

# RIDDHI METAL & CHEMICALS

---





# RIDDHI METAL AND CHEMICALS

We introduce ourselves as an industrial unit located in Mehsana. We are engaged in the manufacture and supply of **HIGH QUALITY FILTERAID** out of imported raw materials. We are in this field for about last five years and are catering to various reputed Industrial customers located all over India and internationally. Satisfied with the quality and reliability of the materials, we have been receiving repeated patronage from all our customers.

Demand for good quality Filter aid in India has been showing an upward trend. With only a few manufacturers, with limited capacities, to meet the growing needs, many companies have been relying on imported Filter aid. The company has set up a sophisticated plant near Ahmedabad for manufacturing Filter aid under the brand name **LIGHT SILICA** which is widely used for Filtration purposes. The company has enough capacity to manufacture and supply the above products as per the customer's requirements. It also has certain ambitious plans to develop new products.

Filter aid are the intrinsic elements used in any filtration process. So if you are

Looking for an aid...

To remove solid suspended impurities from liquids?

To get Excellent Clarity of liquid?

A Consistent Flow rate? At a very Economical Cost.

USE

**LIGHT SILICA**

We hereby enclose the literature of the same for your kind perusal. The correct grade of Filter aid that you may require will depend on the nature of liquid you are filtering. We will be highly obliged if an opportunity is given to exhibit the quality of our products.

We look forward to receive your valued enquires for the above product and we will be pleased to respond to your requirements. Meanwhile, assuring you of our best attention and prompt services at all times



# RIDDHI METAL AND CHEMICALS

*Looking for an aid...*

*To remove solid suspended impurities from liquids?*

*To get Excellent Clarity of liquid?*

*A Consistent Flow rate? At a very Economical Cost.*

## USE

### LIGHT SILICA

#### PERLITE FILTER AID

Perlite in its natural state is a volcanic siliceous rock containing 3 - 4% of occlude water. When crushed and heated up to a temperature of approx. 950 C, it pops like "popcorn" expanding to about 20 or more times its original volume. This popping action gives rise to a host of properties that make the Expanded Perlite ideal for use in many industrial applications. The expansion process also creates one of Perlite's most distinguishing characteristics: "WHITE COLOUR".

Riddhi Metal & Chemicals., has successfully put up a plant for manufacturing Perlite filter aids in India. The plant is located at Mehsana, dist. North Gujarat. The Perlite manufactured by the plant is branded as Light Silica and is thus a natural aid to industrial filtration.

PHYSICAL CHARACTERISTICS	CHEMICAL CHARACTERISTICS
<ul style="list-style-type: none"><li>• Colour - White</li><li>• Apparent Density Dry Loose Density 65 – 180 Kg/Cu.m  Dry Compact Density 205 – 325 Kg/Cu.m</li><li>• Specific Gravity - 2.34</li><li>• Organic Matter - Nil</li><li>• Hygroscopicity - Nil</li></ul>	<p>Chemically, it is an amorphous mineral consisting of fused sodium potassium aluminum silicate. Solubility of LIGHT SILICA Perlite Filter aid is extremely low in organic and inorganic acids at both high and low temperatures. Solubility in alkalis depends upon the kind of alkalis, the concentration and time &amp; temperature in contact.</p>



# RIDDHI METAL AND CHEMICALS

## FULL RANGE OF GRADES

GRADES	MEAN PARTICAL SIZE (MICRON)	FILTER CAKE DENSITY – MAX (Kg/Cu.M)	FLOW RATIO
• <b>Light Silica</b>	12.0 – 18.0	140 - 215	1650 approx.
• <b>Heavy Silica</b>	8.0 – 12.0	230	655

The correct grade of Light Silica to be used will depend on the nature of liquid, solid suspended impurities and the type of filter equipment used.

• <b>Particle size</b>	It is directly related to Filter aid performance. Larger the particles size more permeable is the Filter aid. Proper blend of particle size gives highest clarity at maximum flow rate.
• <b>Filter cake - density</b>	As compared to the diatomite Filter aid Perlite filter aids form lower density cakes. Light Silica Filter aid is available in wide range of grades. The Filter equipment to be used is depended on this factor. ✓ <b>Body feed</b> – High cake density(230-300 Kg/M3) ✓ <b>RVF</b> – Low cake density (150-230 Kg/M3)
• <b>Clarity</b>	Light Silica Filter aids can filter out sub-micron range particles (less than 1.0 micron size). Low permeability grades of Light Silica give the Highest clarity.

