*PRODUCT TYPE : Insulation Castables Equivalent to EIL Types Castables

PRODUCT DATA SHEET

Products	PROGCAST-7		PROGCAST-8S		PROGCAST-11		PROGCAST-11Li		PROGCAST-13Li		PROGCAST-15Li		PROGCAST-IS94	
	TYPE-I		TYPE-III		TYPE-IV		TYPE-V		TYPE-VI		TYPE-VII		TYPE-VIII	
Properties														
Method of Installation	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun
Max. Service Temperature (˚C)	1100		1260		1300		1350		1350		1370		1750	
Material Consumption (Kg/m3)	780	800	880	900	1150	1180	1140	1180	1400	1440	1480	1520	1680	1680
Water % for Installation	60-75	62-78	44-54	45-55	35-45	36-47	35-45	35-45	28-38	30-40	25-34	26-36	20-28	20-30
Max. Grain Size (mm)	6	4	6	4	6	4	6	4	6	4	6	4	5	4
Shelf Life (Months)	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Max.														
Dried at 110 deg. C for 24 hrs	850	880	930	950	1200	1250	1230	1250	1490	1520	1600	1630	1750	1750
Fired at 815 deg. C for 5 hrs	770	800	860	890	1160	1200	1140	1180	1350	1420	1550	1580	1680	1680
Madulus of Rupture, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	4	4	8	8	11	11	13	13	16	16	22	22	24	22
Fired at 815 deg. C for 5 hrs	3	3	7	7	7	7	10	10	13	13	18	18	20	18
Fired at service temp. for 5 hrs	3	3	8	8	11	11	12	12	15	15	20	20	22	20
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	12	12	25	25	40	42	50	50	80	80	100	110	110	110
Fired at 815 deg. C for 5 hrs	4	4	20	20	25	22	30	30	40	50	80	75	75	75
Fired at service temp. for 5 hrs	6	6	30	32	40	40	50	50	50	60	70	85	80	85
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max														
Fired at 815 deg. C for 5 hrs	– 1.00	– 1.00	– 0.30	– 0.40	±0.20	±0.30	±0.20	±0.20	±0.20	±0.20	±0.20	±0.20	±0.20	±0.20
Fired at 1550 deg. C for 5 hrs													±1.00	±1.00
Fired at service temp. for 5 hrs	– 1.20	– 1.20	– 1.00	– 1.20	±1.00	±1.00	±1.00	±1.00	±0.60	±0.80	±1.00	±1.00		
Thermal Conductivity, ASTM C-201/BIS: 9490, W/mK (Kcal/m/hr/˚C), Max														
At 200˚C Mean Temp.	0.15	0.15	0.20	0.20	0.30	0.30	0.35	0.35	0.42	0.42	0.38	0.38	0.92	0.92
At 400˚C Mean Temp.	0.18	0.18	0.22	0.22	0.33	0.33	0.38	0.38	0.45	0.45	0.42	0.42	0.97	0.97
At 600˚C Mean Temp.	0.20	0.20	0.24	0.24	0.38	0.38	0.40	0.40	0.47	0.47	0.48	0.48	1.02	1.02
At 815˚C Mean Temp.	0.22	0.22	0.27	0.27	0.42	0.42	0.42	0.42	0.49	0.49	0.52	0.52	1.09	1.09
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing														
Al2O3, Min	32	32	40	40	35	35	43	43	38	38	40	40	94	94
Fe2O3, Max	9	9	1	1	3.5	3.5	1.5	1.5	2.5	2.5	1.5	1.5	0.3	0.3

- Ø Customer may contact us for any specific or tailor made requirements
- Ø The data presented is based on a normal distribution with 95% confidence level.
- Ø Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.
- Ø Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.
- Ø Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.
- Ø For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.

PROGRESSIVE REFRACTORY & MONOLITHICS PVT. LTD.
Works & Office : INDUSTRIAL AREA RAMGARH CANTT., P.O.- MARAR, DISTT.- RAMGARH- "JHARKHAND" (INDIA), PIN- 829117.
Website: www.progressiverefractory.com
Email: prmramgarh@gmail.com/info@progressiverefractory.com
Mobile: +91-8789967062, 9304441113

