

Orind China
Product Catalog



Committed to Global Excellence

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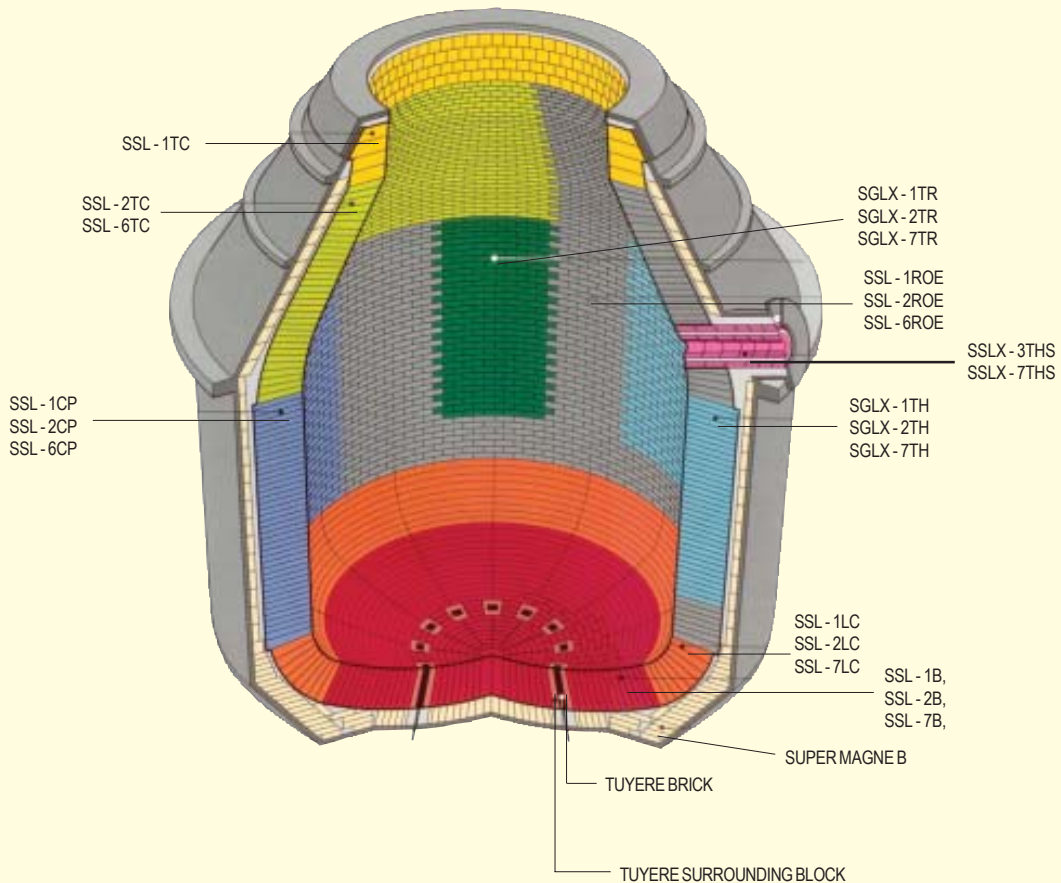


PRODUCT RANGE

Our standard recommendation for BOF / LD Converter application:

Brand Name	Physical Properties					Chemical Analysis		Application Area
	AP	BD	CCS	Coked AP at 1100°C / 2 hrs	HMOR at 1400°C / 0.5 hr	MgO	Residual Carbon	
	%	g/cc	Mpa	%	Mpa	%	%	
	Max	Min	Min	Max	Min	Min	Min	
SUPER SILVERLINE 1B	5.5	3.05	45.0	9.5	14.0	86.0	6.0	Converter Bottom
SUPER SILVERLINE 2B	5.5	3.02	40.0	9.5	14.0	85.0	7.5	
SUPER SILVERLINE S 2B	5.5	3.02	40.0	9.5	14.0	75.0	7.5	
SUPER SILVERLINE 7B	3.0	2.89	25.0	6.0	15.0	73.0	19.0	
SUPER SILVERLINE 1 LC	5.5	3.05	45.0	9.5	14.0	85.0	6.0	Converter Lower Cone
SUPER SILVERLINE 2 LC	5.5	3.05	40.0	9.5	14.0	85.0	7.6	
SUPER SILVERLINE S 2 LC	5.5	3.05	40.0	9.5	14.0	75.0	7.6	
SUPER SILVERLINE 7 LC	3.0	2.90	30.0	6.0	15.0	74.0	18.0	
SUPER SILVERLINE 1 CP	5.0	3.05	45.0	9.0	15.0	85.0	6.0	Converter Charge Pad
SUPER SILVERLINE 2 CP	5.0	3.03	40.0	9.0	14.0	85.0	7.6	
SUPER SILVERLINE S 2 CP	5.0	3.03	40.0	9.0	14.0	75.0	7.6	
SUPER SILVERLINE 6 CP	3.5	2.90	30.0	6.0	15.0	75.0	17.0	
SUPER GOLDLINE X 1 TR	6.0	2.98	35.0	10.0	14.0	84.0	6.0	Converter Trunion
SUPER GOLDLINE X 3 TR	5.5	2.96	30.0	10.0	14.0	83.0	10.5	
SUPER GOLDLINE S 3 TR	5.5	2.96	30.0	10.0	14.0	75.0	10.5	
SUPER GOLDLINE 5 TR	4.0	2.92	25.0	9.0	14.0	75.0	16.0	
SUPER GOLDLINE X 7 TR	3.0	2.85	25.0	6.0	16.0	72.0	20.0	

BOF LINING CONCEPT



Brand Name	Physical Properties					Chemical Analysis		Application Area
	AP	BD	CCS	Coked AP at 1100°C / 2 hrs	HMOR at 1400°C/ 0.5 hr	MgO	Residual Carbon	
	%	g/cc	Mpa	%	Mpa	%	%	
	Max	Min	Min	Max	Min	Min	Min	
SUPER SILVERLINE 1 ROB	6.0	3.02	40.0	10.0	14.0	85.0	6.0	Converter Rest of Barrel
SUPER SILVERLINE 2 ROB	5.5	3.00	40.0	10.0	14.0	84.0	9.0	
SUPER SILVERLINE S 2 ROB	5.5	3.00	40.0	10.0	14.0	75.0	9.0	
SUPER SILVERLINE 7 ROB	3.0	2.85	25.0	6.0	16.0	74.0	18.0	
SUPER GOLDLINE X 1 TH	6.0	2.98	40.0	10.0	14.0	84.0	6.0	Converter Tap Hole Area
SUPER GOLDLINE X 2 TH	5.5	2.96	35.0	10.0	14.0	82.3	9.0	
SUPER GOLDLINE S 2 TH	5.5	2.96	35.0	10.0	14.0	75.0	9.0	
SUPER GOLDLINE X 7 TH	3.0	2.85	25.0	6.0	16.0	74.0	18.0	
SUPER SILVERLINE 1 TC	7.0	3.00	40.0	11.0	13.0	85.0	6.0	Converter Top Cone
SUPER SILVERLINE 2 TC	6.5	2.98	35.0	11.0	14.0	82.0	9.0	
SUPER SILVERLINE S 2 TC	6.5	2.98	35.0	11.0	14.0	75.0	9.0	
SUPER SILVERLINE 6 TC	4.0	2.85	30.0	6.0	16.0	75.0	17.0	
SUPER SILVERLINE X 1 THS	7.0	2.95	40.0	11.0	14.0	84.0	6.0	Converter Tap Hole Tubes / Blocks
SUPER SILVERLINE X 3 THS	6.5	2.90	35.0	11.0	14.0	80.0	10.0	
SUPER SILVERLINE S 3 THS	6.5	2.90	35.0	11.0	14.0	75.0	10.0	
SUPER SILVERLINE X 7 THS	6.0	2.85	25.0	6.0	15.0	72.0	20.0	
SUPER GOLDLINE X 7 TC	4.0	2.85	30.0	6.0	15.0	75.0	18.0	Converter Top Cone
SUPER SILVERLINE 7 TC- KS	4.0	2.85	30.0	6.0	15.0	64.0	18.0	
SUPER SILVERLINE 7 TC	4.0	2.85	30.0	6.0	15.0	74.0	18.0	Converter Charge Pad Converter
SUPER GOLDLINE X 7 CP	4.0	2.85	35.0	6.0	15.0	74.0	18.0	
SUPER GOLDLINE X 7 ROB	4.0	2.85	30.0	6.0	15.0	75.0	18.0	
SUPER GOLDLINE X 7 ROB	4.0	2.85	30.0	6.0	15.0	74.0	18.0	Rest of Barrel
SUPER GOLDLINE X 7 B	4.0	2.85	25.0	6.0	15.0	74.0	18.0	Converter Bottom

Note: 1. B=Bottom, LC=Lower cone, CP=Charge Pad, TR=Trunion, ROB=Rest of Barrel TH= Tap Hole Area , TC= Top Cone, THS = Tap Hole sleeves
2. The above data pertains to standard pressable shapes
3. SUPER SILVERLINE, SUPER SILVERLINE X and SUPER GOLDLINE X are referred as SSL, SSLX and SGLX in short.
4. Material used : SSL = 97.5% purity Fused Magnesite, SGLX = 98% purity Large crystal Fused Magnesite SSLX= 97.5% Purity Large Crystal Fused magnesite



SUPER GOLDLINE X' & 'GOLDLINE X' series are characterized by very high purity fused magnesite (98.0 % MgO content) with large crystal size. These series are highly recommended for the EBT-EAF & conventional types of EAF. These bricks have very good resistance to corrosion by slag at high temperature.