**Light Silica** Filter aid are used as:

1. **Precoat:** The liquid to be Filter aid is allowed to flow through a packed layer of Filter aid.
2. **Body feed:** Filter aid itself is added to the liquid to be Filter aid.

### Industrial applications of **Light Silica** Pearlite Filteraid

- Chemicals
- Paints
- Dyes
- Dextrose/Glucose
- Antibiotics
- Resins
- Vegetable oil
- Soft drinks



# RIDDHI METAL AND CHEMICALS

## GENERAL SPECIFICATIONS OF LIGHT SILICA PERLITE FILTERAID GRADES

### PHYSICAL PROPERTIES

Description	Perlite Filter aid(Light Silica)
COLOUR	WHITE
DRY LOOSE DENSITY ( gms / cc )	0.080 TO 0.11
WET CAKE DENSITY ( gms / cc )	0.215
MOISTURE AT 105 degree C ( Max )	1.5%
WATER ABSORPTION (as % by wt. of Light Silica )	280 TO 345
OIL ABSORPTION (as % by wt. of Light Silica )	230 TO 265
HYGROSCOPICITY	NIL
SPECIFIC GRAVITY	2.34
FLOW RATE	1650 approx.
MEAN PARTICLE SIZE (microns)	12.0 to 18.0
% RETAINED ON 150 MESH (max)	17.0 approx.
% RETAINED ON 325 MESH (max)	37.0 approx.

### CHEMICAL PROPERTIES

● SILICON DIOXIDE %	70.0 TO 76.0
● ALUMINIUM OXIDE %	10.0 TO 14.0
● FERRIC OXIDE % (max)	0.40
● FERROUS OXIDE % (max)	0.50
● CALCIUM OXIDE %	0.50
● MAGNESIUM OXIDE %	0.20
● SODIUM OXIDE %	3.0 TO 4.0
● POTASSIUM OXIDE %	4.0 TO 5.0
● ORGANIC MATTER %	NIL
● pH OF 10% SLURRY IN WATER	6.5 TO 8.0

● SOLUBILITY	NEGLIGIBLE	IN WATER AND WEAK ACIDS
	SOMEWHAT SOLUBLE	IN STRONG ACIDS/ALKALI



# RIDDHI METAL AND CHEMICALS

## PRODUCT PROFILE:

### THE PRODUCT

Precipitated calcium carbonate is one of the most versatile inorganic chemical, which finds application in a wide cross section of industries.

### RAW MATERIAL:

PCC is made from a high purity calcium carbonate rock called limestone. Riddhi Metal and Chemicals (india) PCC Products uses high quality limestone for its pcc products. For the said project, the most accessible and best area for raw material is the deposits in Gujarat. No other place in India can compete Gujarat for limestone mines.



### QUALITY RESEARCH AND DEVELOPMENT:

Our motto "BEST QUALITY AND PROMPT PROMISE" inspires us to achieve the highest standard of products and services. Our technical team is highly qualified with experience of more than two decades of calcium carbonate. Our laboratory, with latest instruments and equipments, helps us in improving and maintaining quality of the product for customer's satisfaction.



### INFRASTRUCTURE :

#### 1. Advantages of plant location and layout.

The plant is situated at Mehsana district at Ahmedabad – Mehsana main highway, that makes it easy approachable. Transportation facility is very convenient from the plant location.

#### 2. Best in class plant shed

The plant is having best shed among others and assures no bird and dust nuisance.

#### 3. Best in class "ss" accessories for manufacturing pcc powder

All the dryers used in the process of manufacturing pcc are made with "SS" accessories that ensure best quality of finished product.

#### 4. Environment & safety management system

We believe in eco friendly environment and sufficient green trees are planted in the factory. Further, the organization follows all safety management compliances in the factory premises.





