

# GRATHICK™

## CLEAN LABEL STARCH (PHYSICALLY MODIFIED STARCH)

### DESCRIPTION

GraThick™ is a Physically Modified starch, **Vegan, Gluten-Free, Plant-based, Non-GMO** starch. It is produced by Physical modification of starch to enhance its thickening and stabilizing properties. It is used as functional food ingredient to improve the consistency of RTC gravies and gravy bases.

### SPECIFICATIONS

S.No	PARAMETERS	SPECIFICATIONS	METHOD OF ANALYSIS
1	APPEARANCE	WHITE TO OFF-WHITE COLOUR FREE FLOWING POWDER	ASF/QP/QA/06/15
2	SOLUBILITY	MAX. 10 % SOLUBLE IN COLD WATER	ASF/QP/QA/06/01
3	pH OF 3% (aqu. Soln)	6 TO 7.5	IS 4706(PART 2)
4	VISCOSITY OF 3% SOLUTION IN BROOKFIELD VISCOMETER, Spindle No:3, RPM :50, Temp: 80° C)	800 TO 1500 cPs	ISI 17- 1e
5	MOISTURE CONTENT (w/w)	Max 13%	IS 4706(PART 2)
6	BULK DENSITY (gm/ ml)	0.7 TO 1.0	ASF/QP/QA/06/08
7	PARTICLE SIZE (100 MESH)	PASS 98%	BS 410 1986
8	ASH CONTENT (w/w)	Max 0.5%	IS 4706(PART 2)

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### MICROBIOLOGICAL PARAMETERS

S.No	TEST PARAMETERS	UNITS	LIMITS AS PER FSSAI	METHOD OF ANALYSIS
1	Total Plate Count	Cfu/g	Not more than 20000	IS 5402
2	Yeast & Mould	Cfu/g	Not more than 100	IS 5403
3	<i>E coli</i>	Present/Absent/g	Absent	IS 5887:PART 1
4	Salmonella	Present/Absent/25	Absent	IS 5887:PART 3
5	Coliform	Cfu/g	Absent	IS:5402
6	<i>Staphylococcus aureus</i>	Present/Absent/25	Absent	IS 5887:PART 2
7	<i>Listeria monocytogenes</i>	Present/Absent/25	Absent	IS 14988:PART 1

### MINERALS AND HEAVY METALS PARAMETERS

S.No	TEST PARAMETERS	UNITS	LIMITS AS PER FSSAI	METHOD OF ANALYSIS
1	Arsenic	Mg/kg	Not more than 1.1	FSSAI MANUAL 2016
2	Lead	Mg/kg	Not more than 2.5	FSSAI MANUAL 2016
3	Cadmium	Mg/kg	Not more than 1	FSSAI MANUAL 2016
4	Mercury	Mg/kg	Not more than 0.25	FSSAI MANUAL 2016
5	Copper	Mg/kg	Not more than 30	FSSAI MANUAL 2016
6	Tin	Mg/kg	Not more than 250	FSSAI MANUAL 2016
7	Zinc	Mg/kg	Not more than 50	FSSAI MANUAL 2016

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### APPLICATIONS

#### As Thickener:

GraThick™ is primarily used as thickener for RTC Gravies and gravy bases. It improves the consistency of gravies without hindering taste and flavour components. The starch granules in GraThick™ absorb liquid when added to the product. The granules start swelling when heated, and then burst, releasing starch into liquid. The granules swell up to 30 times their original size resulting in increased thickness and consistency of the product.

#### As Stabilizer:

RTC (Ready –To- Cook) gravies and gravy bases usually undergo retort packaging to increase the shelf life. GraThick™ helps to maintain the stability of the product while retort packaging. RTC gravies will be reconstituted with water before using. GraThick™ maintains the consistency and thickness of the product while reconstitution also.

- GraThick™ can be used in the preparation of all types of RTC Veg and Non- veg gravies
- It can also be used in gravy – bases of all cuisines(Traditional and Interantional)
- It can also be used in RTU Gravy masalas

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### FEATURES AND BENEFITS

GraThick™ enhances the consistency of the product while reconstitution also providing excellent mouth feel

It aids in uniform dispersion of all ingredients

It can be used as Functional Food ingredient and label friendly product

It is minimally processed starch with no residues of chemicals.

It is highly bio-degradable and causes no harm to the Environment.

GraThick™ is a White powder that adds no color to application and blends well with other ingredients. It has a bland taste and so will not mask flavors or aromas.

GraThick™ contains no fat, protein, fiber, vitamins, or other minerals.

### DOSAGE

Use 1 to 3% GraThick™ of total batch size. For excellent results, maybe use upto 5% GraThick™ of total batch size.

### STORAGE

Exhibits excellent stability when stored under cool and dry ventilated place. Avoid direct sun light.

### BEST BEFORE DATE

Twelve months from the date of manufacturing.

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### PACKING

Available in 25 Kgs net weight paper bags with moisture proof liner inside.

### ADDITIONAL INFORMATION

<b>FSSAI Certification</b>	Yes
<b>ISO 9001:2015 Certification standard from SGS</b>	Yes
<b>ISO 22000:2018 Certification standard from SGS</b>	Yes
<b>BRC Global Standard for Food Safety Certification from SGS</b>	Yes
<b>Kosher Certification by Kosher Check, British Columbia, Canada</b>	Yes
<b>Halal Certificate</b>	Yes
<b>ZED Certificate</b>	Yes
<b>Preservative</b>	NOT PRESENT/ USED IN PRODUCT

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