

**The Leela Corporation**



The Leela Corporation has always believed in exceeding customer expectations on quality, performance, and service. This has been achieved through teamwork and continuous learning and improvement.

[www.leelacorp.com](http://www.leelacorp.com)









## A Brief Introduction

- "THE LEEA CORPORATION" Was established with a vision to become one of the best quality starch manufactures and suppliers in the starch industry. We have been able to put our expiriance to good use to create the best quality starch and its
- We are engaged in Manufacturing and Exporting an array of Corn Starch Powder, Dextrin Modified Starch, Paper Grade Modified starches, Textile Grade Modified Starches, Starches for Food & Pharmaceuticals (I.P/ B.P. Grade) and Corrugated Gum Products for packaging & many more.
- We have been producing Corn Starch & modified starches in a quantity of more than 6000 MT per month.
- Moreover, we have hired highly experienced and qualified professionals who greatly support us in all the activities of our trade.
- Post-processing, these products are thoroughly inspected on certain parameters in order rule out every possibility of flow.

# Product List

## FOOD & PHARMA

- **FOOD GRADE**  
For Food & Confectioneries
- **PHARMA GRADE (Pharmaceutical Industries)**
- **L M GRADE ( LOW MOISTURE STARCH FOR FOOD)**
- **SUPER FINE (150/ #200 MESH PASSING)**

## PAPER GRADE NATIVE CORN STARCH & MODIFIED STARCH

- **TECHNICAL GRADE**  
For Corrugated Box, Paper, Carbord Ind.
- **OXI GRADE ( OXIDIZED STARCH )**  
For Coating & Surface Sizing
- **SIZE P GRADE ( SURFACE SIZING STARCH )**
- **CAT GRADE ( CATIONIC STARCH )**  
For Wet end additive
- **SPRAY GRADE ( SPRAY STARCH )**  
For Wet end additive
- **PASTE GRADE ( HOT & COLD )**

## TEXTILE GRADE NATIVE CORN STARCH & MODIFIED STARCH

- **TECHNICAL GRADE**  
For Textile Sizing
- **TEX GRADE**  
For Textile & Denim Sizing & Finishing
- **WHITE DEXTRIN**  
For Textile Sizing & Finishing



- **FIED T GRADE**

For Textile Finishing,Sizing, fine Fabrics,

## **Dextrin Based Starches**

- **YELLOW DEXTRIN**

For Adhesive, Foundries, Corrugated Box, Inks, Dyes, Paper cone/Tubes Refractories

- **WHITE DEXTRIN**

For Textile, Adhesive, Gums, Laminating & Fireworks/Crackers

- **By Products (Fat, Animal & Poultry feeds)**

1) Corn Gluten

2) Corn germs

3) Corn Fibre

4) Groundnut De-oiled Cake ( GN D.O.C )

## **Technology**

- We thrive on a multifaceted infrastructure facility for smoothly carrying out the activities of our business.
- Sprawling across an extensive area, this facility is empowered with latest machines and advanced technology that are essentially required in the production process.
- Whole plant is made of Stainless Steel which further helps increase the quality of the finished products.





# Safe Storage

For safe storage of the products and ingredients that are used in production process, we have developed a capacious warehousing unit at our premises. Proper labeling and segmentation of this unit is done to store the products systematically under their respective categories.



# Quality controllers

- We put in all our efforts to maintain highest level of quality standard in the range of products offered by us.
- A well-planned quality management policy is adopted and followed to carry out all our business activities with perfection.
- Our team of quality controllers thoroughly checks the products on certain well-defined standards to ensure that our customers get a range of flawless products from us.
- The Products are analyzed as per the standards in our in house laboratory