**PRODUCT TYPE* : *Very Light Weight Insulation Castable.*

PRODUCT DATA SHEET

Product	PROGCAST 106		PROGCAST 106 N		PROGCAST 106 C		PROGCAST 106 Li		PROGCAST 106 S		PROGCAST 5C		PROGCAST 5HS	
Properties														
Method of Installation	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun
Max. Service Temperature (˚C)	1100		982		1050		1000		650		1090		1095	
Material Consumption (Kg/m3)	600	620	680	700	710	720	620	630	620	630	600	620	620	640
Water % for Installation	80-110	80-110	70-105	75-110	70-90	72-95	65-95	70-100	80-100	80-100	90-110	90-110	80-110	80-110
Max. Grain Size (mm)	6	4	6	4	6	4	6	4	6	4	6	4	6	4
Shelf Life (Months)	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Max.														
Dried at 110 deg. C for 24 hrs	650	670	720	750	750	780	650	670	660	680	650	670	650	680
Fired at 815 deg. C for 5 hrs	590	620	670	700	710	730	580	620	640	650	580	600	620	650
Madulus of Rupture, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	2	2	4	4	3	3	2	2	6	6	2.5	2.5	5	5
Fired at 815 deg. C for 5 hrs	1	1	2	2	2	2	1	1			1.5	1.5	3	3
Fired at service temp. for 5 hrs	1	1	2	2	2	2	1	1	3	3	1	1	2	2
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	6	5	12	15	8	8	7	7	22	22	6.5	6.5	15	15
Fired at 815 deg. C for 5 hrs	3	2	7	8	6.5	6.5	5	5			5.5	5.5	10	10
Fired at service temp. for 5 hrs	3	2	5	6	4	4	5	5	12	12	7	7	12	12
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max														
Fired at 815 deg. C for 5 hrs	±0.80	±1.00	– 1.00	– 1.00	– 1.10	– 1.20	– 0.70	– 0.80	_	_	– 1.50	– 1.50	– 1.00	– 1.00
Fired at service temp. for 5 hrs	±1.50	±1.50	– 2.50	– 2.50	– 1.50	– 1.50	– 1.50	– 1.50	±0.20	±0.30	– 2.50	– 2.50	– 2.20	– 2.20
Thermal Conductivity, ASTM C-201/BIS: 9490, W/mK (Kcal/m/hr/˚C), Max														
At 200˚C Mean Temp.	0.12	0.12	0.13	0.13	0.10	0.10	0.13	0.13	0.15	0.15	0.10	0.10	0.15	0.15
At 400˚C Mean Temp.	0.16	0.16	0.16	0.16	0.12	0.12	0.14	0.14	0.17	0.17	0.12	0.12	0.18	0.18
At 600˚C Mean Temp.	0.17	0.17	0.20	0.20	0.15	0.15	0.16	0.16	0.20	0.20	0.14	0.14	0.20	0.20
At 815˚C Mean Temp.	0.18	0.18	0.22	0.22	0.17	0.17	0.18	0.18			0.16	0.16	0.23	0.23
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing														
Al2O3, Min	29	29	29	29	29	29	33	33	20	20	32	32	40	40
Fe2O3, Max	9	9	7	7	10	10	3	3	9	9	5	5	2.5	2.5
SiO2	36	36	35	35	38	38	36	36	32	32	35	35	32	32
CaO	17	17	20	20	18	18	18	18	26	26	18	18	19	19
MgO	5	5	2	2	1	1	4	4	6	6	3	3	2	2
Na2O+K2O	2.2	2.2	3	3	1.5	1.5	1	1	2.5	2.5	3	3	1.5	1.5
LOI	1.5	1.5	2	2	1	1	2	2	3	3	2	2	1	1

- Customer may contact us for any specific or tailor made requirements
- The data presented is based on a normal distribution with 95% confidence level.
- Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.
- Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.
- Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.
- For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.

PROGRESSIVE REFRACTORY & MONOLITHICS PVT. LTD.
Works & Office : INDUSTRIAL AREA RAMGARH CANTT., P.O.- MARAR, DISTT.- RAMGARH- "JHARKHAND" (INDIA), PIN- 829117.
Website: www.progressiverefractory.com
Email: prmramgarh@gmail.com/info@progressiverefractory.com
Mobile: +91-8789967062, 9304441113

*PRODUCT TYPE : Very Light Weight Special Type Insulation Castable.

