

Smart Materials
for the Modern
Foundry





Incorporated in the year 2016, Patel Corporation is one of the leading companies which deals in foundry and steel (casting) industries by serving Ferro alloys, Metals, Minerals, Refractory products, Carbon additives, fluxes, CRC scrap and other products related to these industries. Our constant drive to maintain and exceed quality has made us a renowned brand in the casting industries sector.

We supply the raw materials towards the industries which manufacturing Ferrous – Non-Ferrous castings, cement industries, paper mills, etc.

On the basis of honesty, trustworthy, professionalism we whole heartedly offer the best service and high-quality product for customers. We also welcome domestics and foreign customers to negotiate business with us.

To become known as the best company we were famous for technical proficiency and moral respect and admiration as a result of the company commitment with its responsibilities with its customers.

Our company located at Shapar, Rajkot – an industrial suburb of Gujarat, India – has a wide space of storage where we can store, manufacture and dispatch the materials locally and globally as well.

Your business is in need of an identity review, let Patel Corporation help you, with the widest and number of products ranges available in India.

ABOUT US

Authorized Dealer



FERRO ALLOYS & MINOR METALS

- FERRO SILICON
- FERRO MANGANESE (HC Fe MN & LC Fe MN)
- FERRO CHROME (HC Fe CR & LC Fe CR (0.03 & 0.05 % CARBON))
- FERRO SILICON CALCIUM
- FERRO SILICON ZIRCONIUM
- FERRO SULPHUR
- FERRO PHOSPHORUS
- FERRO TITANIUM (30 % & 70 % TI)
- FERRO VANADIUM
- FERRO NIOBIUM
- FERRO MOLY
- NICKEL
- SILICON METAL
- MANGANESE METAL
- CHROMIUM METAL
- MOLYBDENUM METAL
- SELENIUM METAL
- SILICO MANGANESE
- ALUMINIUM (Shots, Cube, Notch Bar, Ingot)
- TIN
- COPPER
- TUNGSTEN
- IRON – BRIQUETTES (PURE FE)
- OTHER MINOR METALS



CARBON ADDITIVES PRODUCTS

- GRAPHITIZED PETROLEUM COKE (GPC CARBON)
- CALCINED PETROLEUM COKE (CPC CARBON)
- CARBON RAISER
- SILICON CARBIDE



RAMMING MASS FOR FURNACE LINING



Maximum Protection, Minimum Heat Loss

Our Specialized ramming mass for furnace linings making offers the ultimate defense against thermal shock and erosion, ensuring consistent quality in every melt.

NEUTRAL RAMMING MASS (AL₂O₃ BASE) :

Product	AL ₂ O ₃	MGO	SIO ₂	TIO ₂	FE ₂ O ₃	BULK DENSITY	MAX SERVICE TEMP C	GRAIN SIZE
NRM SPINGEN 857	85-86	12-13	0.25 MAX	0.02 MAX	0.15 MAX	85-86	85-86	0-5 MM
STEEL PATCH 85CR	84-85	-	08-09	-	0.5 MAX	84-85	84-85	PASTE
PATCH POWDER 90CR	90-92	-	05-06	-	0.5 MAX	90-92	90-92	POWDER

BASIC RAMMING MASS (MGO BASE) :

Product	MGO	CR ₂ O ₃	SIO ₂	MAX SERVICE TEMP C	GRAIN SIZE (MM)
BASIC RAMMING MASS MAGGEN 85	85-87	08-09	8 MAX	1750	0-5
BASIC TOP MASS	68-70	08-09	8 MAX	1750	0-5
BASIC PATCH POWDER	70-72	08-09	8 MAX	1750	0-1
BASIC LADDLE MASS	65-68	4 MAX	8 MAX	1700	0-5

ACIDIC RAMMING MASS (SIO₂ BASE) :