# Product Information

## Maize Starch ( Corn Starch ) :

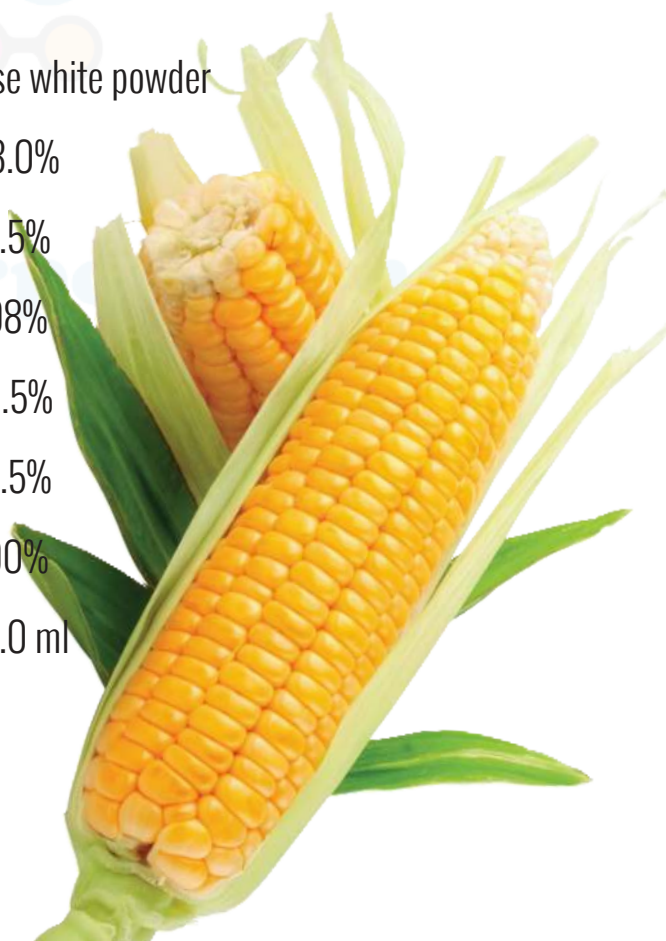
- Corn Starch contains very low Protein & low Ash content.
- Maize Starch is transformed into a very smooth paste within an hour.
- The foaming is usually associated with high pH so it is not necessary to add any antifoaming agent because pH of Maize Starch is always maintained in neutral range.

## Applications :

- PHARMACEUTICAL (I.P/ B.P GRADE ) INDUSTRIES
- Cosmetics industries
- Textile Industry
- Food Industry

## Standard Specification : Technical Grade :

- |  |                                  |
|--|----------------------------------|
| • Appearance                                 | : White to creamise white powder |
| • Moisture                                   | : Not more than 13.0%            |
| • Ash ( on ds )                              | : Not more than 0.5%             |
| • Starch content (on ds )                    | : Not more than 98%              |
| • Cold water solubles ( onds )               | : Not more than 0.5%             |
| • Protien                                    | : Not more than 0.5%             |
| • Whiteness                                  | : Not more than 90%              |
| • Free acidity as ml of 0.1 N NaOH For 10 gm | : Not more than 4.0 ml           |
| • pH of 10% solution                         | : 4.5 to 7.0                     |



# Product Information

## Standard Specification : Food Grade Corn Starch :

- Moisture : Not More than 12.5%
- Ash ( on ds ) : Not More than 0.25 %
- Acid insoluble ash (on ds ) : Not More than 0.10%
- pH of 10% Solution : 5 to 7.5
- Protein Contents : Not More than 0.6%
- Sulphur Dioxide ( ppm ) : Not More than 60 ppm
- Starch Contents (on DS ) : 98% Min.
- Free Acidity for 10 gm sample as per 0.1 N NaOH : Not More than 4.0 ml
- Alcoholic Acidity as ml of 0.1 N NaOH per 10 gm dried sample : Not More than 2.0 ml
- Arsenic (ppm) : Not More than 1.1 ppm
- Copper (ppm) : Not More than 30 ppm
- Lead (ppm) : Not More than 2.5
- Iron : Not More than 40 ppm