# RIDDHI METAL AND CHEMICALS

## **PRECIPITATED CALCIUM CARBONATE MANUFACTURING PROCESS:**

The manufacturing of PCC using limestone as raw-material consists of four steps viz.

1. Calcinations
2. Hydrolyzation
3. Carbonation
4. Drying, Coating (if required) & Packing

## **PRODUCTS AND THEIR APPLICATIONS:**

The different shapes allow PCC to act as a functional additive in sealants, adhesives, plastics, rubber, inks, paper, pharmaceuticals, nutritional supplements, cosmetics, dentifrices, foods and beverages, animal food and many other demanding applications. A formulator can choose a shape, and the physical properties that result from that shape, that gives the best performance in the end use.

In the PCC process, production can be made with very small sizes, with high surface areas, high oil absorption, and/or with different powder bulk densities-from ultra-low to super-high powder densities.

The type of calcium carbonate used by various Indian industries, are namely activated and precipitated calcium carbonate. The activated type is produced in one grade only. Whereas PCC is produced mainly in three grades such as light, medium and heavy.

All the three grades of PCC are same as far as chemical analysis (purity) is concerned Physical characteristics are much different as shown in the specification of product.

As such there is no present or possible competition from the substitute product in the long run.

## **WIDE APPLICATIONS OF PRECIPITATED CALCIUM CARBONATE:**

### **TOOTHPASTE & TOOTH POWDER :**

Precipitated calcium carbonate is used by toothpaste and tooth powder manufacturers widely to reduce the cost and to improve the quality of the product. Due to its abrasive characteristics, toothpaste and tooth powder manufacturers use it as a cleaning and polishing agent and the ph is controlled about at 9. Precipitated calcium carbonate also offers different water absorption options, which enables the manufacturers to choose most suitable option to maintain desired water content in the toothpaste. Tooth powder manufacturers also get benefit of fluffiness due to low bulk density of PCC.

Precipitated calcium carbonate is widely used by paper industry to manufacture alkaline media paper making. Around 70% of the total output of precipitated calcium carbonate of the world is consumed by paper industry alone. Precipitated calcium carbonate improves the brightness, smoothness, and opacity of paper. It also increases the ink receptivity. Precipitated calcium carbonate reduces the cost of production of papermaking. However it is mainly used in office paper and cigarette paper etc.





# RIDDHI METAL AND CHEMICALS

## **PAINT**

Precipitated calcium carbonate is widely used by paint industries for the manufacturing of emulsion paint and powder coatings. With its high whiteness and ideal distribution, precipitated calcium carbonate improves the processability characteristics of paint. Precipitated calcium carbonate is an anti setting agent and also an opacifying agent which enhances the gloss and stability characteristics of the paint. Precipitated calcium carbonate also works as an anti rust agent. Moreover, with all the above benefits it reduces the cost of the product.



## **PHARMACEUTICAL**

Pharmaceutical industries use precipitated calcium carbonate in the fermentation process and to manufacture tapped density tablet making. Pharmaceutical grade precipitated calcium carbonate contains high content of  $\text{CaCO}_3$  and very low impurities like pb, as, hg, fe etc. It is used to neutralize the acids in fermentation process and for calcium supplement tablets. Granulated precipitated calcium carbonate makes it easier to shape calcium tablets.



## **INK**

Ink manufacturers use precipitated calcium carbonate as an anti settling agent. And as anti settling agent, precipitated calcium carbonate works as an extender assisting in the control of strength and body of the ink.



## **FOOD**

Precipitated calcium carbonate is used by the chewing gum, powder drinks and wine manufacturers. The chewing gum manufacturer's uses it as calcium supplement as a mold release material whereas powder drinks manufacturers use it to neutralize excess acid in the food. The wine manufacturers use precipitated calcium carbonate as a filtration aid. Precipitated calcium carbonate increases the nutrition ingredient and puff in food and makes them taste better. For use in the food industry, the heavy metals like pb, as, hg, fe etc. Should be controlled below prescribed standards. It is also used as a source of calcium supplement in baking products. Apart from all these sectors pcc and acc are widely used in pan masala, gutka, chocolates, cattle feeds etc. Pcc is also used in child growth powder for calcium.