ACIDIC RAMMING MASS	SIO ₂ (MIN)	AL ₂ O ₃ (MAX)	FE ₂ O ₃ (MAX)	BINDER	MAX SERVICE TEMP	GRAIN SIZE (MM)
RM9901 (PREMIX)	98.5	0.25	0.1	BORON BASE	1720 C	0-5
RM1001 (PREMIX)	98.5	0.3	0.25	BORIC BASE	1700 C	0-5
NT7001 (NALI-TOP)	98	0.3	0.35	-	1700 C	0-7



CASTABLES FOR LADDLE LINNING



We Are Manufacturing High-performance Refractory Castables That Engineered Specifically For The Precision Molding Which Offering Superior Mechanical Strength And Resistance To Molten Metal Erosion. We Designed For Ease Of Installation And Extended Service Life, There Materials Ensure Consistent Metal Flow And Minimal Downtime In Demanding Foundry Environments. Some Of Grades Are As Below:

REFRACTORY CASTABLE	Chemical Composition				
	AL ₂ O ₃	FE ₂ O ₃	MAX SERVICE TEMP °C	WATER REQUIRED (%)	GRAIN SIZE (MM)
HEATMAX -A	78-82	2.5 MAX	1700	08-10	0-5
HEATMAX -K	53-55	1.1 MAX	1600	10-12	0-5
HEATMAX -C	49-51	1.5 MAX	1600	10-12	0-5
HEATMAX - CREAT SUPER	68-70	5 MAX	1550	10-12	0-5
90 MORTAR	90-92	0.5 MAX	1700	8-10	0-0.2
HEATMAX - 90	89-91	1 MAX	1750	8-10	0-5
HEATMAX - 85 LI	85-86	1 MAX	1750	8-10	0-5
HEATMAX - 85	83-85	1.5-2 M.	1700	8-10	0-5
HEATMAX - LC 70	70-72	1.6 MAX	1700	5.5-6	0-5
HEATMAX - LC 85	85-87	1.2 MAX	1700	5.5-6	0-5
HEATMAX - 6040 (SIO ₂ - 50-52 %)	43-45	1 MAX	1700	5.5-6	0-5
HEATMAX - AZI (ZR - 8-9 %)	60-62	0.5 MAX	1700	5.5-6	0-5
HEATMAX - NC 60	60-62	1.4 MAX	1700	3.5-4	0-5
HEATMAX - NC 85	85-87	1.1 MAX	1700	3.5-4	0-5
HEATMAX- COILCOAT	94-96	0.15 MAX	1700	12-15	0-1, 0-3
HEATSET (FOR BRICK JOINT)	30-35	0.5 MAX	1500	-	PASTE



FOUNDRY COATINGS



We Are Manufacturing High-performance Foundry Coating Which Designed To Improve Surface Finish And Casting Quality. It Reduces Metal Penetration, Gas Defects, And Sand Fusion While Ensuring Smooth, Defect-free Castings And Enhanced Mold Strength.

PRODUCT NAME	PRODUCT DETAILS
HEATCOAT 410	ALUMINO SILICATE WATER BASED COATING
HEATCOAT 430	ALUMINO SILICATE - GRAPHITE WATER BASED COATING
HEATCOAT 432	ALUMINO SILICATE - ZIRCON WATER BASED COATING
HEATCOAT LFC 100	ALUMINO SILICATE WATER BASED THERMOCOL COATING
HEATCOAT INSTA MIX	ALUMINO SILICATE WATER BASED POWDER COATING
HEATCOAT 256	ZIRCON SPRIT BASED COATING
HEATCOAT 100 ZR(I)	ZIRCON IPA BASED COATING
HEATCOAT ZRW	ZIRCON WATER BASED COATING
HEATCOAT GA55	GRAPHITE SPRIT BASED COATING
HEATCOAT GI55	GRAPHITE IPA BASED COATING
HEATCOAT GW55	GRAPHITE WATER BASED COATING
HEATCOAT MAG-100	MAGNESITE SPRIT BASED COATING
HEATCOAT 156	HIGH REFRACTORY SPRIT BASED COATING
HEATCOAT 100 IP	HIGH REFRACTORY IPA BASED COATING

