accent
bonding precision

UNIT - 1

## HONOURED RECOGNITIONS

Every ambition is accomplished with support and boost. Execution of plans is possible only through the required aiding credits. We feel glad to have been approved by FDA to climb this ladder of success. We have earned certifications and accreditations to name as **US-DMF, GMP, ISO 9001:2008, HACCP, KOSHER, HALAL & USP/NF, EP, BP, JP, IP, FCC, FSSC-22000, FSSAI.**

Thanks to all these credits we earned that we were able to see and fulfil our own dreams and serve our clients better.

# THE TRIUMPH TALE

The remarkable journey began in 2001 when Accent made its debut as a manufacturer and supplier of pharmaceutical excipients. Reciting the slogan of technology and quality, Accent has emerged out to be the pioneers in terms of precision and excellence in production.

With the rise and shine over a decade now, Accent has achieved milestones in the form of MCC, MS and CCS. The company values its optimism for the provision of supreme quality products.

UNIT - 2


## VISION

With a focus of expansion on a global platform along with value addition to healthcare and life.

## MISSION

Practising an innovative approach for consistent quality through appropriate groundwork, distinctive strategy and technology.

## QUALITY POLICY

Accent Microcell Private Limited shall ensure to provide high-quality products to our customers through constant improvement in manufacturing process, use of high-quality material & stringent quality control. Customer satisfaction with on-time committed delivery is our main motto. The policy is reviewed for continued suitability from time to time.







## TECHNOLOGY
# MAGNIFIED

Talking about the technology, we mean the quality of products along with an innovative approach to raise the standard of the products.

To identify, unleash and accept the challenges and requirements of the growing product market, technological advancements are conceptualised and established. The Dahej-SEZ Plant in Gujarat spread over 20,000 $m^2$ with an installed capacity of 12,000 MT per annum is the best example of the above.

## THE CRAFTING
# CREW

We owe our prominence to our dedicated staff and our overseas market experience. The efforts put up and the cognisance created by the management keep the company at par to the latest development of today's world.




# A PRECISE ENDEAVOUR

We are equipped for mass production of pharmaceutical excipients under IPEC/GMP guidelines. An in-house R&D, quality control and microbial department with chemical, physical and microbiological analytical laboratories are all structured to function as per international standards.

# PRODUCT RANGE

## MICROCRYSTALLINE CELLULOSE

MCC $(C_6H_{10}O_5)_n$ is basically the outcome of the refinement of highly purified wood pulp. MCC is used as a texturizer, anticaking agent, extender, fat substitute, binder, filler, disintegrant, flow aid, lubricant, sugar coating additive and a bulking agent in food production.

It's silent features can also be mentioned as superior compressibility, high dilution potential, optimum particle size distribution, low friction coefficient, good flowability and fast disintegration.

MCC is pure and does not contain organic or inorganic contaminants. MCC is considered to be the finest element for tableting as it abolishes all formulation-related problems. As an alternative to Carboxymethyl Cellulose and Lactose, MCC is used in plaque assays for counting viruses. Also to mention, the most common form of MCC is used in vitamin supplements and tablets.

### Pharmacopoeia

All Accel grades comply with the latest edition of USP/NF, Ph.Eur., JP and IP.

### Accel 101:

- Direct compression tableting
- Wet granulation
- Extrusion-Spheronisation

### Accel 102:

- Compression properties similar to Accel 101
- With larger particle size, improves the flow

### Accel 103 | Accel 112 | Accel 113:

- Reduces moisture content, ideal for moisture-sensitive materials

### Accel 12:

- Outstanding flowability
- Excellent uniformity
- Short mixing time

### Accel 105:

- Finest particle size
- Direct compression of coarser, granular & crystalline materials
- Enhanced compressibility characteristics make it suitable for application involving difficult-to-compress materials
- Admixed with Accel 101 or Accel 102 to achieve specific flow and/or compression properties

### Accel 200:

- Large particle size increases flowability with minimum effect on compression characteristics
- Direct compression and wet granulation reduces tablet weight variation and improves content uniformity

### Accel 301:

- Higher density than its size equivalent Accel 101
- Increases flowability, greater tablet weight, uniformity and the potential for making smaller tablets

### Accel 302:

- Density characteristics of Accel 302 with a particle size of Accel 102
- Like Accel 301, Accel 302 increases flowability, greater tablet weight, uniformity and the potential for smaller tablets