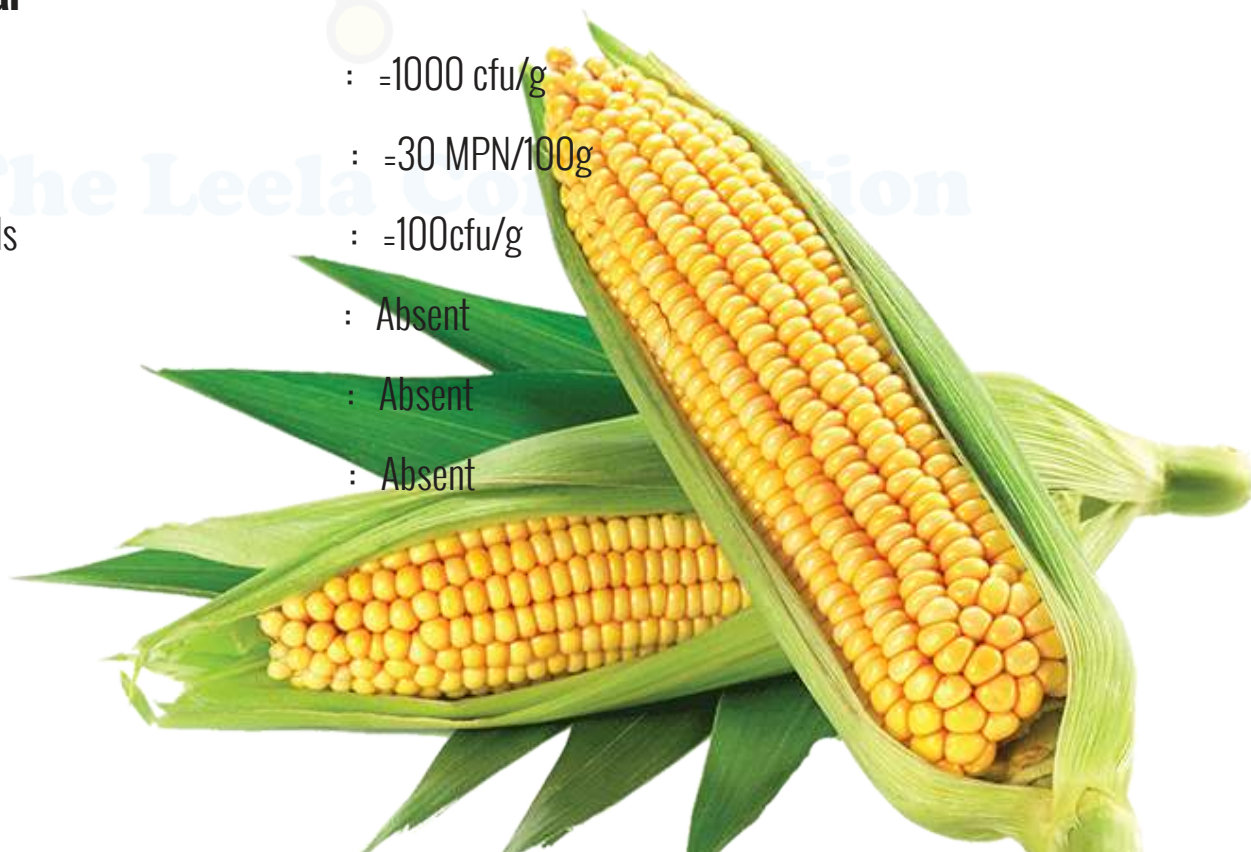
# Product Information

## Standard Specifications : Pharma Grade Corn Starch :

- Moisture : Not More than 14.00
- Ash (on ds) : Not More than 0.6%
- pH of 10 % solution : 5.5 to 7.5
- Acid Insoluble ash (on ds ) : Not More than 0.10%
- Sulphur Dioxide (ppm) : Not More than 50 ppm
- Acidity (for 10 gm) : Not More than 2.0ml of 0.0NaOH
- Oxidising substance : Absent
- Fluorescence : Absent
- Arsenic (ppm) : Not More than 1.1 ppm
- Copper (ppm) : Not More than 30 ppm
- Lead (ppm) : Not More than 2.5 ppm
- Iron : Not More than 40 ppm

## Microbiological

- Total counts : =1000 cfu/g
- Coliforms : =30 MPN/100g
- Yeast & Molds : =100cfu/g
- E. Coli : Absent
- Salmonella : Absent
- Pathogenic : Absent



# Product Information

## Spray Grade : ( Spray Starch )

Spray Starch is a modified Maize Starch powder which is used to improve paper BS.