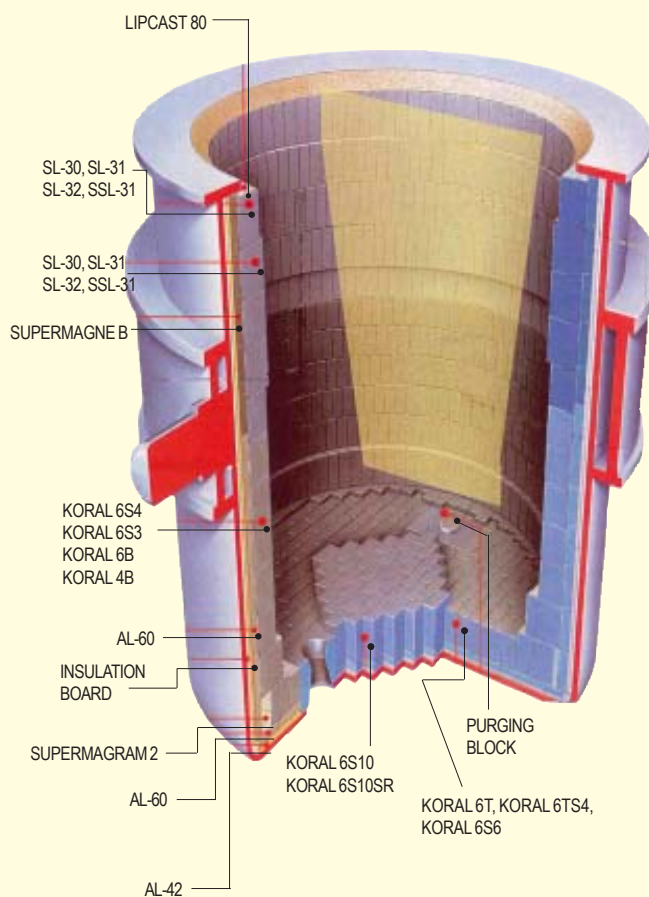
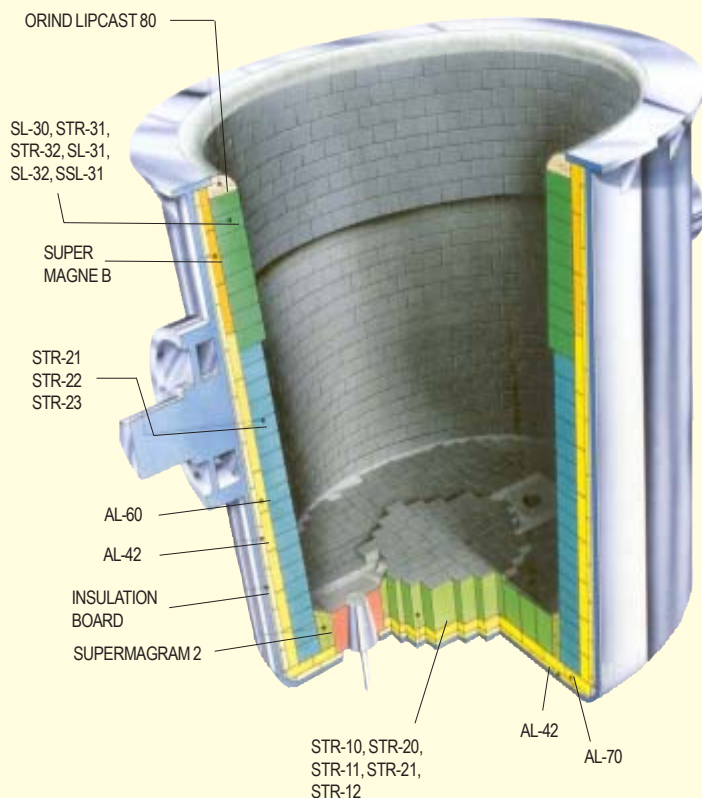
Brand Name	Physical Properties					Chemical Analysis		Area of Application
	AP	BD	CCS	Coked AP at 1100°C / 2 hrs	HMOR at 1400°C / 0.5 hr	MgO	Residual Carbon	
	%	g/cc	Mpa	%	Mpa	%	%	
	Max	Min	Min	Max	Min	Min	Min	
GOLDLINE X 10	6.5	3.06	38.0	10.5	7.0	87.0	5.0	Cold Spot of EBT-EAF or Conventional Type of EAF.
GOLDLINE X S 10	6.5	3.06	38.0	10.5	7.0	75.0	5.0	
GOLDLINE X 11	6.5	3.05	38.0	10.5	7.0	87.0	5.0	
GOLDLINE X 12	7.0	3.04	38.0	11.0	7.0	87.0	5.0	
GOLDLINE X 13	7.0	3.03	38.0	11.0	7.0	87.0	5.0	
GOLDLINE X 14	7.5	3.02	38.0	11.5	7.0	87.0	5.0	
GOLDLINE X 15	7.5	3.01	38.0	11.5	7.0	87.0	5.0	
GOLDLINE X 20	6.0	3.03	38.0	10.0	7.0	84.0	8.0	
GOLDLINE X S 20	6.0	3.03	38.0	10.0	7.0	75.0	8.0	
GOLDLINE X 21	6.0	3.02	38.0	10.0	7.0	84.0	8.0	
GOLDLINE X 22	6.5	3.01	38.0	10.5	7.0	84.0	8.0	
GOLDLINE X 23	6.5	3.00	38.0	10.5	7.0	84.0	8.0	
GOLDLINE X 24	7.0	2.99	38.0	11.0	7.0	84.0	8.0	
GOLDLINE X 25	7.0	2.98	38.0	11.0	7.0	84.0	8.0	
GOLDLINE X 30	5.5	3.00	38.0	9.5	7.0	82.0	11.0	
GOLDLINE X 31	5.5	2.99	38.0	9.5	7.0	82.0	11.0	
GOLDLINE X 32	6.0	2.98	38.0	10.0	7.0	82.0	11.0	
GOLDLINE X 33	6.0	2.97	38.0	10.0	7.0	82.0	11.0	
GOLDLINE X 34	6.5	2.96	38.0	10.5	7.0	82.0	11.0	
GOLDLINE X 35	6.5	2.95	38.0	10.5	7.0	82.0	11.0	
GOLDLINE X 40	5.0	2.97	33.0	9.0	7.0	80.0	13.0	
GOLDLINE X S 40	5.0	2.97	33.0	9.0	7.0	76.0	13.0	
GOLDLINE X 41	5.0	2.96	33.0	9.0	7.0	80.0	13.0	
GOLDLINE X 42	5.5	2.95	33.0	9.5	7.0	80.0	13.0	
GOLDLINE X 43	5.5	2.94	33.0	9.5	7.0	80.0	13.0	
GOLDLINE X 44	6.0	2.93	33.0	10.0	7.0	80.0	13.0	
GOLDLINE X 45	6.0	2.92	33.0	10.0	7.0	80.0	13.0	
GOLDLINE X 50	4.5	2.91	28.0	8.5	7.0	78.0	16.0	
GOLDLINE X 51	4.5	2.90	28.0	8.5	7.0	78.0	16.0	
GOLDLINE X 52	5.0	2.89	28.0	9.0	7.0	78.0	16.0	
GOLDLINE X 53	5.0	2.88	28.0	9.0	7.0	78.0	16.0	
GOLDLINE X 54	5.5	2.87	28.0	9.5	7.0	78.0	16.0	
GOLDLINE X 55	5.5	2.86	28.0	9.5	7.0	78.0	16.0	
SUPER GOLDLINE X 10	6.5	3.06	38.0	10.5	10.0	84.0	5.0	Cold Spot of EBT-EAF or Conventional Type of EAF.
SUPER GOLDLINE X S 10	6.5	3.06	38.0	10.5	10.0	75.0	5.0	
SUPER GOLDLINE X 11	6.5	3.05	38.0	10.5	10.0	84.0	5.0	
SUPER GOLDLINE X 12	7.0	3.04	38.0	11.0	10.0	84.0	5.0	
SUPER GOLDLINE X 13	7.0	3.03	38.0	11.0	10.0	84.0	5.0	Cold Spot of EBT-EAF or Conventional Type of EAF.
SUPER GOLDLINE X 14	7.5	3.02	38.0	11.5	10.0	84.0	5.0	
SUPER GOLDLINE X 15	7.5	3.01	38.0	11.5	10.0	84.0	5.0	
SUPER GOLDLINE X 20	6.0	3.03	38.0	10.0	10.0	81.0	8.0	
SUPER GOLDLINE X S 20	6.0	3.03	38.0	10.0	10.0	75.0	8.0	
SUPER GOLDLINE X 21	6.0	3.02	38.0	10.0	10.0	81.0	8.0	
SUPER GOLDLINE X 22	6.5	3.01	38.0	10.5	10.0	81.0	8.0	
SUPER GOLDLINE X 23	6.5	3.00	38.0	10.5	10.0	81.0	8.0	
SUPER GOLDLINE X 24	7.0	2.99	38.0	11.0	10.0	81.0	8.0	
SUPER GOLDLINE X 25	7.0	2.98	38.0	11.0	10.0	81.0	8.0	

Brand Name	Physical Properties					Chemical Analysis		Area of Application
	AP	BD	CCS	Coked AP at 1100°C / 2 hrs	HMOR at 1400°C / 0.5 hr	MgO	Residual Carbon	
	%	g/cc	Mpa	%	Mpa	%	%	
	Max	Min	Min	Max	Min	Min	Min	
SUPER GOLDLINE X 30	5.5	3.00	38.0	9.5	10.0	79.0	11.0	Hot Spot and Slag Line of EBT-EAF or Conventional Type of EAF
SUPER GOLDLINE X 31	5.5	2.99	38.0	9.5	10.0	79.0	11.0	
SUPER GOLDLINE X 32	6.0	2.98	38.0	10.0	10.0	79.0	11.0	
SUPER GOLDLINE X 33	6.0	2.97	38.0	10.0	10.0	79.0	11.0	
SUPER GOLDLINE X 34	6.5	2.96	38.0	10.5	10.0	79.0	11.0	
SUPER GOLDLINE X 35	6.5	2.95	38.0	10.5	10.0	79.0	11.0	
SUPER GOLDLINE X 40	5.0	2.97	33.0	9.0	10.0	77.0	13.0	
SUPER GOLDLINE X 41	5.0	2.96	33.0	9.0	10.0	77.0	13.0	
SUPER GOLDLINE X 42	5.5	2.95	33.0	9.5	10.0	77.0	13.0	
SUPER GOLDLINE X 43	5.5	2.94	33.0	9.5	10.0	77.0	13.0	
SUPER GOLDLINE X 44	6.0	2.93	33.0	10.0	10.0	77.0	13.0	
SUPER GOLDLINE X 45	6.0	2.92	33.0	10.0	10.0	77.0	13.0	
SUPER GOLDLINE X 50	4.5	2.91	28.0	8.5	10.0	75.0	16.0	
SUPER GOLDLINE X 51	4.5	2.90	28.0	8.5	10.0	75.0	16.0	
SUPER GOLDLINE X 52	5.0	2.89	28.0	9.0	10.0	75.0	16.0	
SUPER GOLDLINE X 2 FMC (spl)	5.0	3.00	40.0	10.0	12.0	75.0	10.0	

Note: 1. "GOLDLINE X" and "SUPER GOLDLINE X" series are referred as "GLX" and "SGLX" in short.
 2. Large Crystal Fused Magnesite with more than 98% purity (MgO > 98%) is used.
 3. The above data pertains to standard pressable shapes.

