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ABOUT US.

Tirupati Metachems (P) Ltd. is an Indian based ISO 9001:2015 certified company with a wide variety of specialties. We are manufacturer of Resin Coated Sand & Foundry Fluxes and Chemicals.

We serve the material needs of industries; we specialize in the manufacture of various grades of resin-coated sand for shell process to produce cores and molds for non-ferrous, ferrous, & steel casting industries. We also manufacture high grade & low-cost reducing fluxes, oxidation fluxes, covering fluxes, dycotes, heat treatment salts, carbon products, silica lining materials and magnesite lining materials for induction furnaces. We also have expertise in removing dissolved non-metallic inclusions from the molten metals through fluxes, which helps very much in the rolling of sheets and flats, particularly in stainless steels.

We have won the trust of our customers over the years and have a strong hold on the local markets, and would like to provide our products & services to other parts of the world also. We strive to give the best sand to the customers through quality, reliability and services by:

- Setting high quality standards
- Upgrading the technology
- Adapting custom built products
- Dedicated to meet customer needs
- On-time delivery
- Responsive to solve trouble shootings
- Improving plant operations to obtain Q-plus products
- Resourcing technical grounds
- Enhancing quality with minimizing costs

PRODUCTS — RESIN COATED SAND.

Generally, dry silica sand of Cochin or Mangalore source / quartz based sand is coated with Phenolic Novalac liquid resin in batch mixture with catalyst and subsequently the coated sand is passed through a heating chamber for complete curing. The liquid resin gives uniform coating on the sand grains and this sand is used for making cores and moulds in the shell process. The major clients for these grades of sands are automobile foundries, pump and motor casting foundries, aluminium engine block manufacturing foundries, general engineering industries, and sanitary manufacturing industries. Our Resin Coated Sand is widely used for all Gray Iron, Malleable Iron, S.G. Iron, Steel and Stainless Steel and various types of Non-Ferrous Foundry Castings.

This is a range of Resin Coated Sand used in production of cores & moulds by shell process with superb hot strength. It is prepared from high grade silica sand by precoating it with phenol-formaldehyde (PF) resin and catalyst. This resin-coated sand is very smooth, free flowing and dry with good resistance to moisture.

QUALITY TESTING REPORT.

SL. NO.	%AGE OF RESIN	CTS (PSI) COLD TENSILE STRENGTH	HTS (PSI) HOT TENSILE STRENGTH	GAS EVOLUTION (CC/GM)	STICK POINT	AFS
A	2.5	175–185	150–160 (10–11)	8.5	100±1	60–65
B	3	225–235	200–210 (14–15)	9.5	100±1	60–65
C	3.3	260–270	235–245 (16–17)	10.2	100±1	60–65
D	3.6	280–290	245–255 (17–18)	11.0	100±1	60–65
E	4	305–315	280–290 (19–20)	12.2	100±1	60–65
F	4.5	345–355	320–330 (22–23)	14.1	100±1	60–65
G	5	445–455	410–430 (28–30)	16.2	100±1	60–65
H	5.5	555–565	500–520 (35–36)	18.1	100±1	60–65

SHELL SAND ADVANTAGES.

1. Extremely flowable, to produce cores / moulds of greater density and compacted ones. Cores and moulds are less prone to erosion by metal which reduces non-metallic inclusions.
2. Shell sand cores and moulds have hollow characteristics resulting in significantly light weight for handling and lowest cost production of castings. Deep drawn patterns with tapers of 0.5 to 3 degree can be produced by shell process.
3. High ‘out of box’ strengths of cores and moulds yield castings with high precise dimensional tolerances which lead to reduction in machining allowances, fettling and finishing cost.
4. Shell process renders elimination of refractory coatings.
5. Shell sand cores/moulds remain usable indefinitely and are unaffected by humidity and resistant to moisture pickup.
6. Shell sands are exceptionally resistant to damage during handling and storing.
7. Shell sands have the ability to make excellent casting time after time, simple to process, operated with unskilled labour.

8. Shell process leads to low capital investment for core/mould making equipments.
9. Shell process yields less sand handling and less sand consumption per unit casting to be produced.

PACKING.

Resin Coated Shell Sand — 50 kgs laminated HDPE bags / laminated PP bags. Printed matter consists of date of manufacture, batch no. & bag no.

OUR CUSTOMERS.

Jindal Stainless Ltd.

Jaquar & Co. Ltd.

Hindalco Industries

Oswal Pumps Ltd.

Note: For current rates, availability or custom formulations, please contact us anytime — Mr. T.C. Sharma, +91-97-1126-8001 · tiruchems@live.in