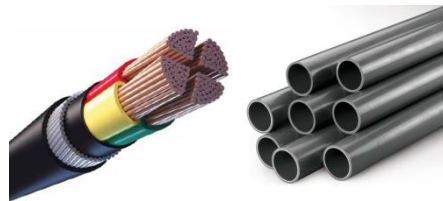




# RIDDHI METAL AND CHEMICALS

## PCC IN PLASTICS

PCC is used as functional filler in polymers as a filler. It improves surface finish, impact strength provides better hardness and controls polymer viscosity. In plastic, main products are: PVC PIPES, ABS, P.O., P.P., PS, EPDXY, PHENOLIC COMPOUNDS, TPES AND PU, PROFILES, PVC CABLES, LEATHER CLOTH, FILMS, FLOORING MASTER BATCH FILLER and PLASTIC WALLPAPERS etc.



## PCC IN COSMETICS

PCC is now a recognized ingredient of face powder. It renders remarkably smooth and free flowing properties with high covering power and absorbency adhesiveness and slip. This industry uses light grade pcc, as a perfume extender. To increase fluffiness and control absorption, as a perfume carrier.



## SPECIFICATIONS

Particulars	RMC - 222	RMC - 333
<b>Appearance &amp; Colour</b>	White fine powder, free from impurities	White fine powder, free from impurities
<b>Bulk Density (mg/ml)</b>	0.44 -0.48	0.62 – 0.66
<b>%Assay as CaCO<sub>3</sub></b>	98.5 (+0.5)	98.5 (+0.5)
<b>%Whiteness</b>	94	94
<b>%Sieve retention on 300#</b>	NIL	NIL
<b>pH</b>	9.5	9.5
<b>%Acid insoluble matter</b>	0.25	0.3
<b>%Loss on drying</b>	0.5 MAX	0.5 MAX
<b>Particle size D50</b>	less than 5 p.m	less than 71.im
<b>%Soluble Alkali (as Na<sub>2</sub>O)</b>	0.14 MAX	0.15 MAX
<b>% Iron (As Fe)</b>	0.0189	0.02
<b>%Mg</b>	0.5 MAX	0.5 MAX
<b>As ppm</b>	<1	<1
<b>Cd ppm</b>	2 MAX	2 MAX
<b>Ni ppm</b>	<1	<1
<b>%Total Heavy metals (As Pb) ppm</b>	20 MAX	20 MAX



# RIDDHI METAL AND CHEMICALS

## **MARKET APPRAISAL & DEMAND POTENTIAL:**

The demand estimation for Precipitated grades of Calcium Carbonate has been established utilizing the relevant information from DGTD on the Planning Commission. Consumption pattern by different industries has been established based on the market survey; the demand is more established on the basis of market appraisal by personal discussion, business contact and data from CMIE.

The demand of calcium carbonate is very high due to its applicability in wide range of industries. With the growth in the production capacities of the above industries, calcium carbonate is going to be in demand more and more.

## **OFFICE:**

**49, MAHAVIR SOCIETY,  
NR. LALBHAI HOSPITAL,**

**DAIRY ROAD,**

**MEHSANA - 384002**

**GUJARAT - INDIA**

**PH. +91 8000373434, +91 9825067915**

**Email: [riddhimetal.chemicals@gmail.com](mailto:riddhimetal.chemicals@gmail.com)**

**Web: [www.riddhimetalandchemicals.com](http://www.riddhimetalandchemicals.com)**

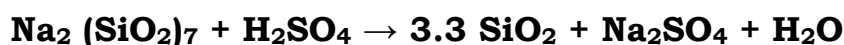
RMC



# RIDDHI METAL AND CHEMICALS

## PRECIPITATED SILICA

**Precipitated silica** is a silica ( $\text{SiO}_2$ ) produced by precipitation from a solution containing silicate salts. The production of precipitated silica starts with the reaction of an alkaline silicate solution with a mineral acid. Sulfuric acid and sodium silicate solutions are added simultaneously with agitation to water. Precipitation is carried out under alkaline conditions. The choice of agitation, duration of precipitation, the addition rate of reactants, their temperature and concentration, and pH can vary the properties of the silica. The formation of a gel stage is avoided by stirring at elevated temperatures. The resulting white precipitate is filtered, washed and dried in the manufacturing process.