LADLE MAGNESIA – CARBON LINING CONCEPT

LADLE MgO-C / AMC LINING CONCEPT

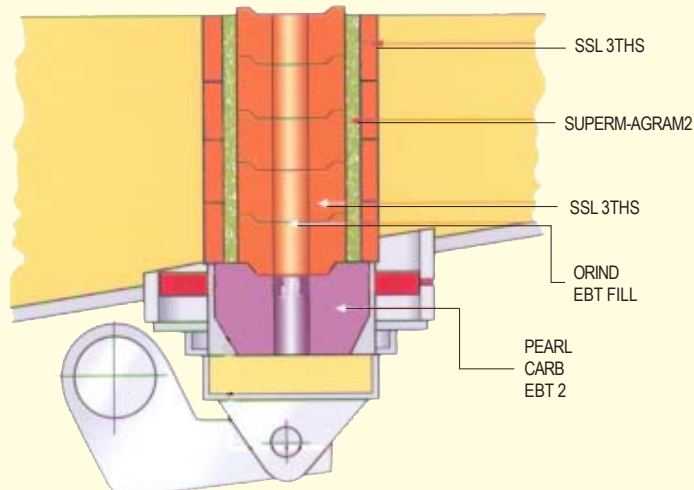


'SUPER SILVERLINE X' series are characterized by high purity fused magnesite (97.5% MgO) with large crystal. These series are very highly recommended for the EBT-EAF & conventional types of EAF. These series are our standard recommendation for EBT-EAF.

Brand Name	Physical Properties					Chemical Analysis		Area of Application	
	AP	BD	CCS	Coked AP at 1100°C / 2 hrs	HMOR at 1400°C / 0.5 hr	MgO	Residual Carbon		
	%	g/cc	Mpa	%	Mpa	%	%		
	Max	Min	Min	Max	Min	Min	Min		
SUPER SILVERLINE X 10	7.0	3.05	35.0	11.0	10.0	83.0	5.0	Cold Spot of EBT-EAF or Conventional Type of EAF	
SUPER SILVERLINE X 10 EP	7.0	3.06	40.0	11.0	10.0	85.0	3.5		
SUPER SILVERLINE X 11	7.0	3.04	35.0	11.0	10.0	83.0	5.0		
SUPER SILVERLINE X 12	7.5	3.03	35.0	11.5	10.0	83.0	5.0		
SUPER SILVERLINE X 13	7.5	3.02	35.0	11.5	10.0	83.0	5.0		
SUPER SILVERLINE X 14	8.0	3.01	35.0	12.0	10.0	83.0	5.0		
SUPER SILVERLINE X 15	8.0	3.00	35.0	12.0	10.0	83.0	5.0		
SUPER SILVERLINE X 20	6.5	3.02	35.0	10.5	10.0	81.0	8.0		
SUPER SILVERLINE X 21	6.5	3.01	35.0	10.5	10.0	81.0	8.0		
SUPER SILVERLINE X 22	7.0	3.00	35.0	11.0	10.0	81.0	8.0		
SUPER SILVERLINE X 23	7.0	2.99	35.0	11.0	10.0	81.0	8.0		
SUPER SILVERLINE X 24	7.5	2.98	35.0	11.5	10.0	81.0	8.0		
SUPER SILVERLINE X 25	7.5	2.97	35.0	11.5	10.0	81.0	8.0		
SUPER SILVERLINE X 30 EP	5.0	2.95	35.0	10.0	14.0	80.0	7.0		Hot Spot / Slag line of EBT-EAF or Conventional Type of EAF
SUPER SILVERLINE X 30	6.0	2.99	35.0	10.0	10.0	79.0	11.0		
SUPER SILVERLINE X 31	6.0	2.98	35.0	10.0	10.0	79.0	11.0		
SUPER SILVERLINE X 32	6.5	2.97	35.0	10.5	10.0	79.0	11.0		
SUPER SILVERLINE X 33	6.5	2.96	35.0	10.5	10.0	79.0	11.0		
SUPER SILVERLINE X 34	7.0	2.95	35.0	11.0	10.0	79.0	11.0		
SUPER SILVERLINE X 35	7.0	2.94	35.0	11.0	10.0	79.0	11.0		
SUPER SILVERLINE X 40	5.5	2.96	30.0	9.5	10.0	77.0	13.0		
SUPER SILVERLINE X 41	5.5	2.95	30.0	9.5	10.0	77.0	13.0		
SUPER SILVERLINE X 42	6.0	2.94	30.0	10.0	10.0	77.0	13.0		
SUPER SILVERLINE X 43	6.0	2.93	30.0	10.0	10.0	77.0	13.0		
SUPER SILVERLINE X 44	6.5	2.92	30.0	10.5	10.0	77.0	13.0		
SUPER SILVERLINE X 45	6.5	2.91	30.0	10.5	10.0	77.0	13.0		
SUPER SILVERLINE X 50	5.0	2.91	25.0	9.0	10.0	75.0	16.0		
SUPER SILVERLINE X 50 HP	5.5	3.00	30.0	9.5	10.0	77.0	13.0		
SUPER SILVERLINE X 51	5.0	2.90	25.0	9.0	10.0	75.0	16.0		
SUPER SILVERLINE X 52	5.5	2.89	25.0	9.5	10.0	75.0	16.0		
SUPER SILVERLINE X 53	5.5	2.88	25.0	9.5	10.0	75.0	16.0		
SUPER SILVERLINE X 54	6.0	2.87	25.0	10.0	10.0	75.0	16.0		
SUPER SILVERLINE X 55	6.0	2.86	25.0	10.0	10.0	75.0	16.0		
SUPER SILVERLINE X 61	5.5	2.85	25.0	9.0	10.0	72.0	18.0		

Note: 1. "SUPER SILVERLINE X " series are referred as "SSLX" series in short.
 2. 97.5 % purity Large crystal Fused Magnesite is used.
 3. The above data pertains to standard pressable shapes.

EBT-EAF LINING CONCEPT

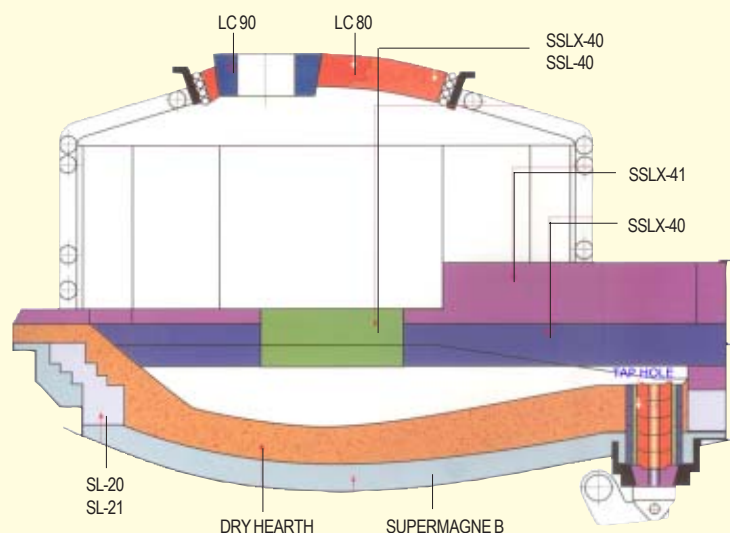


'SILVERLINE X' series are characterized by high purity fused magnesite (97.5% MgO) with large crystal. These series are very highly recommended for the EBT-EAF & conventional types of EAF. These series are our standard recommendation for EBT-EAF.

Brand Name	Physical Properties					Chemical Analysis		Area of Application	
	AP	BD	CCS	Coked AP at 1100°C / 2 hrs	HMOR at 1400°C / 0.5 hr	MgO	Residual Carbon		
	%	g/cc	Mpa	%	Mpa	%	%		
	Max	Min	Min	Max	Min	Min	Min		
SILVERLINE X 10	7.0	3.05	35.0	11.0	7.0	87.0	5.0	Cold Spot of EBT-EAF or Conventional Type of EAF	
SILVERLINE X 11	7.0	3.04	35.0	11.0	7.0	87.0	5.0		
SILVERLINE X 12	7.5	3.03	35.0	11.5	7.0	87.0	5.0		
SILVERLINE X 13	7.5	3.02	35.0	11.5	7.0	87.0	5.0		
SILVERLINE X 14	8.0	3.01	35.0	12.0	7.0	87.0	5.0		
SILVERLINE X 15	8.0	3.00	35.0	12.0	7.0	87.0	5.0		
SILVERLINE X 20	6.5	3.02	35.0	10.5	7.0	84.0	8.0		
SILVERLINE X 21	6.5	3.01	35.0	10.5	7.0	84.0	8.0		
SILVERLINE X 22	7.0	3.00	35.0	11.0	7.0	84.0	8.0		
SILVERLINE X 23	7.0	2.99	35.0	11.0	7.0	84.0	8.0		
SILVERLINE X 24	7.5	2.98	35.0	11.5	7.0	84.0	8.0		
SILVERLINE X 25	7.5	2.97	35.0	11.5	7.0	84.0	8.0		
SILVERLINE X 30	6.0	2.99	35.0	10.0	7.0	82.0	11.0		Hot Spot / Slag Zone of EBT-EAF or Conventional Type of EAF
SILVERLINE X 31	6.0	2.98	35.0	10.0	7.0	82.0	11.0		
SILVERLINE X 32	6.5	2.97	35.0	10.5	7.0	82.0	11.0		
SILVERLINE X 33	6.5	2.96	35.0	10.5	7.0	82.0	11.0		
SILVERLINE X 34	7.0	2.95	35.0	11.0	7.0	82.0	11.0		
SILVERLINE X 35	7.0	2.94	35.0	11.0	7.0	82.0	11.0		
SILVERLINE X 40	5.5	2.96	30.0	9.5	7.0	80.0	13.0		
SILVERLINE X 41	5.5	2.95	30.0	9.5	7.0	80.0	13.0		
SILVERLINE X 42	6.0	2.94	30.0	10.0	7.0	80.0	13.0		
SILVERLINE X 43	6.0	2.93	30.0	10.0	7.0	80.0	13.0		
SILVERLINE X 44	6.5	2.92	30.0	10.5	7.0	80.0	13.0		
SILVERLINE X 45	6.5	2.91	30.0	10.5	7.0	80.0	13.0		
SILVERLINE X 50	5.0	2.91	25.0	9.0	7.0	78.0	16.0		
SILVERLINE X 51	5.0	2.90	25.0	9.0	7.0	78.0	16.0		
SILVERLINE X 52	5.5	2.89	25.0	9.5	7.0	78.0	16.0		
SILVERLINE X 53	5.5	2.88	25.0	9.5	7.0	78.0 <td 16.0			
SILVERLINE X 54	6.0	2.87	25.0	10.0	7.0	78.0	16.0		
SILVERLINE X 55	6.0	2.86	25.0	10.0	7.0	78.0	16.0		