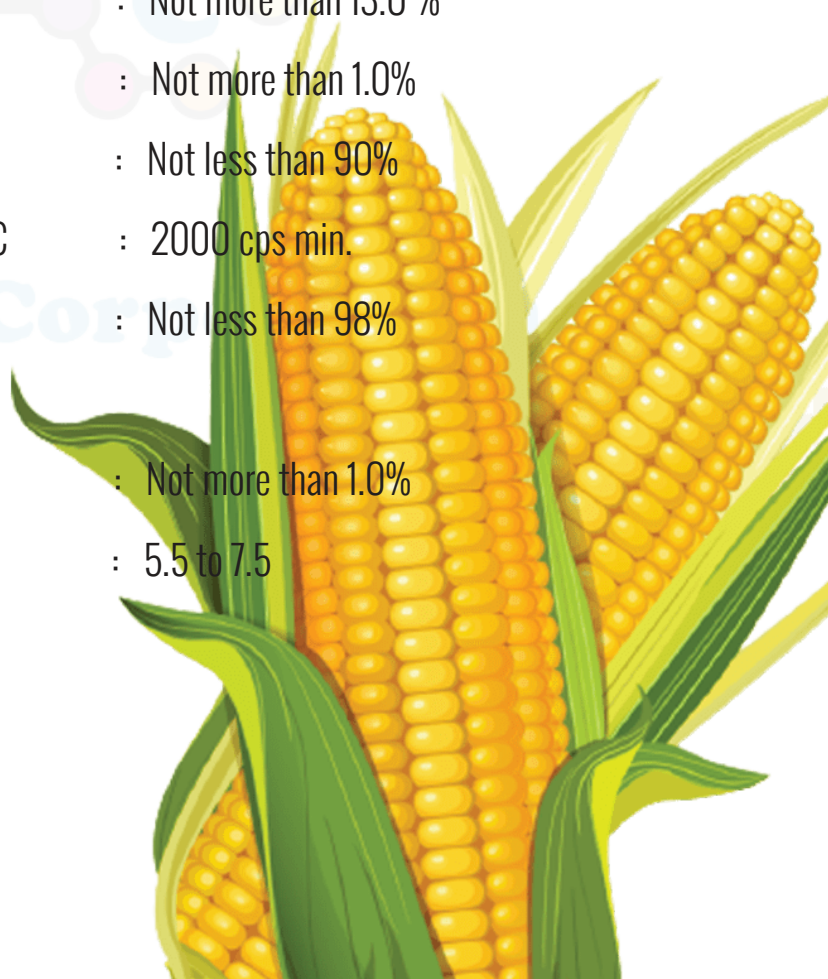
It improves the BS and PLY Bond through buffered starch.

### Advantages :

- By spraying starch slurry on paper web it improves Bursting strength, Stiffness, Ply bonding.
- Reduces linting problem.
- Degree of penetration of starch is controlled in paper web
- BOD levels in back water are reduced.
- It easy in the operation.

### Standard Specifications :

- Appearance : White to creamish white powder
- Moisture : Not more than 13.0 %
- Ash : Not more than 1.0%
- Whiteness : Not less than 90%
- Brookfield Viscosity of 5% (onds) at 60LC : 2000 cps min.
- Screen Test : Not less than 98%  
Passing through 85#
- Cold water solubles : Not more than 1.0%
- PH of 10% solution : 5.5 to 7.5





# Product Information

## Oxi Grade : ( Oxidised Starch )

- Oxidised Starch is a modified maize starch (Oxidized starch) used for surface sizing operation during manufacturing of paper/board.
- The use of Oxidized Starch in size solutions of high solids is to seal pores, tie down loose surface, fibers, improve surface strength and to provide hold out printing inks.
- A higher concentration than acid thinned starches can be used for better finish of printing paper.
- Solutions of Oxidized Starch are clearer than those of acidthinned starches and have less setback
- Oxidised Starch has good paste stability, clarity and reduced tendency to retrograde. It has lower pasting temperature.
- It provides tough, clear and flexible films.

## Advantages :

- Improved print-ability and pigment coating
- Improved brightness, smoothness
- Improved surface strength and provides hold out of printing



# Product Information

## Standard Specifications : ( Oxi Grade )

- Appearance : Fine white, odourless, dry powder
- Moisture : Not more than 13.0 %
- Ash : Not more than 2 %
- Brightness : Not less than 92%
- Ostwald Viscosity of 20%  
Paste at 90LC : 20 to 80 CPS (AS PER REQUIREMENT)
- Phase Separation : No Phase separation  
Observation After 24 hours
- PH Of 10% solution : 6.5 to 7.5  
Carboxyl Value : 0.35 min





# Product Information

## Cat Grade : ( Cationic Starch )

- Cationic starches represent a unique class of high performance starch derivatives which have gained commercial acceptance.
- Cationic starches are effective for improving such physical properties of paper as bursting and tensile strength, elongation, fold endurance, and pick resistance.
- Usually 0.5% to 1 % addition of cooked cationic starch , gives the same improvement in the paper as does 1 .5% to 2% addition of corn starch.
- Other benefits of the cationic starches are improved drainage on the wire, better sheet formation and enhancement of the sizing efficiency of an alum rosin size.
- With increasing filler retention, the sheet loses strength because inert fillers reduce the number of sites for fiber to fiber bonding.
- Because cationic starch acts both to improve strength properties and filler retention, its use gives high strength properties at higher level of filler retention
- Increased internal strength properties & retention of fillers & fines
- Faster drainage & improved sheet formation.
- Improved effluent quality & reduced costs