## RUBBER AND TYRE GRADE (PPTS – 100)

PPTS - 100 gives high dispensability, makes it better reinforcing silica and suitable for filling a natural, synthetic and latex rubber, transparent shoe soles, tyres, tubes, rubber lining, vulcanization of rubber etc. to provide toughness and high resistance to abrasion.

Sr. No.	Description	Specification
1	Appearance	White free flowing powder
2	Packing	25 Kgs.
3	pH (5 % w/v) Aq. Sus.	6.5 to 7.5
4	BET Surface area	160-190 m <sup>2</sup> /gm
5	Moisture Content (at 105@ C for 2 hr )	5.0 % (Max)
6	Bulk Density Before Tapping Bulk Density after Tapping	Gm/ml, 0.10 max. Gm/ml, 0.15 max.
7	Loss on Ignition ( at 1000 C for 2 hrs. on anhydrous basis)	6.0 % ( Max )
8	SiO <sub>2</sub> on Anhydrous Basis	98.0 % ( Min )
9	Soluble Salt	2.0 % ( Max )
10	DBP Oil Absorption	230 % ( Min )

## End Properties

- Improves rolling resistance, wet traction & other dynamic properties.
- Give re-inforcing properties to tyres
- Improves tear resistance and abrasion resistance
- Give re-inforcing properties to tyres
- Provides higher tensile strength, long life and durability.



# RIDDHI METAL AND CHEMICALS

## PESTICIDES AND DETERGENT GRADE (PPTS – 200)

PPTS - 200 is most suitable for pesticides, insecticides & fungicides due to their extremely fine particles size and large surface area which account their use as an absorbent carrier and flow conditioner of solids and viscosity control of liquids. It has higher absorption, easier wetting, better compatibility with most toxicants and better chemical stability even after extended storage under tropical condition.

- **Pesticides:** used as a carrier for converting liquid pesticides into water like formulation of Acephate 75 % Sp, wettable sulfur and many more product formulation.
- **Detergents:** As a process aid.



Sr. No.	Description	Specification
1	Appearance	White Free Flowing Powder
2	Packing	20 Kg. / 25 Kgs.
3	pH (5 % w/v) Aq. Sus.	6.5 to 7.5
4	L.O.D. At 110 °C 2 hrs.	5.0 % ( Max )
5	Moisture Content ( at 105 °C for 2 hr )	6.0 % ( Max )
6	Bulk Density Before Tapping Bulk Density After Tapping	Gm/ml, 0.08 max. Gm/ml, 0.11 max.
7	Loss on Ignition ( at 1000 °C for 2 hrs.	6.0 % ( Max )
8	SiO <sub>2</sub> on Anhydrous Basis	98.0 % ( Min )
9	Iron Content	200 PPM max.
10	Other Soluble Salt	1.0 % ( Max )
11	Residue on 325 Mesh ( Wet Sieving )	2.0 % ( Max )
12	Water Absorption	250(Min )



# RIDDHI METAL AND CHEMICALS

## FREE FLOW ANTICAKING GRADE (PPTS – 250)

- Enhance free flowing characteristics in salt/powdered food
- Prevents caking and provides free flow



Sr. No.	Description	Specification
1	Appearance	White Free Flowing Powder
2	Packing	20 Kgs.
3	pH (5 % w/v) Aq. Sus.	6.5 to 7.5
4	L.O.D. At 110 °C 2 hrs.	5.0 % ( Max )
5	Moisture Content ( at 105 °C for 2 hr )	5.0 % ( Max )
6	Bulk Density Before Tapping Bulk Density After Tapping	Gm/ml, 0.08 max. Gm/ml, 0.10 max.
7	Loss on Ignition ( at 1000 °C for 2 hrs.	6.0 % ( Max )
8	SiO <sub>2</sub> on Anhydrous Basis	98.0 % ( Min )
9	Iron Content	200 PPM max.
10	Other Soluble Salt	1.0 % ( Max )
11	Residue on 325 Mesh ( Wet Sieving )	2.0 % ( Max )
12	Water Absorption	250 (Min )



# RIDDHI METAL AND CHEMICALS

## ANIMAL FEED GRADE (PPTS – 300)

- To improve the processing packing and stability of animal feed additives.
- Converting liquid ingredients to free flowing powder.