### Accel S (Silicified MCC):

- Excellent compaction ability
- Improves lubrication efficiency
- Improves blending properties
- Better binding properties than MCC
- Increased production capacity

### Accel 581 & Accel 591 (Microcrystalline cellulose and Carboxymethyl cellulose sodium):

- Maintains suspension uniformity.
- Increases formulation stability across a wide range of pH
- As stabilizer
- Thickener
- Emulsifier
- In dry mixing, improve the flow property
- Improve creaminess
- Reduces calories

### Cellulose Powder:

- Reduce calorie
- Anticaking agent
- Controlling ice crystal growth for frozen foods
- Increase fibre content
- Maintain moisture content & freshness
- Dispersing agent
- Texturizing agent
- improves stability, , increases consistency and creaminess in case of liquid consumables

# APPLICATION OF MCC

## BAKERY

- Controls flowability
- Gives baking stability
- Gives consistent creamy mouth feel
- Exceptional for low fat products
- Upgrades product stability
- Improves texture
- Acts as bulking agent

## FLUIDS

- Brings stability in hot and cold processes
- Improves creamy mouth feel
- Ideal for dietary health drinks
- Improves opacity in milk shakes

## DAIRY

- Serves as stabilizer in ice-cream to prevent crystallization
- Works as bulking agent
- Improves texture
- Improves texture & mouth feel in processed cheese

## MEAT & SEA FOOD

- Enhances texture & mouth feel
- Excellent freeze and appropriate stability
- Holds natural characteristics and juiciness of products

## EXTRUSITION

- Used in low-calorie spaghetti, macaroni, noodles and brownies
- Raises texture and yield

## TECHNICAL SPECIFICATIONS OF MICROCRYSTALLINE CELLULOSE

| GRADE | | | | | | | |
|---|---|---|---|---|---|---|---|
| GRADE | PARTICLE SIZE DISTRIBUTION | | | | BULK DENSITY (GM/ML) | MOISTURE (%WW) | DOP# |
| | D10 (MIC) | D50 (MIC) | D90 (MIC) | APS# (MIC) | | | |
| ACCEL-101 | NMT 30 | 40-60 | NLT 80 | 50 | 0.27-0.34 | 3.0-5.0 | 200-250 |
| ACCEL-102 | NMT 45 | 70-100 | NLT 140 | 90 | 0.26-0.34 | 3.0-5.0 | 200-250 |
| ACCEL-103 | NMT 30 | 40-60 | NLT 80 | 50 | 0.26-0.34 | 1.0-3.0 | 200-250 |
| ACCEL-105 | | | | 20 | 0.20-0.30 | 1.0-5.0 | 200-250 |
| ACCEL-112 | NMT 45 | 70-100 | NLT 140 | 90 | 0.26-0.34 | 0.0-1.5 | 200-250 |
| ACCEL-12 | NMT < 50 | 100-140 | NLT 200 | 110 | 0.26-0.40 | 3.0-5.0 | 200-250 |
| ACCEL-113 | NMT 30 | 40-60 | NLT 80 | 50 | 0.26-0.34 | 0.0-2.0 | 200-250 |
| ACCEL-200 | NMT 70 | 150-200 | NLT 260 | 180 | 0.31-0.39 | 3.0-5.0 | 200-250 |
| ACCEL-301 | NMT 30 | 40-60 | NLT 80 | 50 | 0.34-0.45 | 3.0-5.0 | 130-180 |
| ACCEL-302 | NMT 45 | 70-100 | NLT 140 | 90 | 0.35-0.45 | 3.0-5.0 | 130-180 |

| DETAILS | |
|---|---|
| Description | Crystalline, odourless, tasteless, free-flowing powder |
| Colour | White or almost white |
| Solubility | Practically insoluble in water, organic solvents and diluted acids. Slightly soluble in NaOH solution (1:20) |
| Identification A | Conforms |
| Identification B (Degree of Polymerization) | Conforms |
| Assay | 97.00% to 102% |
| pH | 5.0 to 7.5 |
| Conductivity | NMT 75 µS.cm-1 |
| Water Soluble Substance | 0.25% max. |
| Ether Soluble Substance | 0.05% max. |
| Loss on Drying | Max. 7.00% |
| Residue on Ignition | 0.1% max. |
| Heavy Metals | NMT 10 PPM |
| Arsenic | NMT 2 PPM |
| Organic Volatile Impurities | Complies |

| MICROBIAL LIMIT | |
|---|---|
| Total Aerobic Microbial Count | NMT 1000 c.f.u./g |
| Total Yeast & Mould Count | NMT 100 c.f.u./g |
| Escherichia Coli | Absent |
| Staphylococcus Aureus | Absent |
| Salmonella Species | Absent |
| Pseudomonas Aeruginosa | Absent |