# Product Information

## Standard Specifications : ( Cat Grade )

- Appearance : Fine white to creamish powder
- Moisture : Not more than 12.0 %
- Ash (on ds) : Not more than 3.0%
- Brightness : Not less than 85%
- Screen Test : Not less than 98

%Passing through 85#

- DS : 0.015 to 0.04 ( As per Requirement )
- pH of 10% solution : 5.0 to 8.0
- Nitrogen (%) : 0.125 to 0.35





# Product Information

## Paper Sizing Starch :

- It is a Modified starch used as an additive for coating and sizing in Paper industries.
- It has good paste stability, clarity, reduced tendency to Retrograde.
- Provides tough, clear and flexible sizing.
- Paper undergoes too much abrasions and tensile strength and due to appropriate viscosity, it offers adequate coating of size

## Benefits :

- Uniform and stable viscosity.
- Compatible with other size ingredients.
- Better elongation of paper

## Standard Specifications :

- Appearance : White powder, free from foreign matter
- Moisture : Not more than 13%
- Ash (on ds) : Not more than 0.5%
- pH of 10% solution : 5 to 7
- 10% Brookfield Viscosity : 30 to 150 cps
- Acetyle Value : Not less than 1.2%



# Product Information

## Tex Grade : ( Thin Boiling Starch )

- It is widely popular in the Denim as well as Terry Towel industries.
- Thin boiling starch has low and uniform viscosity, which does not change much with temperature unlike native starches which show wide variation in viscosity.
- Thin boiling starch is readily dispersed in water and can be boiled into a smooth paste without any pretreatment.
- One of the main drawbacks of tapioca size is that it thins down very much on boiling, resulting in an uneven pick up on the high speed machine.
- The viscosity of thin boiling does not change with boiling and this ensures uniform pick up size even on modern high speed sizing machines.

## Finishing :

- In finishing, Thin boiling starch are preferred for a light finish when very little filling is required to give body to the cloth.
- For finishing dyes or printed fabric, a transparent size is required so as not to dull the color or impair the design. In such application thin boiling starches are preferred to thick boiling starches

## Advantages :

- Thin boiling starch, because of the low viscosity ensures uniform pick up and penetration. There is a very negligible variation in viscosity on boiling which result in uniform size than beam to beam on high speed modern sizing machines.
- Thin boiling starch does not develop abrasive points on over drying and its flexible film gives the yarn the desired elasticity.





# Product Information

- Thin boiling starch size achieves a striking balance of surface coating and penetration, which ensures effective binding and reduces the droppings considerably in the loomshed.
- Thin boiling starch is compatible with all the ingredients used in sizing- humectants, lubricant, gums, synthetic sizes, etc.
- Thin boiling starch is easily removed during the customary de-sizing process.

## Standard Specifications :

- Appearance : White to creamish white powder <sup>®</sup>
- Moisture : Not more than 10%
- Ash : Not more than 0.5%
- Viscosity of 5% solution : 33 to 50 secs  
At 75 deg.cel.
- pH of 10% solution : 5 to 8



# Product Information

## White Dextrin

- White Dextrin, manufactured under controlled conditions using precise catalysts.
- White Dextrin has all the properties needed to meet classical requirements such as texture, volume and stiffness.
- White Dextrin is produced in a wide range of water solubility to suite various application.
- It provides higher film strength and excellent adhesive properties.