Sr. No.	Description	Specification
1	Appearance	White Free Flowing Powder
2	Packing	25 Kgs.
3	pH (5 % w/v) Aq. Sus.	6.5 to 7.5
4	BET Surface area	160-200 m <sup>2</sup> /gm
5	Moisture Content ( at 1050 °C for 2 hr )	5.0 % ( Max )
6	Bulk Density Before Tapping Bulk Density After Tapping	Gm/ml, 0.15 max. Gm/ml, 0.20 max.
7	Loss on Ignition (at 10000 °C for 2 hrs.	6.0 % ( Max )
8	SiO <sub>2</sub> on Anhydrous Basis	98.0 % ( Min )
9	Soluble Salt	1.0 % ( Max )
10	DBP Oil Absorption (cc/100gm)	250 % ( Min )
11	Microbiological Analysis 1) TVC 2) Y & M	NMT 1000 cfu/gm NMT 100 Cfu/gm



# RIDDHI METAL AND CHEMICALS

## FOOTWEAR & CONVEYOR BELTS GRADE (PPTS – 350)

PPTS - 350 is used in shoes soles for its resistance to wear and to tearing, its non-scuffing characteristics and to obtain compounds with light color and even transparent materials. Provides superior durability and resilience and improved modulus. Acts as white reinforce facilitating manufacturing of colored end products. We have recently introduced EVA grade for EVA footwear market. The EVA grade can be incorporated as it imparts good abrasion & modulus properties. Because Precipitated Silica is white it allows the formulator to produce either colored or translucent no marking soles. Precipitated Silica provides superior durability and resilience while improving compound stiffness for all types of rubber soled footwear.



Sr. No.	Description	Specification
1	Appearance	White Free Flowing Powder
2	Packing	25 Kgs.
3	pH (5 % w/v) Aq. Sus.	6.5 to 7.5
4	BET Surface area	110-160 m <sup>2</sup> /gm
5	Moisture Content ( at 150 °C for 2 hr )	5.0 % ( Max )
6	Bulk Density Before Tapping Bulk Density After Tapping	Gm/ml, 0.10 max. Gm/ml, 0.15 max.
7	Loss on Ignition (at 1000 °C for 2 hrs.	6.0 % ( Max )
8	SiO <sub>2</sub> on Anhydrous Basis	98.0 % ( Min )
9	Soluble Salt	2.0 % ( Max )
10	DBP Oil Absorption (cc/100gm)	230 % ( Min )

### End Properties

- Provides increase abrasion resistance and strength.
- Provides superior durability and resilience and improved modulus.



# RIDDHI METAL AND CHEMICALS

## DENTAL GRADE (PPTS – 400)

PPTS – 400 suitable in the manufacturing tooth powder and tooth paste. PPTS - 500 Silica when added to tooth powder or tooth paste acts as a good abrasive agent, thereby cleaning teeth thoroughly. The transparency of high porous and high surface area of Supersil-220 Silica permits the development of transparent tooth paste.



Sr. No.	Description	Specification
1	Appearance	White Free Flowing Powder
2	Packing	20 Kgs./25 Kgs.
3	pH (5 % w/v) Aq. Sus.	6.5 to 7.5
4	BET Surface area	160-200 m <sup>2</sup> /gm
5	Moisture Content ( at 1050 °C for 2 hr )	6.0 % ( Max )
6	Bulk Density Before Tapping Bulk Density After Tapping	Gm/ml, 0.08 max. Gm/ml, 0.13 max.
7	Loss on Ignition (at 10000 °C for 2 hrs.	6.0 % ( Max )
8	SiO <sub>2</sub> on Anhydrous Basis	98.0 % ( Min )
9	Soluble Salt	1.0 % ( Max )
10	Refractive Index	1.4350-1.4600
11	Residue on 325 Mesh ( Wet Sieving )	2.0 % ( Max )
12	Total Heavy Metal ( as Pb )	Not more than 10 ppm
13	Linseed Oil Absorption	250 - 300 (cc/100 gm)
14	Microbiological Analysis - TVC Microbiological Analysis - Y and M	NMT 1000 cfu/gm NMT 100 Cfu/gm

### End Properties

- Gives thickening effect to opaque & gel toothpaste formulation





# RIDDHI METAL AND CHEMICALS

## PHARMA GRADE (PPTS – 500)

PPTS – 500 is suitable for making tablets and pharmaceutical powders.