Note: 1. "SILVERLINE X" series are referred as "SLX" series in short.
 2. 97.5 % purity Large crystal Fused Magnesite is used.
 3. The above data pertains to standard pressable shapes.

EAF-EBT TAPHOLE ARRANGEMENT





'SUPER SILVERLINE' series are characterized by high purity fused magnesite (97.5% MgO). These series are very highly recommended for the EBT-EAF & conventional types of EAF for the most cost-effective application. These series are our standard recommendation for EBT-EAF and also for the slag line of Steel Ladle.

Brand Name	Physical Properties					Chemical Analysis		Application Area
	AP	BD	CCS	Coked AP at 1100°C / 2 hrs	HMORat 1400°C / 0.5 hr	MgO	Residual Carbon	
	%	g/cc	Mpa	%	Mpa	%	%	
	Max	Min	Min	Max	Min	Min	Min	
SUPER SILVERLINE 10	6.5	3.05	40.0	10.5	10.0	84.0	5.0	Cold Spot of EBT-EAF or Conventional Type of EAF and Slag Line of Steel Ladle (8% Residual Carbon)
SUPER SILVERLINE S 10	6.5	3.05	40.0	10.5	10.0	75.0	5.0	
SUPER SILVERLINE 11	6.5	3.04	40.0	10.5	10.0	84.0	5.0	
SUPER SILVERLINE 12	7.0	3.03	40.0	11.0	10.0	84.0	5.0	
SUPER SILVERLINE 13	7.0	3.02	40.0	11.0	10.0	84.0	5.0	
SUPER SILVERLINE 14	7.5	3.01	40.0	11.5	10.0	84.0	5.0	
SUPER SILVERLINE 15	7.5	3.00	40.0	11.5	10.0	84.0	5.0	
SUPER SILVERLINE 20	6.0	3.02	40.0	10.0	10.0	81.0	8.0	
SUPER SILVERLINE 20 HP	4.0	3.02	40.0	10.0	12.0	85.0	5.0	
SUPER SILVERLINE 21	6.0	3.01	40.0	10.0	10.0	81.0	8.0	
SUPER SILVERLINE 22	6.5	3.00	40.0	10.5	10.0	81.0	8.0	
SUPER SILVERLINE 23	6.5	2.99	40.0	10.5	10.0	81.0	8.0	
SUPER SILVERLINE 24	7.0	2.98	40.0	11.0	10.0	81.0	8.0	
SUPER SILVERLINE 25	7.0	2.97	40.0	11.0	10.0	81.0	8.0	
SUPER SILVERLINE 30 HP	4.0	3.00	40.0	8.0	12.0	82.0	8.0	
SUPER SILVERLINE 30	5.5	2.99	40.0	9.5	10.0	79.0	11.0	
SUPER SILVERLINE 30 HX 01	5.0	3.00	38.0	9.0	14.0	80.0	11.0	
SUPER SILVERLINE DCS 30	4.0	3.00	38.0	9.0	10.0	82.0	11.0	
SUPER SILVERLINE S 30	5.5	3.00	38.0	9.5	10.0	75.0	11.0	
SUPER SILVERLINE 31	5.5	2.98	38.0	9.5	10.0	79.0	11.0	
SUPER SILVERLINE S 31	5.5	2.98	38.0	9.5	7.0	74.0	11.0	
SUPER SILVERLINE 32	6.0	2.97	38.0	10.0	10.0	79.0	11.0	
SUPER SILVERLINE 33	6.0	2.96	38.0	10.0	10.0	79.0	11.0	
SUPER SILVERLINE 34	6.5	2.95	38.0	10.5	10.0	79.0	11.0	
SUPER SILVERLINE 35	6.5	2.94	38.0	10.5	10.0	79.0	11.0	
SUPER SILVERLINE 40	5.0	2.96	35.0	9.0	10.0	77.0	13.0	
SUPER SILVERMAG S 40	4.0	2.96	35.0	9.0	11.0	74.0	13.0	
SUPER SILVERLINE 40 KS	4.0	2.92	25.0	11.0	10.0	79.0	14.5	
SUPER SILVERLINE 41	5.0	2.95	35.0	9.0	10.0	77.0	13.0	
SUPER SILVERLINE 42	5.5	2.94	35.0	9.5	10.0	77.0	13.0	
SUPER SILVERLINE 43	5.5	2.93	35.0	9.5	10.0	77.0	13.0	
SUPER SILVERLINE 44	6.0	2.92	35.0	10.0	10.0	77.0	13.0	
SUPER SILVERLINE 45	6.0	2.91	35.0	10.0	10.0	77.0	13.0	
SUPER SILVERLINE 50	4.5	2.91	30.0	8.5	10.0	75.0	16.0	
SUPER SILVERLINE DCL 50	4.0	2.95	30.0	9.0	12.0	75.0	15.0	
SUPER SILVERLINE 51	4.5	2.90	30.0	8.5	10.0	75.0	16.0	
SUPER SILVERLINE 51 G5	4.0	2.95	35.0	8.0	12.0	75.0	14.0	
SUPER SILVERLINE 52	5.0	2.89	30.0	9.0	10.0	75.0	16.0	
SUPER SILVERLINE 53	5.0	2.88	30.0	9.0	10.0	75.0	16.0	
SUPER SILVERLINE 54	5.5	2.87	30.0	9.5	10.0	75.0	16.0	
SUPER SILVERLINE 55	5.5	2.86	30.0	9.5	10.0	75.0	16.0	
SUPER SILVERLINE 3K II	3.0	2.90	35.0	8.0	15.0	72.0	14.0	
SUPER SILVERLINE DCL	4.0	2.55	18.0	12.0	10.0	40.0	47.5	
SST 4T	4.0	2.90	30.0	11.0	12.0	66.0	16.0	
ORIND B CLASS	4.0	2.90	25.0	11.0	10.0	78.5	14.5	
MAGCOR 30 F 5	6.0	2.95	40.0	9.0	12.0	75.0	11.0	

Note: 1. "SUPER SILVERLINE " series are referred as " SSL " series in short.
 2. 97.5 % purity Fused Magnesite is used.
 3. The above data pertains to standard pressable shapes.
 4. "SUPER SILVERMAG" series are referred as "SSM" series in short.

'SILVERLINE' series are without anti-oxidants. These series are recommended for the steel ladle slag line / EAF cold spot / EAF slag line, where the oxygen activities in the liquid steel is nominal.

Brand Name	Physical Properties					Chemical Analysis		Application Area
	AP	BD	OCS	Coked AP at 1100°C / 2 hrs	HMOR at 1400°C / 0.5 hr	MgO	Residual Carbon	
	%	g/cc	Mpa	%	Mpa	%	%	
	Max	Min	Min	Max	Min	Min	Min	
SILVERLINE 10	6.5	3.05	40.0	10.5	7.0	87.0	5.0	Cold Spot of EBT-EAF or Conventional Type of EAF
SILVERLINE 11	6.5	3.04	40.0	10.5	7.0	87.0	5.0	
SILVERLINE 12	7.0	3.03	40.0	11.0	7.0	87.0	5.0	
SILVERLINE 13	7.0	3.02	40.0	11.0	7.0	87.0	5.0	
SILVERLINE 14	7.5	3.01	40.0	11.5	7.0	87.0	5.0	
SILVERLINE 15	7.5	3.00	40.0	11.5	7.0	87.0	5.0	
SILVERLINE 20	6.0	3.02	40.0	10.0	7.0	84.0	8.0	
SILVERLINE 21	6.0	3.01	40.0	10.0	7.0	84.0	8.0	
SILVERLINE 22	6.5	3.00	40.0	10.5	7.0	84.0	8.0	
SILVERLINE 23	6.5	2.99	40.0	10.5	7.0	84.0	8.0	
SILVERLINE 24	7.0	2.98	40.0	11.0	7.0	84.0	8.0	
SILVERLINE 25	7.0	2.97	40.0	11.0	7.0	84.0	8.0	
SILVERLINE 30	5.5	2.99	38.0	9.5	7.0	82.0	11.0	
SILVERLINE S 30	5.5	2.99	38.0	9.5	7.0	74.0	11.0	
SILVERLINE 31	5.5	2.98	38.0	9.5	7.0	82.0	11.0	
SILVERLINE S 31	5.5	2.98	38.0	9.5	7.0	74.0	11.0	
SILVERLINE 32	6.0	2.97	38.0	10.0	7.0	82.0	11.0	
SILVERLINE 33	6.0	2.96	38.0	10.0	7.0	82.0	11.0	
SILVERLINE 34	6.5	2.95	38.0	10.5	7.0	82.0	11.0	
SILVERLINE 35	6.5	2.94	38.0	10.5	7.0	82.0	11.0	
SILVERLINE 40	5.0	2.96	35.0	9.0	7.0	80.0	13.0	
SILVERLINE S 40	4.0	2.96	35.0	9.0	7.0	75.0	13.0	
SILVERLINE 41	5.0	2.95	35.0	9.0	7.0	80.0	13.0	
SILVERLINE S 41	5.0	2.95	35.0	9.0	7.0	75.0	13.0	
SILVERLINE 42	7.0	2.95	35.0	11.0	7.0	80.0	13.0	
SILVERLINE S 42	5.5	2.94	35.0	9.5	7.0	75.0	13.0	
SILVERLINE 43	5.5	2.93	35.0	9.5	7.0	80.0	13.0	
SILVERLINE 44	6.0	2.92	35.0	10.0	7.0	80.0	13.0	
SILVERLINE 45	6.0	2.91	35.0	10.0	7.0	80.0	13.0	
SILVERLINE 50	4.5	2.91	30.0	8.5	7.0	78.0	16.0	
SILVERLINE 51	4.5	2.90	30.0	8.5	7.0	78.0	16.0	
SILVERLINE 52	5.0	2.89	30.0	9.0	7.0	78.0	16.0	
SILVERLINE 53	5.0	2.88	30.0	9.0	7.0	78.0	16.0	
SILVERLINE 54	5.5	2.87	30.0	9.5	7.0	78.0	16.0	
SILVERLINE 55	5.5	2.86	30.0	9.5	7.0	78.0	16.0	
DIAMOND SK 10	5.0	3.04	40.0	9.0	10.0	83.0	5.0	Cold Spot of EBT-EAF or Conventional Type of EAF.
DIAMOND S S S 10	6.0	3.05	35.0	9.0	10.0	75.0	3.0	
DIAMOND FCC S 11	5.0	3.04	40.0	9.0	10.0	75.0	5.0	
DIAMOND FCC 13	5.0	3.01	40.0	9.0	7.0	85.0	5.0	
DIAMOND SD 20	6.0	3.03	40.0	10.0	7.0	82.0	9.0	
DIAMOND SD 30	4.0	3.03	40.0	8.0	10.0	82.0	9.0	