## Special Features :

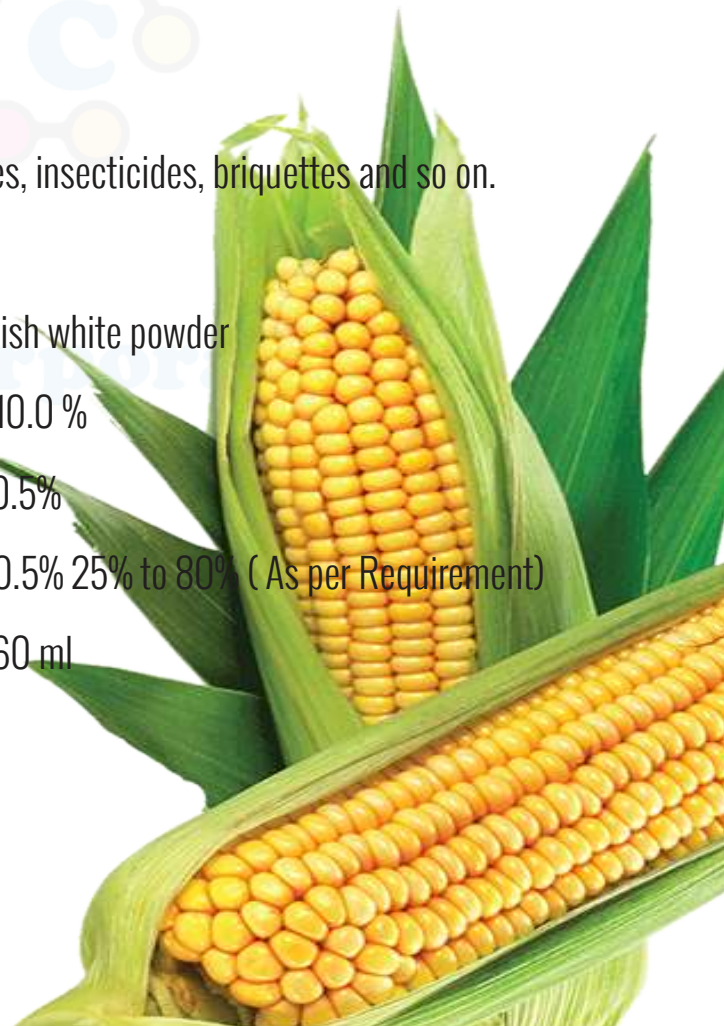
- White dextrine are of light colour and pasty.
- Cooked and cooled solutions set to soft pastes rather than firm gels.

## Uses :

- Textiles- For finishing (crisp organdy).
- In cigarettes manufacturing
- In food industry
- As binder for water color, Dyes, mineral aggregates, insecticides, briquettes and so on.

## Standard Specifications :

- |                       |   |
|-----------------------|---|
| • Appearance          | : White to creamish white powder                      |
| • Moisture            | : Not more than 10.0 %                                |
| • Ash                 | : Not more than 0.5%                                  |
| • Cold water solubles | : Not more than 0.5% 25% to 80% ( As per Requirement) |
| • Free acidity        | : Not more than 60 ml                                 |



# Product Information



## **Textile Sizing Starch :**

- It is a Modified starch used as an additive for coating and sizing in textile.
- It has good paste stability, clarity, reduced tendency to Retrograde. Provides tough, clear and flexible sizing.
- Yarn undergoes too much abrasions and tensile strength and due to appropriate viscosity ,it offers adequate coating of size on yarn and subsequent suppression of hairiness.
- The product sizes the yarn smoothly and results in improved resistance against abrasion, jerks and tension.
- It offers minimum dropping and it can be removed easily during de sizing operation.

## **Benefits :**

- Effective hairiness removal.
- Uniform and stable viscosity.
- Uniform size pick up.
- Compatible with other size ingredients.
- Easy to de-size.



# Product Information

## Uses :

- Textiles- For finishing (crisp organdy).
- In cigarettes manufacturing
- In food industry
- As binder for water color, Dyes, mineral aggregates, insecticides, briquettes and so on.

## Standard Specifications :

- Appearance : White powder, free from foreign matter
- Moisture : Not more than 14%
- Ash (on ds) : Not more than 0.5%
- pH of 10% solution : 5 to 7
- Viscosity (Brookfied) : 40 to 120 cps  
( of 5% w/w (on ds) paste @30 DEG. )



# Product Information

## Single Shot Sizing starch for Textile :

- Single Shot Sizing starch for Textile is one shot sizing chemical starch for textile.
- Single Shot Sizing starch for Textile is a premier product specially Modified chemical Starch for Textile Sizing, that works for Spun yarns like Pure Cotton yarn, Polyester-cotto Blended yarn (PC yarn), Terry Rayon blended yarn, 100% Viscose Rayon yarn etc, , PV yarn and dyed yarn having construction on air jet / rapier, sulzer looms.
- Our sizing chemical has extremely good results on high speed shuttle – less looms having speed up-to 600-1000 rpm for counts ranging from low to high thread count (From 6's till 120's.).
- There is a marked increase in efficiency and yardage; also there is no chance of ball formation.
- Single Shot Sizing starch for Textile chemical also decreases in dead loss, value loss and overall saving in humidification costs.
- Also having lower cooking and temperature, cost saving are realized.
- You do not require to add any other ingredients with TLC like PVA, Acrylates etc.
- Our Single Shot Sizing starch for Textile is better in performanc eagainst PVA,UCF4 & Multiple binder combination used by many acustomers