Sr. No.	Description	Specification
1	Appearance	White Fine light amorphous odourless powder
2	Packing	10 Kgs.
3	pH (5 % w/v) Aq. Sus.	3.5 to 5
4	BET Surface area	170-180 m <sup>2</sup> /gm
5	Bulk Density Before Tapping Bulk Density After Tapping	Gm/ml, 0.04 max. Gm/ml, 0.08 max.
6	Loss on Ignition ( at 1000 C for 2 hrs. on anhydrous basis)	5.0 % ( Max )
7	SiO <sub>2</sub> on Anhydrous Basis	98.0 % ( Min )
8	Chloride	Not more than 250 ppm
9	Total Heavy Metal ( as Pb )	Not more than 25 ppm
10	Behavior with Water	Hydrophilic

### End Properties

- Used as economic replacement of fumed silica.
- Acts as rheology controller & viscosity enhancer in creams
- Used in various pharmaceutical formulation (Tablet and powder) and syrup suspension.



# RIDDHI METAL AND CHEMICALS

## OTHER SUGGESTIVE APPLICATIONS

### **ADHESIVE:**

Precipitated silica is useful to enhance bond strength and as a reinforcing and thickening agent. The dispersed silica particles within a liquid adhesive harden fast when it is in contact with solid surface. In both natural and synthetic rubber based adhesive. Precipitated Silica provides thixotropy, reinforcement and promotes adhesion as well as serves as extenders; therefore it raises quality and lowers cost. To adjust rheology and provide reinforcement.



### **PVC SHEETS:**

Precipitated Silica is used to improve pigment dispersion and acts as a parting agent and as an absorbent to improve the flow and imparts a dry feel to the compound

- Provides higher tensile strength
- Provides longer life and durability
- Improves tear resistance
- Acts as reinforcing agent





# RIDDHI METAL AND CHEMICALS

## **RAILWAY PADS:**

Precipitated Silica is used for the following reasons in Railway Pads:

- Provides increased abrasion resistance and strength.
- Provides superior durability and resilience and improved modulus



## **RICE ROLLERS AND RUBBER ROLLERS:**

Precipitated Silica is used in Rubber Rollers and Rice Rollers for following reasons:

- Acts as reinforcing agent
- Provides higher tensile strength.
- Provides longer life and durability
- Improves the abrasion resistance and stiffness





# RIDDHI METAL AND CHEMICALS

## **SILICON TUBES:**

Silicone rubber is used in a number of applications where its unique properties provide a substantial benefit. Many of these properties are highly dependent on the type and quantity of filler used in the compound. Particular silicone rubber applications have certain physical strength requirements for example: wire and cable, medical and surgical, belting, hose, tubing and various fuel-resistant rubbers uses. When physical strength is a primary concern, reinforcing silica is the filler of choice.



## **TEXTILE COTS AND APRONS:**

Precipitated silica is used for reinforcing silica for textile cots & Aprons.



## **PRINTING INK:**

Precipitated silica is used as a thickening and suspending agent, to prevent set off and picking, to heighten brilliance.





# RIDDHI METAL AND CHEMICALS

## **COATINGS:**

Precipitated silica is used as thickening, thixotropy, ant settling agent and as matting agent at high concentration. It also reduces gloss of trade sale clear oil modified urethane varnish. It gives satin sheen in nitrocellulose furniture lacquer. It is also preferred in aluminum extrusion coating and coil coating with long guaranteed life, to reduce gloss at all viewing angles. It is gaining use in high solid pigmented metal office furniture.



## **FIRE EXTINGUISHING POWDERS:**

Precipitated silica ensures extremely good humidity protection due to its hygroscopic nature, so extinguishers remain fully operational even after extended storage.