Note: 1. "SILVERLINE" series is referred as "SL" series in short.
2. 97.5 % purity Fused Magnesite is used.
3. The above data pertains to standard pressable shapes.



'SUPER SILVERSTAR' series are specifically designed for ladle application. These series are highly recommended for the steel ladle application.

Brand Name	Physical Properties					Chemical Analysis		Application Area	
	AP	BD	CCS	Coked AP at 1100°C / 2 hrs	HMOR at 1400°C / 0.5 hr	MgO	Residual Carbon		
	%	g/cc	Mpa	%	Mpa	%	%		
	Max	Min	Min	Max	Min	Min	Min		
SUPER SILVER STAR 10	6.5	3.05	40.0	10.5	10.0	83.5	5.0	Steel Ladle Metal Zone & Bottom	
SUPER SILVER STAR 11	6.5	3.04	40.0	10.5	10.0	83.5	5.0		
SUPER SILVER STAR 12	7.0	3.03	40.0	11.0	10.0	83.5	5.0		
SUPER SILVER STAR 13	7.0	3.02	40.0	11.0	10.0	83.5	5.0		
SUPER SILVER STAR 14	7.5	3.01	40.0	11.5	10.0	83.5	5.0		
SUPER SILVER STAR 15	7.5	3.00	40.0	11.5	10.0	83.5	5.0		
SUPER SILVER STAR 20	6.0	3.02	40.0	10.0	10.0	80.5	8.0		
SUPER SILVER STAR 21	6.0	3.01	40.0	10.0	10.0	80.5	8.0		
SUPER SILVER STAR 22	6.5	3.00	40.0	10.5	10.0	80.5	8.0		
SUPER SILVER STAR 23	6.5	2.99	40.0	10.5	10.0	80.5	8.0		
SUPER SILVER STAR 24	7.0	2.98	40.0	11.0	10.0	80.5	8.0		
SUPER SILVER STAR 25	7.0	2.97	40.0	11.0	10.0	80.5	8.0		
SUPER SILVER STAR 30	5.5	2.99	38.0	9.5	10.0	78.5	11.0		Steel Ladle Slag Zone
SUPER SILVER STAR 31	5.5	2.98	38.0	9.5	10.0	78.5	11.0		
SUPER SILVER STAR 32	6.0	2.97	38.0	10.0	10.0	78.5	11.0		
SUPER SILVER STAR 33	6.0	2.96	38.0	10.0	10.0	78.5	11.0		
SUPER SILVER STAR 34	6.5	2.95	38.0	10.5	10.0	78.5	11.0		
SUPER SILVER STAR 35	6.5	2.94	38.0	10.5	10.0	78.5	11.0		
SUPER SILVER STAR 40	5.0	2.96	35.0	9.0	10.0	76.5	13.0		
SUPER SILVER STAR 41	5.0	2.95	35.0	9.0	10.0	76.5	13.0		
SUPER SILVER STAR 42	5.5	2.94	35.0	9.5	10.0	76.5	13.0		
SUPER SILVER STAR 43	5.5	2.93	35.0	9.5	10.0	76.5	13.0		
SUPER SILVER STAR 44	6.0	2.92	35.0	10.0	10.0	76.5	13.0		
SUPER SILVER STAR 45	6.0	2.91	35.0	10.0	10.0	76.5	13.0		
SUPER SILVER STAR 50	4.5	2.91	30.0	8.5	10.0	74.5	16.0		
SUPER SILVER STAR 51	4.5	2.90	30.0	8.5	10.0	74.5	16.0		
SUPER SILVER STAR 52	5.0	2.89	30.0	9.0	10.0	74.5	16.0		
SUPER SILVER STAR 53	5.0	2.88	30.0	9.0	10.0	74.5	16.0		
SUPER SILVER STAR 54	5.5	2.87	30.0	9.5	10.0	74.5	16.0		
SUPER SILVER STAR 55	5.5	2.86	30.0	9.5	10.0	74.5	16.0		

Note: 1. "SUPER SILVERSTAR " series is referred as "SSTR" series in short.
 2. 97 % purity Fused Magnesite is used.
 3. The above data pertains to standard pressable shapes.

Our Standard recommendation for EBT-EAF Tap hole system (Tap Hole Block, Tap Hole tube & End Block):

Brand Name	Physical Properties					Chemical Analysis		Application Area
	AP	BD	CCS	Coked AP at 1100°C / 2 hrs	HMOR at 1400°C / 0.5 hr	MgO	Residual Carbon	
	%	g/cc	Mpa	%	Mpa	%	%	
	Max	Min	Min	Max	Min	Min	Min	
SUPER SILVERLINE X1 THS	7.0	2.95	40.0	11.0	14.0	84.0	6.0	EBT - EAF Tap Hole surrounding Block & Tap Hole Tube
SUPER SILVERLINE X3 THS	7.0	2.90	40.0	11.0	14.0	80.0	10.0	
SUPER SILVERLINE X7 THS	5.0	2.88	25.0	6.0	15.0	72.0	20.0	
						Al ₂ O ₃	SiC	Residual Carbon
						%	%	%
						Min	Min	Min
PEARLCARB - EB T2	10.0	2.90	30.0	12.0	12.0	65.0	10.0	12.0
PEARLCARB - EB T4	10.0	2.85	30.0	12.0	12.0	60.0	18.0	12.0
PEARLCARB - EB F 4	10.0	2.85	30.0	12.0	12.0	58.0	16.0-18.0	12.0
PEARLCARB - EB F 2	10.0	2.90	30.0	12.0	12.0	63.0	9.0-11.0	12.0

Note: PEARLCARB SERIES ARE USED IN THE EBT-EAF END BLOCK.
 1. The above data pertains to standard pressable shapes.
 2. Quality with "SUPER" prefix contains anti-oxidants.

'SILVERSTAR' series are specifically designed for ladle application. These series are highly recommended for the steel ladle application.

Brand Name	Physical Properties					Chemical Analysis		Application Area	
	AP	BD	CCS	Coked AP at 1100°C / 2 hrs	HMORat 1400°C / 0.5 hr	MgO	Residual Carbon		
	%	g/cc	Mpa	%	Mpa	%	%		
	Max	Min	Min	Max	Min	Min	Min		
SILVER STAR 10	6.5	3.05	40.0	10.5	7.0	86.5	5.0	Steel Ladle Metal Zone & Bottom	
SILVER STAR 10 TIP	6.5	3.02	50.0	10.5	7.0	84.5	7.0		
SILVER STAR 11	6.5	3.04	40.0	10.5	7.0	86.5	5.0		
SILVER STAR 12	7.0	3.03	40.0	11.0	7.0	86.5	5.0		
SILVER STAR S 12	7.0	3.03	40.0	11.0	7.0	75.0	5.0		
SILVER STAR 13	7.0	3.02	40.0	11.0	7.0	86.5	5.0		
SILVER STAR 14	7.5	3.01	40.0	11.5	7.0	86.5	5.0		
SILVER STAR 15	7.5	3.00	40.0	11.5	7.0	86.5	5.0		
SILVER STAR 20	6.0	3.02	40.0	10.0	7.0	83.5	8.0		
SILVER STAR 21	6.0	3.01	40.0	10.0	7.0	83.5	8.0		
SILVER STAR 22	6.5	3.00	40.0	10.5	7.0	83.5	8.0		
SILVER STAR MAG 22	7.0	2.98	35.0	10.0	7.0	73.0	8.0		
SILVER STAR 23	6.5	2.99	40.0	10.5	7.0	83.5	8.0		
SILVER STAR 24	7.0	2.98	40.0	11.0	7.0	83.5	8.0		
SILVER STAR 25	7.0	2.97	40.0	11.0	7.0	83.5	8.0		
SILVER STAR 30	5.5	2.99	38.0	9.5	7.0	81.5	11.0		Steel Ladle Slag Zone
SILVER STAR 31	5.5	2.98	38.0	9.5	7.0	81.5	11.0		
SILVER STAR 32	6.0	2.97	38.0	10.0	7.0	81.5	11.0		
SILVER STAR 33	6.0	2.96	38.0	10.0	7.0	81.5	11.0		
SILVER STAR 34	6.5	2.95	38.0	10.5	7.0	81.5	11.0		
SILVER STAR 35	6.5	2.94	38.0	10.5	7.0	81.5	11.0		
SILVER STAR 40	5.0	2.96	35.0	9.0	7.0	79.5	13.0		
SILVER STAR 41	5.0	2.95	35.0	9.0	7.0	79.5	13.0		
SILVER STAR 42	5.5	2.94	35.0	9.5	7.0	79.5	13.0		
SILVER STAR 43	5.5	2.93	35.0	9.5	7.0	79.5	13.0		
SILVER STAR 44	6.0	2.92	35.0	10.0	7.0	79.5	13.0		
SILVER STAR 45	6.0	2.91	35.0	10.0	7.0	79.5	13.0		
SILVER STAR 50	4.5	2.91	30.0	8.5	7.0	77.5	16.0		
SILVER STAR 51	4.5	2.90	30.0	8.5	7.0	77.5	16.0		
SILVER STAR 52	5.0	2.89	30.0	9.0	7.0	77.5	16.0		
SILVER STAR 53	5.0	2.88	30.0	9.0	7.0	77.5	16.0		
SILVER STAR 54	5.5	2.87	30.0	9.5	7.0	77.5	16.0		
SILVER STAR 55	5.5	2.86	30.0	9.5	7.0	77.5	16.0		

