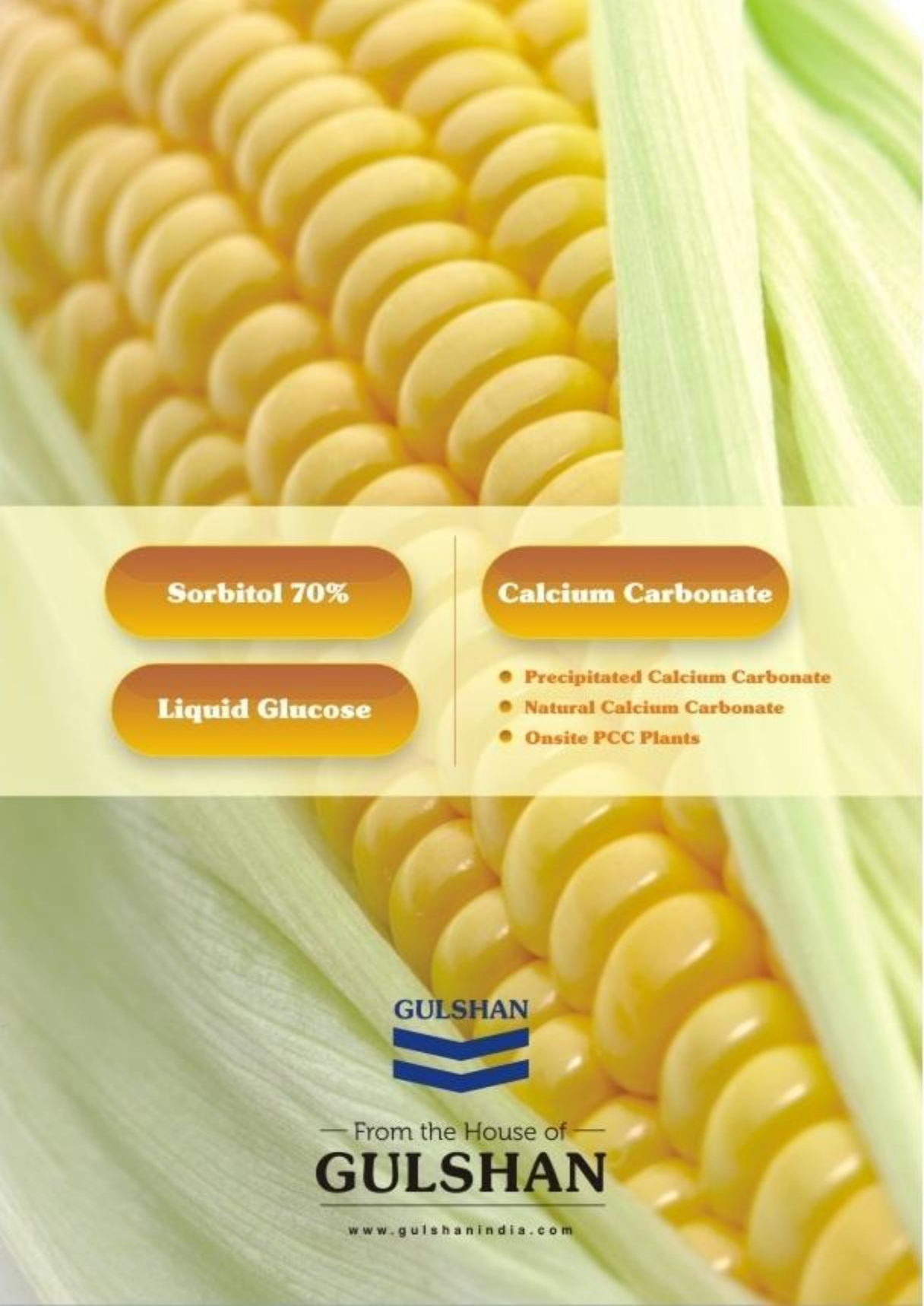
Sorbitol 70%
Liquid Glucose
Calcium Carbonate
Precipitated Calcium Carbonate
Natural Calcium Carbonate
Onsite PCC Plants
GULSHAN
From the House of
GULSHAN
www.gulshanindia.com

About Gulshan Polyols Ltd.