INSULATION PRODUCTS

- ASBESTOS MILL BOARD & ASBESTOS CLOTHS
- CERAWOOL BLANKETS
- MICA SHEET AND CERAMIC PAPER SHEET

BINDERS & SANDS FOR INVESTMENT CASTING

- ALUMINA SAND & FLOUR
- ZIRCON SAND & FLOUR
- FUSED SILICA (IMPORT MATERIAL)
- WHITE SAND FOR BACKUP
- SILLIMINITE SAND
- CHROMITE SAND
- OLLIVE SAND
- CALCINED CLAY (16/30, 30/80, FINES)
- CHAMOTE CLAY (MULLITE BASE) (16/30, 30/80, FINES)
- COLLODIAL SILICA



PURGING PLUG GAS DIFFUSERS

Gas Diffuser (often Referred To As A Porous Plug Or Purging Plug) In Molten Metal Works By Introducing Inert Gas- Typically Argon Or Nitrogen- At The Bottom Of A Furnace To Create A Consistent, Bubbling And Stirring Action.

It Works Through A Combination Of Pressure Management And High Temperature Material Engineering To Ensure That Gas Is Dispersed Evenly Throughout The Molten Metal

BENEFITS OF GAS DIFFUSERS :

- IMPROVE QUALITY OF CASTING
- REMOVAL OF INCLUSIONS AND IMPURITIES
- REDUCTION IN GAS CONTENT
- TEMPERATURE HOMOGENIZATION



PERLIGHT ORE & SLAG 30

Our Special Slag 30 (blue) Provides Numerous Benefits In Furnace And Ladle Operations, Particularly In Iron And Steel Foundries As It Is Primarily Used To Remove Non-metallic Impurities, Improve Metal Purity And Enhance Operational Efficiency.



FERRO SILICON MAGNESIUM & INOCULANT

FERRO SILICON MAGNESIUM

Magnesium is used to convert flake graphite into spherical (nodular) graphite, significantly improving the mechanical properties of the metal

TYPES OF FESI MAGNESIUM	CHEMICAL COMPOSITION %						SIZE
	SI	CA	AL	MG	LA	RE	MM
LAMET 5922 NODULARISER	44-48	2.8-3.4	0.8 MAX	5.6-6.2	0.4-0.6	-	2-12,4-25,4-32
LAMET 7314 NODULARISER	44-48	2.3-2.7	0.8 MAX	6.9-7.6	0.4-0.6	-	08--25
ELMAG 5800	44-48	0.8-1.2	1 MAX	5.5-6.2	-	0.85-1.15	4-25
ELMAG 6225	44-48	0.8-1.2	1 MAX	6-6.5	-	0.9-1.3	2-12,5-25
ELMAG 6527	44-48	1.8-2.4	1 MAX	6-7	-	1.7-2.0	5-15
ELMAG 7311	44-48	2.2-2.8	1 MAX	6.9-7.4	-	1.1-1.3	05--25
FSM 801112	44-48	1-2.5	1 MAX	7.5-9.0	-	1-2	2--12
FSM 951819	44-48	1.5-2	1 MAX	9.2-9.8	-	1.5-2	2-12,5-25
COMPACTMAG	44-48	1.8-2.3	1 MAX	5-6	-	5.5-6.5	2-12,5-25

FERRO SILICON INOCULANT

For Optimize Graphite Nucleation, Eleminate Chill And Enhance The Mechanical Properties Of Your Grey And Ductile Iron Casting You Can Use From Below Fesi Innoculants Types:

TYPES OF FE SI INOCULANTS	CHEMICAL COMPOSITION %								SIZE
	SI	CA	AL	BA	CE	ZR	SR	MN	MM
BARINOC	64-70	1--2	0.80-1.5	02-03	-	-	-	-	0.2-0.7, 0.7-3, 2-6
RESEED	70-76	0.75-1.25	0.75-1.25	-	1.5-2.0	-	-	-	0.2-0.7, 0.7-3, 2-6
ULTRASEED CE	68-74	0.75-1.25	0.75-1.25	-	1.4-2.0	-	-	-	0.2-0.7, 0.7-3, 2-6
PRESEED PRECONDITIONER	62-69	0.6-1.9	03--05	-	-	03-05	-	-	0-10
SUPERSEED 75	73-78	0.1 MAX	0.5 MAX	-	-	-	0.6-1.0	-	0.2-0.7, 0.7-3, 2-6
SUPERSEED EXTRA	73-78	0.1 MAX	0.5 MAX	-	-	1-1.5	0.6-1	-	0.2-0.7, 0.7-3, 2-6
SMZ 25	62-69	0.6-1.90	0.55-1.3	0.3-0.7	-	03-05	-	2.80-4.50	1-3,2-6
SMZ 95	62-69	0.6-1.90	0.55-1.3	0.3-0.7	-	3.5-05	-	3.0-4.50	0.2-0.7
MIN ALLOY	70-75	0.60-1.0	1.5 MAX	-	-	-	-	-	0.7-3, 2-6



HIGH PERFORMANCE GREEN SAND ADDITIVES

LUSTER CARBON MCOL

MCOL is a range of carbonaceous additives for green sand moulding process which is blend of products having good Lustrous Carbon, to give your casting, excellent surface finish and probably best Peel-off.

PARAMETERS	MCOL K+	MCOL K	MCOL F	MCOL CP
VOLATILE MATTERS (VM %)	41 - 41 %	48 - 52 %	53 - 57 %	45 - 55 %
ASH %	7 % MAX	7 % MAX	7 % MAX	7 % MAX
FIXED CARBON %	46 - 52 %	41 - 45 %	36 - 40 %	38 - 48 %

PRINCIPLE WE FOLLOW WHILE DEVELOPING PRODUCT MCOL
“MAXIMUM SAND, MINIMUM ADDITIVES”

BENTONITE POWDER

MICROGEL is range of Bentonite Powder which improves sand flow ability and allows the sand to breathe better by improving permeability, reduces dead clay and maintains sand refractoriness which all essential to maintaining good green sand performance on castings and reducing casting related defects.

PHYSICAL PROPERTIES	MICROGEL	MICROGEL-I
MOISTURE (@105-110 °C)	12 % MAX.	12 % MAX.
SIEVE ANALYSIS (WET) - 200 MESH	98 % Min.	98 % Min.
SIEVE ANALYSIS (DRY) - 200 MESH	85 % Min.	85 % Min.
PH VALUE (6% SUSPENSION)	9.0 - 10.5	9.8 - 11
SWELLING INDEX (2 gms/ 100 Cc)	30 +- 2 cc	35 +- 2 cc
GELLING TIME (10%)	Instantaneous	Instantaneous
GELLING FORMATION INDEX	85 Min.	90 Min.
M.B. VALUE (mg/gm of Bentonite)	390 +- 10	400 +- 10
GREEN COMPRESSIVE STRENGTH (10:4) Kg/Cm2	0.90 Min	1.0 Min.
WET TENSILE STRENGTH (N/Cm2)	0.32 Min.	0.4 Min.



OTHER FOUNDRY CONSUMABLES

- THERMEXO POWDER (RAISER POWDER)
- ANTI PIPING COMPOUND (APC POWDER)
- SURFACE COTE (FOR SURFACE HARDENING INTO GREEN SAND MOULDS PROCESS)
- COLD BOX CHEMICALS (PART A, PART B, PART C AND ITS DIE CLEANING CHEMICALS)
- NO-BACK RASIN & HARDNER (FINOLIC, FURAN, ALPHA SET)
- SILRON OIL FOR CO2 PROCESS
- SINGLE PART CORE OIL
- GRAPHITE POWDER FOR SPRAY AND SPRINK
- CORE FIX, CORE REPAIRING PASTE
- INSULATING, EXOTHERMIC AND SPECIAL PURPOSE SLEEVES
- GRAPHITE CRUCIBLES/ CARBON CUP
- THERMOCOUPLE TIPS
- YELLOW DEXTRIN POWDER (GUM POWDER)
- REDOXIDE POWDER
- CERAMIC & FOAM FILTERS
- PATTERN CLEANING AGENTS
- BORIC ACID POWDER
- ALL TYPES OF FIRE BRICKS & GRADED BRICKS
- SOFT STONE POWDER, FIRE CLAY, GROG BAJARI