Note: 1. "SILVERSTAR" series is referred as "STR" series in short. 2. 97 % purity Fused Magnesite is used.
3. The above data pertains to standard pressable shapes. 4. "SILVERSTAR MAG" series is referred as "STRM" series in short.

These series are for the ladle metal / Slag zone application, where the operation is not very stringent.

Brand Name	Physical Properties					Chemical Analysis		Application Area
	AP	BD	CCS	Coked AP at 1100°C / 2 hrs	HMORat 1400°C / 0.5 hr	MgO	Residual Carbon	
	%	g/cc	Mpa	%	Mpa	%	%	
	Max	Min	Min	Max	Min	Min	Min	
ORICARB 10	9.0	2.95	40.0	13.0	5.0	85.0	5.0	Steel Ladle Metal Zone
ORICARB 21	8.5	2.85	40.0	12.5	5.0	79.0	8.0	
ORICARB 22	8.5	2.85	40.0	12.5	5.0	79.0	8.0	
ORICARB 31	8.0	2.80	40.0	12.0	5.0	76.0	11.0	
ORICARB 32	8.0	2.80	40.0	12.0	5.0	76.0	11.0	
SUPER ORICARB 10	9.0	2.95	40.0	13.0	8.0	82.0	5.0	
SUPER ORICARB 21	8.5	2.85	40.0	12.5	8.0	76.0	8.0	
SUPER ORICARB 22	8.5	2.85	40.0	12.5	8.0	76.0	8.0	
SUPER ORICARB 31	8.0	2.80	40.0	12.0	8.0	73.0	11.0	
SUPER ORICARB 32	8.0	2.80	40.0	12.0	8.0	73.0	11.0	
OXIMAG 21	7.5	2.95	40.0	11.5	6.0	83.0	8.0	
OXIMAG 22	7.5	2.95	40.0	11.5	6.0	83.0	8.0	
OXIMAG 31	7.0	2.90	40.0	11.0	6.0	80.0	11.0	
OXIMAG 32	7.0	2.90	40.0	11.0	6.0	80.0	11.0	
SUPER OXIMAG 21	7.5	2.95	40.0	11.5	10.0	80.0	8.0	
SUPER OXIMAG 22	7.5	2.95	40.0	11.5	10.0	80.0	8.0	
SUPER OXIMAG 31	7.0	2.90	40.0	11.0	10.0	77.0	11.0	
SUPER OXIMAG 32	7.0	2.90	40.0	11.0	10.0	77.0	11.0	
MAGBON 10	7.0	2.90	30.0	12.5	5.0	80.0	4.0	



Brand Name	Physical Properties					Chemical Analysis		Application Area
	AP	BD	CCS	Coked AP at 1100°C / 2 hrs	HMOR at 1400°C / 0.5 hr	MgO	Residual Carbon	
	%	g/cc	Mpa	%	Mpa	%	%	
	Max	Min	Min	Max	Min	Min	Min	
MAGBON 13	7.0	2.83	25.0	12.5	9.0	80.0	11.0	Free Board Slag Zone
MAGBON 21	7.0	2.90	40.0	12.5	5.0	75.0	8.0	
MAGCARB 21	7.0	2.95	40.0	12.5	5.0	75.0	8.0	
STEEL MAG M	7.0	2.92	35.0	12.0	5.0	80.0	8.0	
STEEL MAG F	7.0	2.92	35.0	12.0	5.0	80.0	9.0	
STEEL MAG S	6.0	2.90	35.0	12.0	5.0	80.0	10.0	

Note : 1. ORICARB & SUPER ORICARB , OXIMAG and SUPER OXIMAG series is referred to as "OR", "SOR", "OX" & "SOX" respectively in short
 2. Material used : OR and SOR =96 % purity Fused Magnesite OX and SOX = 97 % purity sintered magnesite
 STEEL MAG = 96% purity sintered magnesite
 3. The above data pertains to standard pressable shapes.

'KORAL' series are Alumina Magnesia Carbon series. These series are highly recommended for steel ladle bottom / wall impact, bottom & side wall lining.

Brand Name	Physical Properties					Chemical Analysis			Application Area
	AP	BD	CCS	Coked AP at 1100°C / 2 hrs	HMOR at 1400°C / 0.5 hr	MgO	Al ₂ O ₃	Residual Carbon	
	%	g/cc	Mpa	%	Mpa	%	%	%	
	Max.	Min.	Min.	Max.	Min.	Min.	Min.	Min.	
KORAL 6T	9.0	3.15	60.0	13.0	8.0	8.0	77.0	5.0	Steel Ladle Bottom & Metal Zone
KORAL 6T LP	8.0	3.15	60.0	12.0	8.0	5.0	73.0	5.0	
KORAL 6S 10	9.0	3.20	60.0	13.0	8.0	8.0	77.0	5.0	
KORAL 6W 10	9.0	3.25	60.0	13.0	10.0	8.0	77.5	6.0	
KORAL 6S10 SR	9.0	3.20	60.0	13.0	8.0	14.0	70.0	5.0	
KORAL 6S10 LS *	9.0	3.20	60.0	12.0	8.0	8.0	77.0	5.0	
KORAL 6S10 LS SR *	9.0	3.20	60.0	12.0	8.0	14.0	70.0	5.0	
KORAL 6TS4	9.0	3.12	60.0	13.0	8.0	8.0	77.0	5.0	
KORAL 6S6	10.0	3.10	60.0	14.0	8.0	8.0	74.0	5.0	
KORAL 6S5	10.0	3.10	60.0	14.0	8.0	8.0	74.0	5.0	
KORAL 6S4	10.0	3.05	60.0	14.0	8.0	8.0	74.0	5.0	
KORAL 6S4 SR	10.0	3.04	60.0	13.0	8.0	14.0	65.0	5.0	
KORAL 6S4 LS **	10.0	3.05	60.0	13.0	8.0	8.0	74.0	5.0	
KORAL 6S3	10.0	3.04	60.0	14.0	8.0	8.0	73.0	5.0	
KORAL 6S2	11.0	3.02	60.0	15.0	8.0	8.0	73.0	5.0	
KORAL 6B	12.0	2.95	60.0	16.0	8.0	8.0	71.0	5.0	
KORAL 4B	12.0	2.97	60.0	16.0	8.0	8.0	73.0	4.0	
KORAL 2B	12.0	2.98	60.0	16.0	10.0	8.0	70.0	2.5	
KORAL10 S 10 P 7	6.0	3.16	30.0	12.0	8.0	7.0	70.0	10.5	
KORAL10 S 10 P 17	6.0	3.17	30.0	12.0	8.0	17.0	62.0	9.5	
KORAL12 S 10 P 22	7.0	3.12	60.0	11.0	8.0	22.0	56.0	11.5	
KORAL 12 S 5 P 22	7.0	3.09	60.0	11.0	8.0	22.0	53.0	11.5	
KORAL11 S 5 P 12	8.0	3.13	60.0	12.0	8.0	12.0	64.0	10.5	
KORAL 12 B 10 P 22	7.0	3.06	60.0	11.0	8.0	22.0	51.0	11.5	
KORAL 11 B 10 P 12	8.0	3.10	60.0	12.0	8.0	12.0	61.0	10.5	
KORAL 10 B P 10	11.0	2.96	50.0	15.0	8.0	10.0	62.0	10.0	
KORAL 10 B P 15	11.0	2.94	50.0	15.0	8.0	15.0	57.0	10.0	
KORAL 10 B P 20	11.0	2.94	50.0	15.0	8.0	15.0	57.0	10.0	
KORAL 10 S 4 P10	8.0	3.05	50.0	12.0	8.0	10.0	65.0	10.0	
KORAL 10 S 4 P15	8.0	3.03	50.0	12.0	8.0	15.0	60.0	10.0	
KORAL 10 S 10 P10	7.0	3.17	50.0	11.0	8.0	10.0	68.0	10.0	
KORAL 10 S 10 P15	7.0	3.15	50.0	11.0	8.0	15.0	63.0	10.0	
KORAL 10 S 4 P 20	7.0	3.13	50.0	11.0	8.0	20.0	58.0	10.0	
KORAL 10 S 10 P 20	8.0	3.01	50.0	12.0	8.0	20.0	55.0	10.0	
KORAL 8 S10 P20	6.0	3.25	50.0	9.0	10.0	20.0	60.0	9.0	
KORAL 9 S10 P20	6.0	3.25	50.0	9.0	10.0	20.0	60.0	10.0	
KORAL 8 S4 P14	6.0	3.20	40.0	9.0	8.0	14.0	70.0	8.0	
KORAL 8 S4 P9	6.0	3.15	40.0	9.0	8.0	9.0	72.0	8.0	

* SiO₂ < 1.0 % , ** SiO₂ < 4.0 %

Note: 1. Material used: T=Tabular Alumina, W=White Fused Alumina, S=Fused alumina, B=Bauxite, P=Periclase
 2. The above data pertains to standard pressable shapes.