Gulshan Polyols Ltd (GPL) is an ISO 9001:2008 certified, leading manufacturer of specialty chemicals:

Starch Derivatives – Sorbitol 70% and **Liquid Glucose**

Calcium Carbonate – Precipitated, Activated, GCC, WGCC, Paper Grade, Onsite PCC and more

GPL has **six manufacturing facilities** spread across five states in India and an established sales-distribution network across the globe. Manufacturing facilities are built over 150 acres of total land area. GPL has commissioned 10MW co-gen Power Plants at its various locations and employs over 1500 people. Focus on quality is maintained through **in-house microbiology laboratory,** including HPLC equipment. Our esteemed client list includes Colgate Palmolive, Hindustan Unilever Ltd, Asian Paints, ITC (PSPD), BILT, Century Pulp & Paper. Company is listed in Bombay Stock Exchange and is

Brief History

Company was incorporated in year 1981 as Gulshan Sugars & Chemicals Limited with primary business of manufacturing Calcium Carbonate, both Precipitated and Activated grades, with an initial capacity of 2100 MTPA. Since then, company has multiplied its Cal-carb capacity to 1,05,000 MTPA. It also set up a Starch Derivatives unit (Specialty chemicals like Polyols) in 1996 at 15,000 MTPA, which has grown to 60,000 MTPA.

Mission Statement:

Gulshan Polyols Ltd's mission is to provide quality products at competitive pricing for total customer satisfaction with consistent service.

Future Growth:

1. GPL foresees India to become the global supply hub of Starch and Starch Derivatives. With this perspective, company is increasing production of Sorbitol 70% and Liquid Glucose to cater to global demand. At the same time, it is developing production facility for Mannitol and Dextrose Monohydrate to further enhance its reach in Specialty Polyols & Starch Derivatives.
2. GPL has introduced the fist onsite satellite PCC plant for paper industry in India. Company foresees setting up many more such units in near future.
3. GPL is diversifying into manufacturing ENA and bottling IMFL, under the name Indus Spirits. Bottling unit is expected to commence

SORBITOL 70% (Crystalline and Non-crystalline Grade)

GPL's Sorbitol 70% facility is ISO, **HACCP, OU-Kosher and HALAL certified.** It also meets **IP, BP and USP grade specifications.** Strict quality standards are maintained through in-house fully equipped QC & QA lab along with separate **microbiology laboratory,** equipped with latest HPLC machines.

Facts about Sorbitol 70%

- Sorbitol is a water-soluble polyhydric alcohol.
- It is obtained by reduction of glucose, changing the aldehyde group to a hydroxyl group
- Is an excellent humectant, texturizing and anti-crystallizing agent
- It provides bulk, smooth mouth-feel, sweetness, cool and pleasant taste
- It has one-third fewer calories than sugar--about 2.6 calories per gram
- Is non-cariogenic; also resistant to metabolism by oral bacteria prevents formation of dental caries and is less vulnerable to mould growth

Sorbitol Applications

- Sweetener – Sorbitol is used as a **sugar substitute** and bonding agent. It si referred to as a **nutritive sweetener** because it provides dietary energy: It is often used in diet foods (including diet drinks and ice cream), mints, sugar-free chewing gums, sugar-free candies, frozen desserts and baked goods.
- Health care and cosmetic uses - Sorbitol is often used in cosmetics like Face creams, Lotions etc. as a humectant and thickener. Sorbitol is added to soaps, especially transparent glycerin bar soaps. It is widely used in oral hygiene formulation industries i.e. mouthwash, toothpaste and transparent gels as it resists fermentation by dental plaque bacteria.
- Others: Confectionary, Tobacco, Textiles, Adhesives, Paper Emulsions and Paints: - It is widely used in various other industries like Paper for increasing the flexibility, Tobacco