# Product Information

## Features and Advantages :

- Yield percentages guaranteed in the 90's or higher.
- Saving in dead loss.
- No ball formation.
- Breaking strength of yarn increase, elongation property improves.
- Very good penetration and pliability of sizing film over the yarn.
- End product's perceived quality / image is upgrade.
- Our sizing chemical not only gives better performance by controlling sticky end & hairiness problem but also reduces ETP load & total cost of sizing process.
- It is a starch based sizing compound that is 100% eco-friendly and does not contain substances that are being increasingly rejected in the European Union and elsewhere around the world.



## Gypsoplast :

- Gypsoplast is a modified starch that is used in the manufacturing of gypsum boards.
- When mixed with gypsum slurry, it gelatinises in the oven and optimally migrates towards the edge of gypsum and board.
- During the cooling the starch then retrogradates and forms hydrogen bridges, effectively binding the board to the gypsum
- Also known as thin boiling starch for gypsum board.



# Product Information

## Standard Specifications :

- Appearance : White to creamish white powder
- Moisture : Not more than 12.5%
- Ash : Not more than 0.5%
- B4 cup Viscosity : 15-20 sec.  
(10% solution @ 90 deg.)
- pH of 10% solution : 5 to 8
- Alkali Fluidity : 75to 100 ml
- Screen Test : Not less than 98%  
%Passing through 100#



# Product Information

## Pasting Gum :

- It is specially developed for use in the corrugated paper packaging boards having the advantages of consistency and perfection in terms of quality.
- This gum is mainly used in semi-automatic plants.
- Pasting gum is used for making 3-ply and 5-ply paperboards from two ply, in those units where the double backer facility is not available & for making 7-ply board from 5-ply board.

## Advantages :

- Easier application at higher solid content of cold suspension
- Consistent viscosity at application temperature (room temperature)
- Greater tack with good bonding
- Quicker drying
- Improves surface properties

## Standard Specifications :

- Appearance : Light brown powder
- B4 cup viscosity : 20 to 40 sec  
(As per required ration in hot condition)