## COSMETICS
- Hydrocolloid compatibility aids in manufacturing creams, lotions & various cosmetic emulsions

## WELDING ELECTRODES
- Improves electrode surface and burning of electrodes
- Provides better incineration due to very low ash contents

## RUBBER
- Aids in tyre manufacture & rubber yarn for good strength & superior texture

## ENZYMES
- Helps in enzyme cellulose manufacture

## PAINTS
- Used for better texture
- Controls viscosity
- Improves holding property of paints on the surface

## CEMENT & CERAMICS
- Improves binding property
- Absorbs moisture and prevents clogging

## FILTRATION
- Assists in all filtration processes
- Serves as filtering aid in petroleum industry for metal filtration








## TECHNICAL SPECIFICATION OF SILICIFIED MICROCRYSTALLINE CELLULOSE

| GRADE | | | | | |
|---|---|---|---|---|---|
| GRADE | PARTICLE SIZE | | BULK DENSITY | MOISTURE | DOP |
| | RETAINED ON 60 MESH | RETAINED ON 200 MESH | | | |
| ACCEL S 101 | NMT 1.0% | NMT 30.0% | 0.28 to 0.33 g/ml | NMT 7.0% | NMT 350 |
| ACCEL S 102 | NMT 8.0% | NLT 45.0% | 0.28 to 0.33 g/ml | NMT 7.0% | NMT 350 |
| ACCEL S 102 HD | NMT 8.0% | NLT 45.0% | 0.35 to 0.50 g/ml | NMT 7.0% | NMT 350 |

| DETAILS | |
|---|---|
| Description | White or almost white, fine or granular powder. |
| Solubility | Slightly soluble in sodium hydroxide solution (1 in 20), Practically insoluble in water, in acetone, in ethanol, and in diluted acid. |
| Identification A (IR Absorption) | Conforms |
| Identification B | Conforms |
| Identification C | Conforms |
| Identification D | Conforms |
| pH | 5.0-7.5 |
| Conductivity | NMT 75 µS.cm-1z |
| Water Soluble Substance | NMT 0.25 % |
| Ether Soluble Substance | NMT 0.25 % |
| Loss on Drying | NMT 7.0 % |
| Heavy Metals | NMT 10 PPM |
| Residue on Ignition / Sulphated Ash | 1.8 to 2.2 % |

| MICROBIAL LIMIT | |
|---|---|
| Total Viable Aerobic Count | N.M.T. 1000 cfu/g |
| Total yeast & Mould Count | N.M.T 100 cfu/g |
| Staphylococcus aureus | Absent/g |
| Escherichia Coli. | Absent/g |
| Pseudomonas aeruginosa | Absent/g |
| Salmonella species | Absent/10g |

## TECHNICAL SPECIFICATION OF CELLULOSE POWDER

| GRADE | | | | | | |
|---|---|---|---|---|---|---|
| GRADE | PARTICLE SIZE | | | BULK DENSITY | % MOISTURE | DOP |
| | RETAINED ON 300 µm | RETAINED ON 100 µm | RETAINED ON 32 µm | | | |
| ACCEL- POWDER CELLULOSE | NMT 0.5% | NMT 15% | NMT 85% | 260 to 400 g/l | NMT 6.5% | NLT 440 |

| DETAILS | |
|---|---|
| Description | White or almost white, odourless, tasteless. |
| Solubility | Practically insoluble in water, dilute acid and most of organic solvents, Slightly soluble in dilute NaOH solution |
| Identification A,1 (Zinc Chloride test) | Conforms |
| Identification B,3 (Degree of Polymerization) | NLT 440 |
| Identification 2, Suspention test | Conforms |
| pH (10% suspension in water) | 5.0-7.5 |
| Conductivity | NMT 75 µS.cm-1 |
| Water Soluble Substance | NMT 1.0 % |
| Ether Soluble Substance | NMT 0.15 % |
| Heavy Metals | NMT 10 PPM |
| Arsenic | NMT 3 PPM |
| Lead | NMT 2 PPM |
| Mercury | NMT 1 PPM |
| Cadmium | NMT 1 PPM |
| Sulphated Ash | NMT 0.3% |
| Assay | NLT 92% |
| Starch | Not detectable |
| Particle size | NLT 5µm (not more than 105 of particles less than 5 µm) |

| MICROBIAL LIMIT | |
|---|---|
| Total Viable Aerobic Count | N.M.T. 1000 cfu/g |
| Total yeast & Mould Count | N.M.T 100 cfu/g |
| Staphylococcus aureus | Absent |
| Escherichia Coli. | Absent |
| Pseudomonas aeruginosa | Absent |
| Salmonella species | Absent |