Technical Data & Specifications

Description	Clear colourless viscous liquid, sweet in taste, free from foreign matter
Appearance of solution	Clear, colourless, syrupy liquid, miscible with water
D-Sorbitol% (m/m)	Min. 50%
Water Content	Between 28% to 31%
Dry matter	Min. 69%
Reducing Sugar	Max. 0.2%
pH	5.00 to 7.00
Sulphated Ash% (m/m)	Max. 0.1%
Lead	Max. 0.5ppm
Nickel	Max. 1ppm
Sulphate	Max. 100ppm
Chloride	Max. 50ppm
Arsenic (As)	Max. 3mg/kg
Heavy Metals	Max. 10ppm

Microbiological Characteristics

Total Mesophilic Aerobic Becterial Count (Ad/g)	Max 1000
Mould	<10 cfu/ml
Yeast	<10 cfu/ml
E.coli.	Nil
Salmonella	Nil

Packaging: *300kg HMHDPE barrels & 270kg Galvanized iron drums. It is also transported in tankers as per individual party requirement.**

SORBITOL QUALITY Certifications

OU-KOSHER

HACCP

ISO 90012008

HALAL CERTIFICATE

LIQUID GLUCOSE/CORN SYRUP

Liquid Glucose or Corn Syrup is a purified aqueous solutiion fo Various polysaccharides obtained from hydrolysis of maize starch. It is manufactured by refining and thermo vacuum evaporation process. Liquid Glucose has functional properties such as high fermentability, viscosity, humectancy-hygroscopicity, sweetness, colligative properties.

Facts about Liquid Glucose:

- High viscosity, humidity, sweetness and pervasion.
- Does not crystallize on storage and prevents crystallization of sucrose in combined syrups.
- Lowers freezing point.
- Keeps food products soft and fresh
- Excellent food preservative
- Provides body and cohesiveness
- Emulsion Stabilizer

Applications of Liquid Glucose:

- **Sweetener:** Liquid Glucose is an ideal additive for sweets, confectionary, biscuits, ice creams, jams, jellies, preserves pastries & liqueurs due to it's moderate sweetness & nutritive value. It also forms the base of artificial honey.
- **Others; Tobacco, Leather, Shoe Polish:** Tobacco industry uses liquid glucose to impart flavour, texture & stability in chewing tobacco & cigarettes. In the leather industry, Liquid Glucose is used in the tanning process for pliability and to add body to the leather. In shoe polish, the addition of 5%-10% Liquid Glucose prevents it from caking and helps

Technical Data & Specifications

Description	Clear colourless viscous liquid, sweet in taste, free from foreign matter
Dry Solide %	80 - 87
Dextrose Equivalent (% on DB)	38 - 44
PH of 50% Solution	4.5 - 5.5
Sulphated Ash (max)	0.2 %
Sulphur Dioxide ppm.	400 max.
Sulphur Dioxide Free Glucose (ppm)	40 max
Arsenic ppm	1 max.
Copper ppm	5 max.
Lead ppm	5 max.

Calcium Carbonate

Gulshan Polyls Ltd produces over 19 grades of Calcium Carbonate (Precipitated, Activated, ground and wet) used in various industries. four of GPL's facilities, spread across the country, are dedicated to manufacturing calcium carbonate with an integrated capacity of 1,05,000 MTPA. facilities have in-house microbiology laboratory with extensive R & D facility and are backed by 7MW captive power plants. GPL has imported classifiers from IVA industrieberatung GmBH, Germany, for ground Calcium Carbonate in order to make it-self eco-friendly, all facilities have clarifiers to recover maximum solids and waste water discharge.

Facts about Calcium Carbonate:

- Calcium Carbonate is a chemical compound with the formula CaCo3.
- Calcium Carbonate Precipitated, Activated Calcium Carbonate, GCC, WGCC, Paper Grade, Onsite PCC and more.
- Activated Calcium Carbonate is produced by surface coating on Precipitated calcium Carbonate with stearic Acid, Titanate Coupling Agent, etc.

