack has been opened product must be used immediately.	
Minimum Durability:	24 months from date of manufacture. See pack for Best Before Date	

Part 1.5 Product Use	
Product Use:	Edible Bovine Collagen Casing, used in 'skin-on' sausage manufacture is suitable for fresh sausage applications.
Equipment:	Casing can be used for handlinking or twistlinking at slow speeds.
Processing Conditions:	Temperature of meat stuffing: minimum 0°C Suitable for all meat stuffing. Number of twists: 1.8 – 3.0

Product Guidelines

Nominal calibre	Recommended stuffing calibre	Maximum stuffing calibre	Stuffing Tube Diameter	Maximum stuffing speed for AutoLoad	Maximum speed of stuffing for semiautomatic devices
19	18.0-18.5	18.5	11	600	350
21	20.0-20.5	21	12	600	350
23	22.0-22.5	23	14	600	350
26	25.0-25.5	26	15	600	350
28	27.0-27.5	28	17	600	350
30	29.0-29.5	30	19	600	350

Note: This information is for guidance only. Please contact Sales or Technical Services personnel for application advice

Part 2: Additional product Information

Part 2.1: Nutritional Information

	Typical content in casings **[100g]**	Note: The Nutritional contribution of the casing is negligible due to the low inclusion levels in final product - sausage. (Less than 1% weight of final product) Nutritional content is based on calculations with some verification testing.
Energy [kJ/kcal]	<400Kcal, <1650KJ	
Fat [g] Total	<9	
of which **Saturates, [g]**	<2	
Protein [g]	<70	
Carbohydrate [g] of which — **sugars [g/]**	<10 <0.2	
Dietary Fibre	<2	
Sodium [mg]	<500	
Salt [g]	<1.25	
Moisture [g]	<21	
Total Ash [g]	<1	

Part 2.2: Chemical and microbiological analysis.

Parameter	Limit	Legislation
Arsenic	1 ppm	Regulation 853/2004/EC, Annex III, Section XV as amended
Lead	5 ppm	
Cadmium	0.5 ppm	
Mercury	0.15 ppm	
Chromium	10 ppm	
Copper	30 ppm	
Zinc	50 ppm	
SO_2 (European Pharmacopoeia, latest edition).	50 ppm	
H_2O_2 (European Pharmacopoeia, latest edition).	10 ppm	
Salmonella	Negative / 25 g	Regulation 2073/2005/EC as amended

Analytical frequency:	All our products are made from the same base ingredients and therefore we do not test every code to a specified frequency. The testing is completed quarterly, and products selected are based on production at the time of testing. Over the year a variety of the different brands are tested to meet the Legislative Chemical and Micro specification that is stated on this specification.

Part 2.3 Allergens and Intolerance – None of the below are used in the production of this product unless identified as such			
Potential allergen	Present	**Potential allergen**	Present
Cereals containing gluten (i.e. wheat, rye, barley, oats, spelt, kamut or their hybridised strains) and products thereof	No	Tree nuts, i.e. almonds (*Amygdalus communis L.*), hazelnuts (*Corylus avellana*), walnuts (*Juglans regia*), cashews (*Anacardium occidentale*), pecan nuts (*Carya illinoiesis (Wangenh.) K. Koch*), Brazil nuts (*Bertholletia excelsa*), pistachio nuts (*Pistacia vera*), macadamia nuts and Queensland nuts (*Macadamia ternifolia*), and products thereof	No
Crustaceans and products thereof	No	Celery and products thereof	No
Eggs and products thereof	No	Mustard and products thereof	No
Fish and products thereof (including oil)	No	Sesame seeds and products thereof	No
Peanuts and products thereof (including oil)	No	Sulphur dioxide and sulphites at concentrations of more than 10 mg/kg or 10 mg/litre expressed as SO2	No
Soybeans and products thereof (including oil)	No	Lupin and products thereof	No
Milk and products thereof (including lactose)	No	Molluscs and products thereof (including oil)	No
Buckwheat	No	Gelatine	No
"matsutake" Mushrooms	No	Yams	No
Aliums (onions, garlic, chives, leeks, etc.)	No	Herbs	No
Legumes (beans, peas, etc..)	No	Maize and products thereof	No
Spices	No	Edible Fungi (Mushrooms etc..)	No
Umbelliferae family (celery, celeriac, carrot, parsnip,	No	Cruciferous	No
Yeast and yeast products	No	Fruit	No

Part 3: Additional consumer information			
Additives	Present	**Animal products**	Present
Antioxidants	No	Bovine	**Yes**
Flavour Enhancers	No	Porcine	No
Flavours	No	Ovine	No
Preservatives	No	Poultry	No
Intense Sweeteners	No	Equine	No
Colours	No	Insect (including bees)	No
Sunset yellow (FD&C Yellow No.6; E110), Quinoline yellow (D&C Yellow 10; E104), Carmoisine (Food Red 3, E122), Allura Red (FD&C Red No. 40; E129), tartrazine (FD&C Yellow No.5; E102), Ponceau 4R (E 124)	No	Others	No
Carmine (Natural Red 4, E120)	No		
Annatto (E160b), bixin, norbixin	No		
Others			
Alcohol	No		
Hydrogenated vegetable oils	No	Caffeine	No
Hydrolysed vegetable proteins	No	Added salt	No
Genetically Modified Organisms	No	Added Sugar	No
Palm Oil If yes Status; Sustainable? If yes is it RSPO certified? Certificate number If Sustainable (IP, Segregated or mass balance?	No, this product does not contain palm oil.		

The information above is based on our present technical knowledge and experience. On receipt of this specification please confirm acceptance to Technical.Support@devro.com. If there is no formal email response within 30 days, it is assumed that you have accepted this Product Specification. Any substantial changes to this specification will be advised to you.