## TECHNICAL SPECIFICATIONS OF CARBOXYMETHYL CELLULOSE AND MICROCRYSTALLINE CELLULOSE

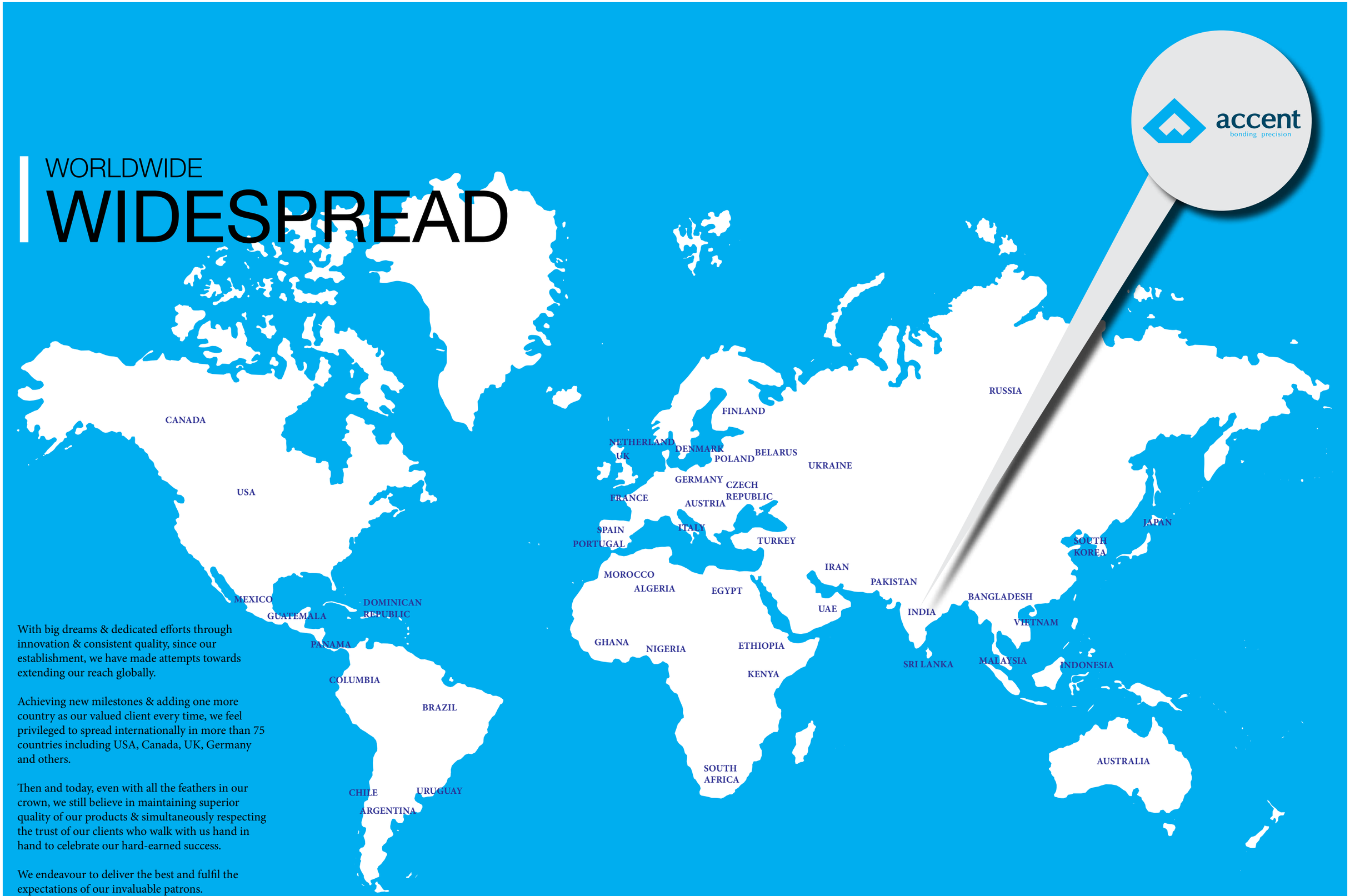
| GRADE | | | | |
|---|---|---|---|---|
| GRADE | PARTICLE SIZE | | VISCOSITY, CPS (1.2% SOLID) | %MOISTURE |
| | RETAINED ON 60 MESH | RETAINED ON 325 MESH | | |
| ACCEL - 591 | NMT 0.1% | NMT 45.0% | Between 40 and 95 | NMT 8.0% |
| ACCEL - 581 | NMT 8.0% | NMT 35.0% | Between 70 and 170 | NMT 8.0% |