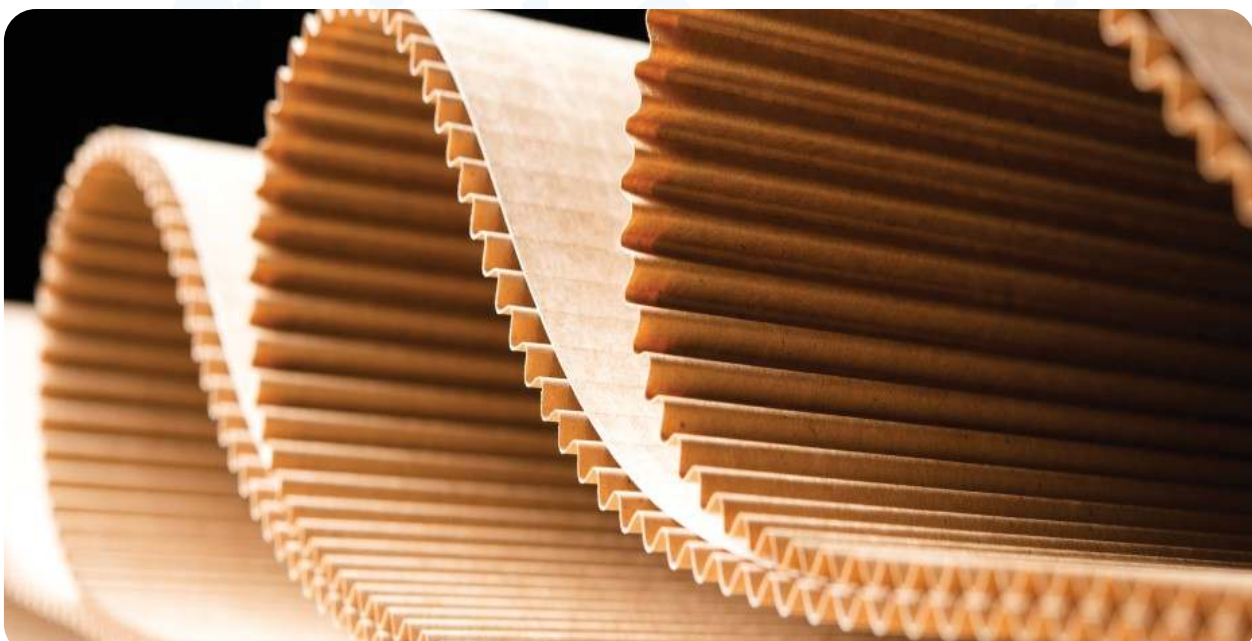
# Product Information

## Corrugation Gum Powder :

- CORRUGATION GUM POWDER is already-mix corrugation Gum. It is specially developed for use in the corrugated paper packaging boards having the advantages of consistency and perfection in terms of quality.
- This chemical and mechanical reaction reduces the large molecule size into small molecule and with maintained viscosity.
- It offers a cure to the paper converters problems such as weak bonding, reduced machine speed, wash boarding adhesive waste, etc.

## Advantages :

- Has good penetration into paper.
- Has low gelatinisation temperature for better machine runnability.
- Produces strong bond strength of high density paper, which resists delaminating during the mechanical operation such as slitting, scoring cut off and take away.
- Better coverage with economy.
- Improves stress and strain tolerance of finished corrugated containers





# Product Information

## Standard Specifications :

- Appearance : Cream White Powder
- Ratio : As per required (standard 1 :4)
- Moisture Content : 12% Max
- Ash content : 6% Max
- Viscosity : 45 to 75 seconds (measure in B4 cup)
- PH : 9.0 to 12.5
- Paste Clarity : Opaque
- Delamination : No
- Fermentation : No
- Toxicity : No



# Product Information

## Yellow dextrin.

- Yellow Dextrin is useful in foundries, refractory, adhesive in corrugated boxes, dyes, inks, fire cracker / Sparklers industries, paper and textile tubes/cones.
- Produces high solid pastes that are very tacky dry rapidly.
- Light yellow to dark Yellow powder with more than 90% soluble in cold water.
- Extra care is taken while producing Yellow Dextrin to reduce the ash contents to minimum level.

## Standard Specifications :

- Appearance : Yellow powder
- Moisture : Not more than 8.0 %
- Ash : Not more than 0.5%
- Cold water solubles : Not less than 90%
- Free acidity : Not more than 80 ml
- Reducing Sugar : Not more than 8%



# Product Information

## Corn Germs :

- Corn germ, primarily due to the high content of oil-rich tocopherol vitamin E, as well as high calorie value of around 19 MJ/kg has significant application in human and animal nutrition
- Used as raw materials for production of quality edible oil, which has the special use value for consumers with elevated cholesterol - in combination with other vegetable oils.

## Standard Specifications :

- Appearance : Heterogeneous mixture of golden-yellow color
- Odour : Typical Characteristic Odour
- Moisture : Max. 8%
- Fat (oil %) : Min. 40%
- Cellulose (%) : CCA 10
- Total Protein : CCA 10
- Free Fat Acid Content : max.4.0  
(FFA% oleic Acid)
- Storage conditions : Storage: Bulk—silos with the possibility of elevation and covering,  
well ventilated floor storages
- Validity : 3 months





# Product Information

## Corn Gluten :

- Corn Gluten Meal is a High protein meal that consists of about 60-65% protein, 3-4% fat, 35% starch together with fibre and little mineral matter.
- Corn Gluten Meal makes an excellent poultry feed and pet food ingredient and its 55% bypass protein make it a good dairy feed.
- Great care is taken during production to guarantee our protein levels are consistently higher than industry standards.
- Our Corn Gluten Meal is a highly digestible and an ideal protein source in an animal feed ration.
- Corn gluten meal supplies vitamins, minerals, and energy in poultry feeds; pet food processors value it for its high digestibility and low residue.

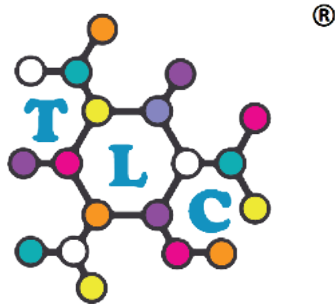
## Applications :

- Gluten has two key uses in industry.
- It is used in the poultry industry as a feed, since it is a rich source of proteins, amino acids, fat and minerals.
- It is also used as a protein supplement in cattle Feed.

## Standard Specifications :

- Appearance : Light yellow to golden yellow powder
- Moisture : Not more than 10%
- Protein : Not less than 60%





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