Applications of Calcium Carbonate:

- **PVC & CABLE:** PCC improves the base properties of polyvinyl chloride by adding stiffness to the polymer matrix and improves impact resistance. It also improves mechanical properties (tensile strength and elongation) and electrical properties (volume resistivity). Polypropylene compounds are often filled with calcium carbonate to increase rigidity, a requirement that becomes important at high use temperatures.
- **PAINTS:** PCC is used as an extender in paints, in particular matte emulsion paint. It provides a greater covering strength, thus increasing the performance of high quality paints, oil synthetic and other coatings. It contributes to the opacity and that the paint will cover, without dripping, the surfaces.
- **DENTRIFICE:** Toothpaste and tooth powder manufacturers use PCC as a cleaning-polishing absorption options, which enables the manufacturers to choose most suitable option to maintain desired water content in th toothpaste.
- **DETERGENTS**: PCC is used as a mineral filler to improve the consistency and dryness of the final mass of detergent.
- **RUBBER:** PCC maintains flexibility and increases resistance to torsion and traction thus improving rubber's mechanic and electric characteristics.

Packaging

The Calcium Carbonate is packed in different denominations such as 25kg/50kg/1000kg HDPE/Paper Bags.

Common analysis of Gulshan Calcium Carbonates

Following are the typical analysis of different grades of Gulshan Precipitated Calcium Carbonates (PCC) & Natural Ground /Wet ground Calcium Carbonates (GCC/WGCC), which are controlled by meticulous processing/grinding conditions as well as selection of raw

Typical chemical analysis

Parameters	PCC	GCC/WGCC
Caco3 (min)	97%	98%
Magnesia as Mgo (Max)	0.5%	0.5%
Silica as SiO2 (Max)	0.5%	0.3%
Iron as Fe (max)	0.01%	0.01%
Manganese as Mn (max)	.003%	.003%
Fluoride (max)	0.05%	0.05%
Phosphate (max)	0.07%	0.07%
Sulphate (max)	0.25%	0.25%
Copper Cu (Max)	5 PPM	5PPM
Lead Pb (Max)	10 PPM	10PPM
Arsenic As (Max)	2 PPM	2 PPM
Chloride Cl	Traces	Traces
Matter insoluble In HCL (Max)	0.2%	0.2%
pH Value	9.8 ± 0.5	9.8 ± 0.5
Soluble alkali (max)	0.2 %	Traces

Physical Properties

Parameters	PCC	GCC/WGCC
Color	Bright white	Bright white
Brightness (ISO)	95-98%	92-95%
Specific gravity in µ	2-6 µ	1-6 µ
Moisture (Max)	1%	0.5%
PSD-D50 in µ	2-6 µ	1-6 µ
PSD (Top-Cut) in µ	8-14 µ	2-15 µ

Calcium Carbonate

Onsite PCC Plant

Global Reach

GPL's products are available in 30 countries, making it the largest exporter of Sorbitol 70% from india. GPL's strength lies in manufacturing products efficiently. This fact is substantiated by our Sorbitol exports to regions as diverse from South-East Asia to Africa & Middle-Ease. GPL has created its niche market on the strength of its quality and deliverables to its esteemed customers and has established a name for itself in global polyols market.

PLANT LOCATIONS

Starch Derivatives Unit
Jhagadia Industrial Estate
Distt. Bharuch (Gujarat)
India

Indus Spirits, IMFL Bottling
9, 10, 11 Boregaon Industrial Area
Tehsil Sausar,
District Chhindwara (M.P), India

Calcium Carbonate Units

Unit - 1
9th K.M., Jansath Road
Muzaffarnagar - 251 001 (U.P.)
India

Unit - 2
Village Rampur Majri
Dhaulan Kaun - 173 001
Distt. Sirmour (H.P.), India

Unit - 3
Jhagadia Industrial Estate
Distt. Bharuch, (Gujarat)
India

Unit – 4
E-21-22, RIICO Growth Centre
Phase-II Abu Road
District Sirohi (Rajasthan), India

BRANCH OFFICE

Mumbai
112, Sri Balaji Darshan, Tilak Marg, Santa Cruz (West), Mumbai - 400 054
Phones: +91-22-3253 5659, 3253 3597, Fax: +91-22-26461428
E-mail: gsclmumbai@gulshanindia.com

GULSHAN

Corporate Office :
GULSHAN POLYOLS LTD.
G-81, Preet Vihar, New Delhi 110 092, INDIA
Ph. : +91-11-49999200, 206, Fax : +91-11-49999202
E-mail : gscldelhi@gulshanindia.com, marketing_scm@gulshanindia.com