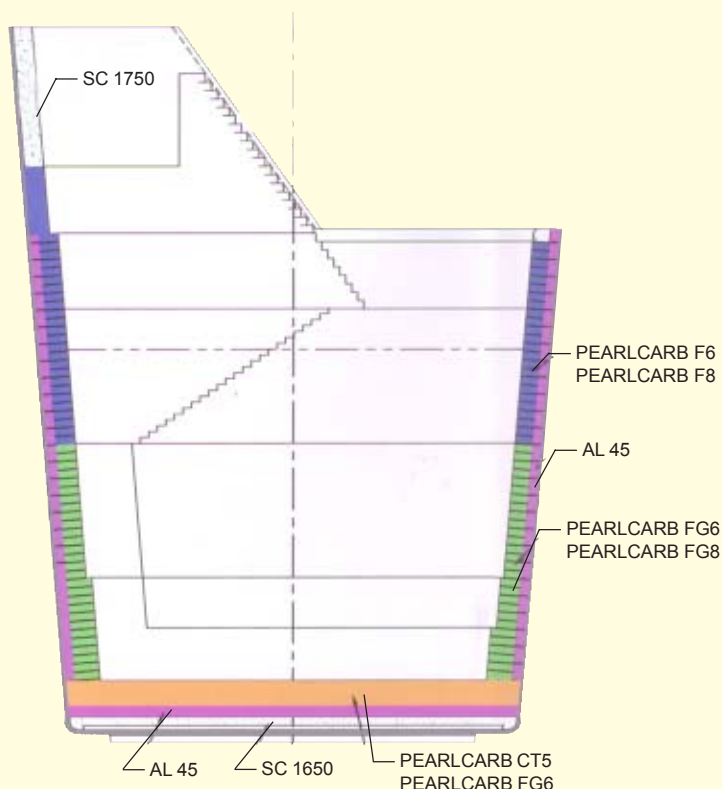
PRODUCT RANGE

'PEARLCARB' series are Alumina Silicon Carbide Carbon series. These series are highly recommended for Torpedo Ladle / Hot metal Ladle.

Brand Name	Physical Properties					Chemical Analysis			Application Area
	AP	BD	CCS	Coked AP at 1100°C/ 2 hrs	HMOR at 1400°C/ 0.5 hr	Al ₂ O ₃	SiC	Residual Carbon	
	%	g/cc	Mpa	%	Mpa	%	%	%	
	Max.	Min.	Min.	Max.	Min.	Min.	Min.	Min.	
PEARLCARB F 14	6.0	2.90	40.0	10.0	10.0	68.0	14.0	12.0	Hot Metal Ladle/ Torpedo Ladle
PEARLCARB F 8	6.0	2.95	40.0	10.0	10.0	68.0	8.0	14.0	
PEARLCARB F 7	6.0	2.95	40.0	10.0	10.0	70.0	7.0	12.0	
PEARLCARB F 6	6.0	2.95	40.0	10.0	10.0	70.0	6.0	10.0	
PEARLCARB FG 8	6.0	2.90	40.0	10.0	8.0	66.0	8.0	13.0	
PEARLCARB FG 8 LC	6.0	2.90	40.0	10.0	8.0	66.0	8.0	11.0	
PEARLCARB FG 6	6.0	2.90	40.0	10.0	8.0	70.0	6.0	10.0	
PEARLCARB FG 6 LC	6.0	2.90	40.0	10.0	8.0	70.0	6.0	8.0	
PEARLCARB C 8	8.0	2.65	40.0	12.0	6.0	60.0	8.0	13.0	
PEARLCARB C 6	8.0	2.85	40.0	12.0	6.0	64.0	6.0	13.0	
PEARLCARB C 5	8.0	2.65	40.0	12.0	6.0	65.0	5.0	10.0	
PEARLCARB CT 5	9.0	2.70	35.0	12.0	6.0	57.0	5.0	9.0	
PEARLCARB - EB T 2	10.0	2.90	30.0	12.0	14.0	65.0	10.0	12.0	
PEARLCARB - EB T 4	10.0	2.85	30.0	12.0	14.0	60.0	18.0	12.0	
PEARLCARB FW 8	6.0	2.96	40.0	10.0	10.0	70.0	8.0	15.0	
PEARLCARB FS 8	6.0	2.95	40.0	10.0	10.0	70.0	8.0	15.0	
PEARLCARB F8 LC	6.0	2.95	40.0	10.0	10.0	76.0	8.0	6.0	
PEARLCARB F8 P5	6.0	2.95	40.0	10.0	10.0	65.0	8.0	8.0	
PEARLCARB F5	6.0	2.98	40.0	10.0	10.0	80.0	5.0	5.0	
PEARLCARB FG5	6.0	2.93	40.0	10.0	10.0	80.0	5.0	5.0	

Note: 1. Material Used: F = Fused Alumina, FG= Fused Alumina and Bauxite, C and CT = Pyrophyllitic clay and Bauxite, T= Tabular Alumina

HOT METAL LADLE LINING CONCEPT



BRAND NAME	Physical Properties					Chemical Properties	
	AP	BD	CCS	Coked AP at 1100°C / 2 hrs	HMOR at 1400°C / 0.5 hr	MgO	Residual Carbon
	%	g/cc	Mpa	%	Mpa%	%	
	Max	Min	Min	Max	MinMin	Min	
LF, EAF SERIES							
ZADELINE 20	6.0	3.02	38.0	10.0	7.0	74.0	8.0
ZADELINE 21	6.0	3.01	38.0	10.0	7.0	74.0	8.0
ZADELINE 22	6.5	3.00	38.0	10.5	7.0	74.0	8.0
ZADELINE 30	5.5	2.99	38.0	9.5	7.0	73.0	11.0
ZADELINE 31	5.5	2.98	38.0	9.5	7.0	73.0	11.0
ZADELINE 32	6.0	2.97	38.0	10.0	7.0	73.0	11.0
ZADELINE 40	5.0	2.96	35.0	9.0	7.0	72.0	13.0
ZADELINE 41	5.0	2.95	35.0	9.0	7.0	72.0	13.0
ZADELINE 42	5.5	2.94	35.0	9.5	7.0	72.0	13.0
SUPER ZADELINE 20	6.0	3.02	38.0	10.0	10.0	74.0	8.0
SUPER ZADELINE 21	6.0	3.01	38.0	10.0	10.0	74.0	8.0
SUPER ZADELINE 22	6.5	2.99	38.0	9.5	10.0	74.0	8.0
SUPER ZADELINE 30	5.5	2.99	38.0	9.5	10.0	73.0	11.0
SUPER ZADELINE 31	5.5	2.98	38.0	9.5	10.0	73.0	11.0
SUPER ZADELINE 32	6.0	2.97	38.0	10.0	10.0	73.0	11.0
SUPER ZADELINE 40	5.0	2.96	35.0	9.0	10.0	72.0	13.0
SUPER ZADELINE 41	5.0	2.95	35.0	9.0	10.0	72.0	13.0
SUPER ZADELINE 42	5.5	2.94	35.0	9.5	10.0	72.0	13.0
BOF SERIES							
SUPER ZADELINE 2B	6.5	3.05	40.0	10.0	14.0	75.0	7.6
SUPER ZADELINE 2LC	6.5	3.05	40.0	10.0	14.0	75.0	7.6
SUPER ZADELINE 2CP	5.5	3.08	45.0	9.0	14.0	75.0	7.6
SUPER ZADELINE 3TR	7.0	3.02	40.0	11.0	14.0	75.0	10.5
SUPER ZADELINE 2ROB	7.0	3.04	40.0	11.0	14.0	75.0	9.0
SUPER ZADELINE 2TH	7.0	3.04	40.0	11.0	14.0	75.0	9.0
SUPER ZADELINE 2TC	7.5	3.02	40.0	11.5	14.0	75.0	9.0
SUPER ZADELINE 3THS	7.5	2.90	40.0	11.5	14.0	75.0	10.0

BRAND NAME	Physical Properties					Chemical Properties	
	AP	BD	CCS	Coked AP at 1100°C / 2 hrs	HMOR at 1400°C / 0.5 hr	MgO	Residual Carbon
	%	g/cc	Mpa	%	Mpa	%	%
	Max	Min	Min	Max	Min	Min	Min
RH Degasser Lower vessel MCB							
SGL 10 EP	6.5	3.06	40.0	10.5	10.0	85.0	3.5
SGL 10 EP-B	6.5	3.06	40.0	10.5	12.0	85.0	3.5
SSLX 10 EP	7.0	3.04	38.0	11.0	10.0	85.0	3.5

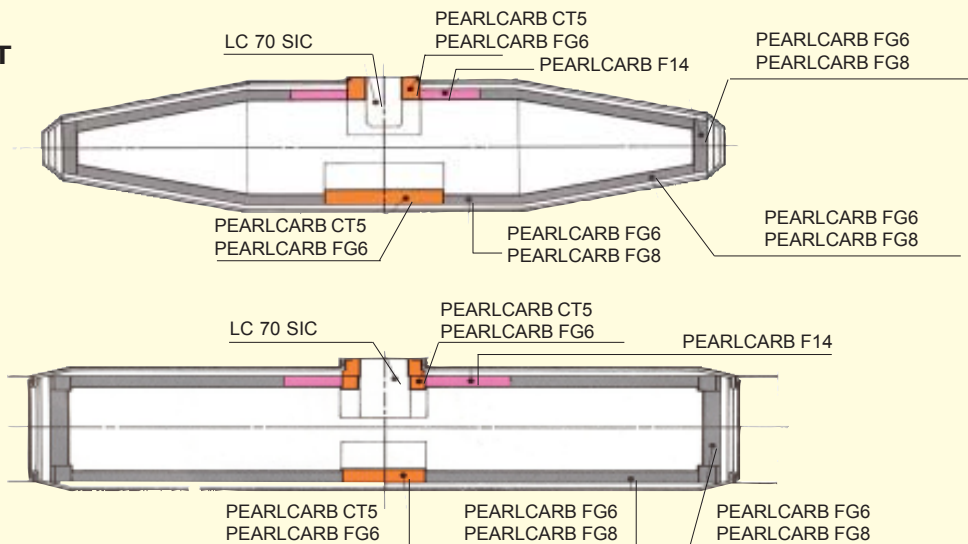
Our complete range of ultra low cement castable, low cement castable, conventional castable, high alumina ramming mass, ladle back fill & mortar for different application in Steel Ladle, Hot Metal Ladle, Hot Metal Mixer etc.