| DETAILS | |
|---|---|
| Description | White to off-white white, coarse to fine powder. Taste less, odourless. |
| Solubility | Swells in water, producing, when dispersed, A white, opaque dispersed or gel. Insoluble in organic solvents and in dilute acids. |
| Identification A | A white, opaque, dispergen is produced which does not settle on standing. |
| Identification B | Each drop forms a white, opaque globule which does not disperse on standing |
| Identification C | No blue or purplish blue colour is produce. |
| pH | 6.0-8.0 |
| Viscosity, cps (1.2% solid) | Between 40 and 95 |
| Heavy Metals | NMT 10 PPM |
| Sulphated Ash | NMT 5% |
| Loss on Drying (1g at 105°C) | NMT 8.0% |
| Assay, %( NLT 75% and NMT 125% of the labeled amount of CMC Sodium, calculated on dry basis) | 8.3 to 13.8 |

| MICROBIAL LIMIT | |
|---|---|
| Total Viable Aerobic Count | NMT 1000 c.f.u./g |
| Total Yeast & Mould Count | NMT 100 c.f.u./g |
| Staphylococcus Aureus | Absent/g |
| Escherichia Coli | Absent/g |
| Pseudomonas Aeruginosa | Absent/g |
| Salmonella Species | Absent/10g |

WORLDWIDE

# WIDESPREAD




With big dreams & dedicated efforts through innovation & consistent quality, since our establishment, we have made attempts towards extending our reach globally.

Achieving new milestones & adding one more country as our valued client every time, we feel privileged to spread internationally in more than 75 countries including USA, Canada, UK, Germany and others.

Then and today, even with all the feathers in our crown, we still believe in maintaining superior quality of our products & simultaneously respecting the trust of our clients who walk with us hand in hand to celebrate our hard-earned success.

We endeavour to deliver the best and fulfil the expectations of our invaluable patrons.

CROSCARMELLOSE

# SODIUM

CCS is an internally cross-linked polymer of sodium carboxymethyl cellulose and at Accent is available as Acrocell. Possessing the nature of being cross-linked, it is insoluble, hydrophilic and highly absorbent. Being uniquely fibrous, it holds remarkable water wicking capabilities. CCS improves bioavailability of formulations through its drug dissolution and disintegration attributes. E468 cross-linked sodium carboxymethyl cellulose acts as a food emulsifier.

## APPLICATION OF CCS

- Rapid disintegrator in pharmaceutical formulations for tablets, capsules and granules
- CCS effectively combines with insoluble and filler binders such as MCC and DCP
- It is preferable for non-starch base formulation products
- CCS being a rapid disintegrator, tablet dissolution can be easily achieved
- Efficient for low use of levels
- CCS works well for insensate hardness of tablets & finer dissolution stability for a long term
- Used in solid-dosage forms, vitamins and other nutrition