CRC AND MS SCRAP



POWERED BY MODERN MACHINES



1700 °C MUFFLE FURNACE



CCS TESTING MACHINE



PLANETARY MIXER



PAN MIXER



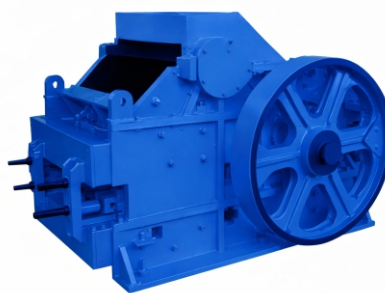
TWIN SHAFT PADDLE MIXER



SIEVE SHAKER



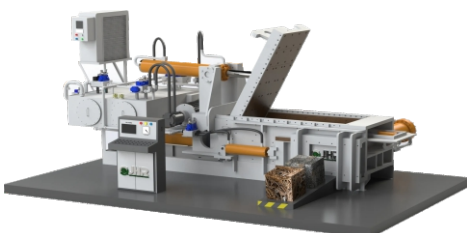
VIBRO SCREEN MACHINE



JAW CRUSHER



COATING MIXER



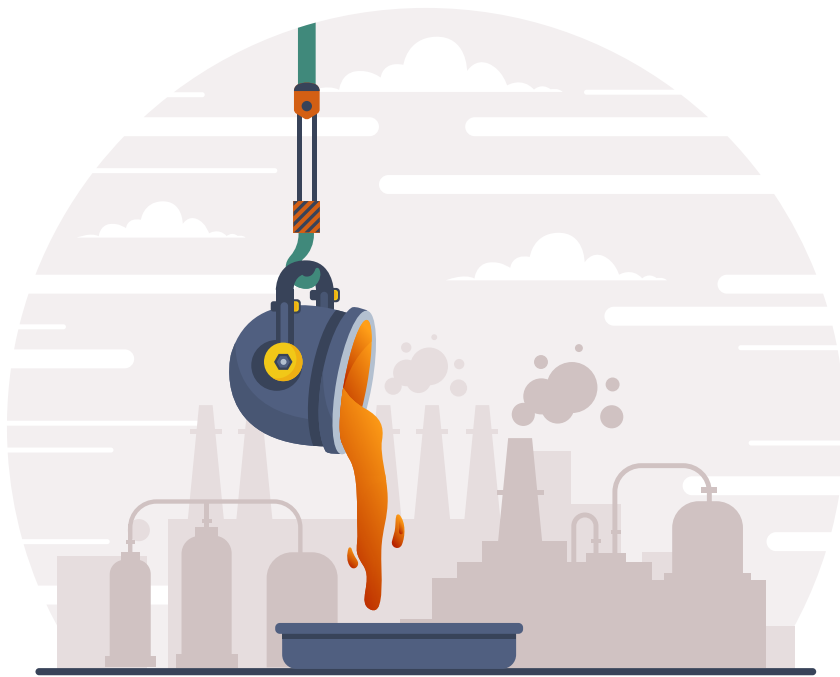
SCRAP BALING MACHINES



SPECTRO METAL ANALYZER



GAS PRE HEATER



**Premium Raw Materials
For High-performance
Foundry Operations**

- Manufacturer of Refractory Products
- Manufacturer of Coatings & Chemicals
- Ferro Alloys & Metals
- Fluxes & Minerals
- CRC & MS Scrap

Get In Touch

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