Brand Name	Chemical Analysis					Physical Analysis		Sieve Analysis (%)			
	Al ₂ O ₃ % (Min)	SiO ₂ % (Max)	Fe ₂ O ₃ % (Max)	TiO ₂ % (Max)	Cr ₂ O ₃ %	BD (g/cc) min. after drying at 110°C/24hr	CCS (MPa) min. after drying at 110°C/24hr	Max Grain Size (mm)	+1 mm (+16#)	+0.4 mm (+35#)	- 0.1 mm (-150#)
DENSE CASTABLES											
ORIND SC-1450/1600/1650	65	20	3.0			2.1	45.0	5	40±4	-	35±4
ORIND SC-1600SF	65	20	3.0			2.25	55.0	5	40±4	-	35±4
ORIND SC-1750	80	6	2.5	3.0		2.60	50.0	5	35±4	-	35±4
ORIND SC-1850	85	4	2.0	3.0		2.85	50.0	5	45±4	-	35±4
ORIND SC-1900	88	3	1.8	2.5		2.85	55.0	5	45±4	-	35±4
SPECIAL DENSE CASTABLES											
ORICAST 65	65	-	-			2.5	60.0	5	45±4	-	35±3
ORIND SC-1950	90	2.5	1.5	2		2.9	60.0	5	45±4	-	35±3
ORIND SC-1950 C	90	2.5	1.5	2	1-2	2.9	60.0	5	45±4	-	35±3
ORICAST 95	92	-	1.5			3.08	60.0	5	40±4	-	35±3
ORICAST 97	97	-	0.5			3.0	40.0	5	40±4	-	35±3
LOWCEMENT CASTABLES											
					CaO% (Max)						
ORINDLC45	45	-	1.2		3.0	2.3	55	5	45±4	-	35±3
ORINDLC60	60	-	1.2		3.0	2.6	60	5	45±4	-	35±3
ORINDLC70	70	-	1.2		3.0	2.75	80	5	45±4	-	35±3
ORINDLC80	80	-	1.5		3.0	2.85	80	5	45±4	-	35±3
ORINDLC90	90	-	1.2		3.0	3	85	5	45±4	-	35±3
SPECIAL LOWCEMENT CASTABLES											
ORINDLC 60A	56	-	1.5		3.0	2.5	65	5	45±4	-	35±3
ORINDLC 80 XC	80	-	1.5		3.0	2.95	90	20	53±4	-	35±3
LIPCAST 80	80	-	1.5		3.0	2.85	90	5	40±4	-	35±3
ORINDLC 95	93	-	1.0		3.0	3.0	40.0	5	45±4	-	35±3
SPINCAST 95	92	-	0.5		3.0	3	50	10	53±4	-	35±3
ULTRALOWCEMENT CASTABLES											
ORIND ULC 45	45	-	2		2.4	45	5	40±5	-	45±3	
TRUFCAST 65	65	-	1		2.85	70	5	40±5	-	45±3	
ORIND ULC 80	80	MgO: (5-10)	2	TiO ₂ <1.5 CaO <2.0	2.85	65	5	35±5	-	35±4	
ORIND ULC 90	85	MgO: (5-10)	1	TiO ₂ <1.0 CaO <2.0	3.0	45	5	30±5	-	35±4	
HIGHALUMINA RAMMINGMASSES											
ORINDALCOR 70	70	-	2.5	-	2.65	20	5	40±5	-	45±3	
ORINDALCOR 80	75	15	5	TiO ₂ <5	2.65	30	5	40±5	-	45±3	
ORINDALCOR 90/90B	90	-	1.2	-	2.9	30	5	45±5	-	35±4	
ORINDALCOR 95H	95	-	0.5	-	2.9	40	3	35±5	-	30±4	
MORTARS											
AEROSET 50 (AL-50)	50	15	-	-			0.5	NIL	1 Max	70 Min	
AEROSET 60 (AL-60)	60	15	-	-			0.5	NIL	1 Max	70 Min	
AEROSET 70 (AL-70)	70	15	-	-			0.5	NIL	1 Max	70 Min	
AEROSET 80 (AL-80)	80	12	-	-			0.5	NIL	1 Max	70 Min	
KEMSET 70	70	-	1.5	-			0.5	NIL	1 Max	70 Min	
KEMSET 90 K/M	90	4	-	Cr ₂ O ₃ <2			0.5	NIL	1 Max	90 Min	
AIRSET 80M (Ready to use)	80	15	-	-			0.5	NIL	1 Max	70 Min	
FILLINGMASSES											
BACKFILL 80A/ ORIFILL 80A	80	6	3	TiO ₂ <4			3	30±5	-	25±5	

Our full range of Magnesite base ramming mass, gunning mass, spraying mass & filling mass for various Ladle, BOF, EAF & Tundish application:

Brand name	Chemical Analysis			Physical Analysis		Sieve Analysis (%)			
	MgO% (Min)	SiO2% (Max)	OTHERS %	BD (g/cc) min. after drying at 110°C/ 24hr	CCS (MPa) min. after drying at 110°C/ 24hr	Max Grain Size (mm)	+1 mm (+16#)	+0.4 mm (+35#)	-0.1mm (-150#)
RAMMING MASSES									
ORIND SUPERMAGRAM-1	90	2		2.6		4	45±5	-	26±4
ORIND SUPERMAGRAM (or SUPERMAGRAM-2)	90	2	Cr2O3 : (1-2)	2.5	AP <25%, CCS>25MPa	4	45±5	-	26±4
ORIND SUPERMAGRAM-3	90	2	P2O5 <3	2.5		4	45±5	-	26±4
CASTABLES FOR TAP HOLE									
ORIND OXIMAGRAM	85	2	C >10	2.6	25	6	45±5	-	26±4
ORIND DRYHEARTH (DRY RAMMING MASS)	75		CaO >7	2.75		10	45±5	-	26±4
GUNNING MASSES									
ORIND ARCGUN	85	7		2.5	30	4	45±5	-	25±5
ORIND SUPERARCGUN	85	7		2.5	30	4	45±5	-	25±5
ORIND ARCGUN 90C	88	5	Cr2O3 <2	2.75	35	4	45±5	-	30±5
ORIND ARCGUN 90P	80	5	P2O5 <3	2.75	35	4	45±5	-	30±5
ORIND ARCGUN 95C	90	3	Cr2O3 <2	2.8	40	4	45±5	-	30±5
ORIND OXIGUN	80	7	LOI <10	2.85	25	5	35±5	-	36±4
PATCHING MASSES									
ORIND OXYPATCH (HOT PATCH)	60	7				5	50±5	-	25±5
ORIND ARCFET-1	75	2				10	45±5	-	20±5
ORIND ARCFET-2	80	3				10	45±5	-	20±5
FILLING MASSES									
EBT FILLING MASS	45	-				8	90±5	-	NIL
ORIND BACKFILL 70M	60-70	20	Al2O3 <10			3	30±5	-	25±5
ORIND ORIFILL 70M	70	20	Fe2O3 <5			3	30±5	-	25±5
TUNDISH COATING MASSES									
ORIND TSPRAY 1	66	25		1.8		0.5	NIL	5 Max	45±5
ORIND TSPRAY 2	85	7		1.85		0.5	NIL	5 Max	45±5
ORIND TGUN 1	90	3		1.8		1	NIL	10±5	45±5
MORTAR									
MAG MORTAR / 80% MgO MORTAR	80	10				0.5	NIL	1 Max	70 Min
PREMIX	95	-				-	NIL	1 Max	90 Min
SLAG CONDITIONER	57	-	LOI <25			-	-	-	-

TORPEDO LADLE LINING CONCEPT



Our complete solution for the ladle purging system with directional porous plug (including wear indicator) & seating block and the complete solution for the ladle slide gate system with ladle slide plate, ladle nozzle, collector nozzle & ladle well block:

Brand name	Chemical Analysis					Physical Analysis				
	Al ₂ O ₃ % (Min)	MgO % (Min)	Fe ₂ O ₃ % (Max)	SiO ₂ % (Max)	ZrO ₂ % (Min)	C % (Min)	AP % (Max)	BD (g/cc) min.	CCS (MPa) min.	HMOR at 1400°C/0.5 hr
SLIDE PLATES										
FLORIND P 90	92.0					4.0	5.0	3.10	150.0	20.0
FLORIND P 80 Z	83.0				5.0	4.0	5.0	3.10	150.0	20.0
FLORIND P 70 F Z	72.0				9.0	4.0	10.0	3.10	150.0	20.0
SLIDE GATE NOZZLES										
FLORIND N 90 M	89 (Al ₂ O ₃ +MgO)					5.0	8.0	3.00	60.0	15.0
FLORIND N 90 A	90 (Al ₂ O ₃ +MgO)					5.0	8.0	3.00	60.0	15.0
WELL BLOCK										
FLORIND W 95	95 (Al ₂ O ₃ +MgO)		1.0	2.0			16.0	3.00	60.0	16.0
FLORIND W 90	90 (Al ₂ O ₃ +MgO)		1.2	2.0			14.0	3.00	65.0	12.0
FLORIND W 85	85 (Al ₂ O ₃ +MgO)		1.5	5.0			14.0	2.80	60.0	8.0
FLORIND TIP 75	75 (Al ₂ O ₃ +MgO)		2.0	8.0			16.0	2.75	60.0	8.0
FLORIND TIP 90	90 (Al ₂ O ₃ +MgO)		1.2	6.0			14.0	3.00	60.0	12.0
SEATING BLOCK										
TURBORIND SB 95	95 (Al ₂ O ₃ +MgO)		0.5	0.5	Cr ₂ O ₃ % 3-4		14.0	3.00	65.0	18.0
POROUS PLUG										
TURBORIND PP 95	95 (Al ₂ O ₃ +MgO)		0.5	0.5	Cr ₂ O ₃ % 3-4		14.0	3.00	65.0	18.0

SLIDE GATE ASSEMBLY