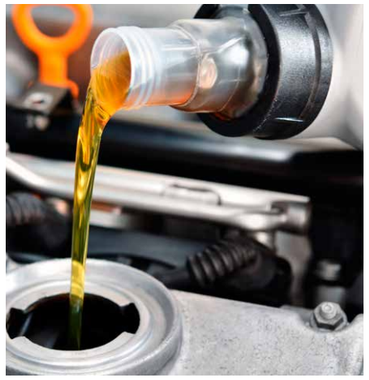
## TECHNICAL SPECIFICATIONS OF CROSCARMELLOSE SODIUM

| DETAILS | |
|---|---|
| Description | Free-flowing powder, very hygroscopic powder |
| Colour | Almost white |
| Solubility | Practically insoluble in acetone, ethanol, ether and toluene |
| Identification (A,B,C), (1,2,3) | Have to correspond as USP/NF, JP, Ph.Eur., BP |
| Degree of Substitution | 0.60 to 0.85 as USP/NF, JP, Ph.Eur., BP |
| Loss on Drying | NMT 10.0% as USP/NF, JP, Ph.Eur., BP |
| pH | 5.0-7.0 as USP/NF, JP, Ph.Eur., BP |
| Content of Water Soluble Substance | NMT 10.0 % as USP/NF, JP, Ph.Eur., BP |
| Residue on Ignition / Sulphated Ash | 14.0% to 28.0% as USP/NF, JP, Ph.Eur., BP |
| Settling Volume | 10 to 30 ml as USP/NF, JP, Ph.Eur., BP |
| Sodium Chloride & Sodium Glycolate | NMT 0.5 % as USP/NF, Ph.Eur., BP |
| Heavy Metals | NMT 10 PPM as USP/NF, Ph.Eur., BP |

| MICROBIAL LIMIT | |
|---|---|
| Total Aerobic Microbial Count | N.M.T. 1000cfu/g as USP/NF, Ph.Eur., BP |
| Total Yeast & Mould Count | N.M.T 100cfu/g as USP/NF, Ph.Eur., BP |
| Escherichia Coli | Absent as USP/NF, Ph.Eur., BP |
| Staphylococcus Aureus | Absent as USP/NF, Ph.Eur., BP |
| Salmonella Species | Absent as USP/NF, Ph.Eur., BP |
| Pseudomonas Aeruginosa | Absent as USP/NF, Ph.Eur., BP |

MAGNESIUM

# STEARATE



MS, also called Octadecanoic Acid, is a salt that contains 2 equivalents of stearate joined by an ionic bond to a magnesium atom. MS being insoluble in water and carrying a melting point of about 120°C, it is considered safe for human consumption below levels of 2500 mg/kg/day.

With its lubricating properties, MS prevents the ingredients from sticking to the machines during the compression of chemical powders into production of solid tablets thus speeding up production. MS is a sugar binder for candies and is also commonly used in baby foods.

The FDA classifies MS as a glidant or a granulating agent. MS functions in preventing molecular clumping thus ensuring accurate dosage of every pill. It is an inactive ingredient binding the active ingredients of a pill or a capsule. MS acts as a masking agent for taste & odour of active ingredients and helps prolong the shelf life of pharmaceuticals.

## APPLICATION OF MS

- Used as lubricant in tableting & pharmaceuticals
- Works as flattening agent in paints and varnishes
- Functions as stabilizer & lubricant in engineering & plastics
- Acts as soothing agent in talcum powder & other cosmetics
- Serves as emulsifying agent in cosmetics & anti-caking agent in foods

## TECHNICAL SPECIFICATIONS OF MAGNESIUM STEARATE

| DETAILS | |
|---|---|
| Description | Very fine, light powder, greasy to touch |
| Colour | White |
| Solubility | Practically insoluble in water & anhydrous ethanol |
| Identification A (Freezing Point) | Have to correspond as USP/NF, Ph.Eur., BP |
| Identification B (Acid Value) | 195 to 210 as USP/NF, Ph.Eur., BP |
| Identification C, D | Have to correspond as USP, BP, Ph.Eur |
| Acidity or Alkalinity | Have to correspond as USP, BP, Ph.Eur |
| Chloride | NMT0.1% as USP/NF, Ph.Eur., BP |
| Sulphates | NMT 0.5% as USP/NF, Ph.Eur., BP |
| Cadmium | NMT 3 PPM as USP/NF, Ph.Eur., BP |
| Lead | NMT 10 PPM as USP/NF, Ph.Eur., BP |
| Nickel | NMT 5 PPM as USP/NF, Ph.Eur., BP |
| LOD | NMT 6% as USP/NF, Ph.Eur., BP |
| Assay of Magnesium | 4.0% to 5.0% as USP/NF, Ph.Eur., BP |
| Fatty Acid Composition | NLT 40% of Stearic Acid & NLT 90% of sum of stearic acids & palmitic acid as USP/NF, Ph.Eur., BP |
| Bulk Density | 0.22 to 0.35 gm/ml |
| Sieve Analysis 200 Mesh (Passing Through) | NLT 90.00% |

| MICROBIAL LIMIT | |
|---|---|
| Total Viable Aerobic Count | N.M.T. 1000cfu/g as USP/NF, Ph.Eur., BP |
| Total Yeast & Mould Count | N.M.T 100cfu/g as USP/NF, Ph.Eur., BP |
| Escherichia Coli | Absent as USP/NF |
| Salmonella Species | Absent as USP/NF |

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