CT DATA SHEET

Products	PROGCAST 5 VLW		PROGCAST 5 HT		PROGCAST SLW		PROGCAST SLW-C		PROGCAST SLW-N1		PROGCAST SLW-V1		PROGCAST SLW-S1	
Properties														
Method of Installation	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun
Max. Service Temperature (˚C)	1100		1100		1000		1100		1000		1000		1150	
Material Consumption (Kg/m3)	720	740	680	700	600	620	800	820	600	610	590	610	680	700
Water % for Installation	70-90	75-90	70-105	75-110	65-85	65-85	60-80	65-85	85-110	85-110	80-100	80-100	80-110	80-110
Max. Grain Size (mm)	6	4	6	4	6	4	6	4	6	4	6	4	6	4
Shelf Life (Months)	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Max.														
Dried at 110 deg. C for 24 hrs	750	780	660	680	650	660	850	860	640	660	650	680	720	750
Fired at 815 deg. C for 5 hrs	680	710	580	640	600	620	780	800	580	600	590	630	620	650
Madulus of Rupture, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	4.5	4	3	3	3	3	4	4	3	3	3	3	5	5
Fired at 815 deg. C for 5 hrs	4	3	2	2	2	2	3	3	2	2	2	2	3	3
Fired at service temp. for 5 hrs	5.5	5	1.5	1.5	1	1	3	3	1	1	2	2	3	3
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	16	16	7	8	10	10	15	15	8	8	10	10	18	20
Fired at 815 deg. C for 5 hrs	12	12	6.5	7	4	4	9	9	5	5	4	4	12	12
Fired at service temp. for 5 hrs	14	14	7.5	9	5	5	12	12	4	4	5	5	14	15
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max														
Fired at 815 deg. C for 5 hrs	– 1.50	– 1.50	– 1.50	– 1.50	– 0.80	– 0.80	– 1.00	– 1.00	– 1.00	– 1.00	– 0.80	– 0.80	– 1.20	– 1.20
Fired at service temp. for 5 hrs	– 3.00	– 3.00	– 2.50	– 2.50	– 1.00	– 1.00	– 1.60	– 1.60	– 1.50	– 1.50	±1.00	±1.00	– 2.00	– 2.00
Thermal Conductivity, ASTM C-201/BIS: 9490, W/mK (Kcal/m/hr/˚C), Max														
At 200˚C Mean Temp.	0.12	0.12	0.10	0.10	0.12	0.12	0.12	0.12	0.15	0.15	0.12	0.12	0.12	0.12
At 400˚C Mean Temp.	0.15	0.15	0.12	0.12	0.13	0.13	0.15	0.15	0.17	0.17	0.14	0.14	0.16	0.16
At 600˚C Mean Temp.	0.19	0.19	0.14	0.14	0.15	0.15	0.17	0.17	0.19	0.19	0.18	0.18	0.18	0.18
At 815˚C Mean Temp.	0.22	0.22	0.16	0.16	0.18	0.18	0.19	0.19	0.21	0.21	0.20	0.20	0.21	0.21
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing														
Al2O3, Min	30	30	33	33	25	25	33	33	31	31	23	23	38	38
Fe2O3, Max	1.5	1.5	4	4	11	11	8	8	12	12	11	11	2.5	2.5
SiO2	42	42	34	34	34	34	30	30	27	27	37	37	30	30
CaO	16	17	20	20	20	20	20	20	22	22	20	20	21	21
MgO	2	2	3	3	3	3	2	2	3	3	2	2	1	1
Na2O+K2O	5	4	3.2	3.2	3	3	1	1	1.5	1.5	2	2	1.5	1.5
LOI	1	1	0.5	0.5	1.5	1.5	3	3	2	2	3.5	3.5	1	1

- Ø Customer may contact us for any specific or tailor made requirements
- Ø The data presented is based on a normal distribution with 95% confidence level.
- Ø Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.
- Ø Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.
- Ø Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.
- Ø For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.

**PRODUCT TYPE* : *124 Series Light Weight Medium Purity Insulation Castable.*

PRODUCT DATA SHEET

Properties	PROGCAST 124 V		PROGCAST 124 SPL		PROGCAST 124 VX		PROGCAST 124 N		PROGCAST 124 HS V		PROGCAST 124 C		PROGCAST 124	
Properties														
Method of Installation	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun
Max. Service Temperature (˚C)	1100		1100		1100		1100		1000		1100		1100	
Material Consumption (Kg/m3)	940	950	1020	1040	930	960	1030	1050	1000	1020	920	950	930	960
Water % for Installation	42-54	44-55	40-52	42-54	45-55	45-55	42-52	44-52	42-48	42-50	45-55	45-55	43-52	43-52
Max. Grain Size (mm)	6	4	6	4	6	4	6	4	6	4	6	4	6	4
Shelf Life (Months)	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Max.														
Dried at 110 deg. C for 24 hrs	1000	1020	1080	1100	1000	1040	1000	1040	1040	1080	1000	1020	1000	1030
Fired at 815 deg. C for 5 hrs	940	950	1020	1050	940	980	930	960	980	1020	900	940	930	960
Madulus of Rupture, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	5	5	8	8	5	5	6	6	8	8	7	7	6	6
Fired at 815 deg. C for 5 hrs	4	4	6	6	3	3	5	5	7	6	6	6	5	5
Fired at service temp. for 5 hrs	4	4	7	7	4	3	6	6	8	8	5	5	4	4
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	15	16	35	35	15	15	30	30	35	32	22	22	25	25
Fired at 815 deg. C for 5 hrs	6	8	30	30	7	7	20	18	25	22	18	18	12	12
Fired at service temp. for 5 hrs	10	12	20	25	10	10	22	20	28	30	15	15	10	10
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max														
Fired at 815 deg. C for 5 hrs	±0.60	±0.60	– 0.50	– 0.50	±0.60	±0.60	– 0.50	– 0.50	– 0.40	– 0.40	– 0.50	– 0.50	– 0.60	– 0.60
Fired at 1000 deg. C for 5 hrs	– 0.80	– 0.80	– 0.80	– 0.80	±1.20	±1.20	– 0.60	– 0.60	– 0.60	– 0.60	– 0.60	– 0.60	– 1.20	– 1.20
Fired at service temp. for 5 hrs	±1.00	±1.00	– 1.00	– 1.00	– 1.50	– 1.50	– 1.50	– 1.50	– 0.80	– 0.80	– 1.00	– 1.00	– 1.50	– 1.50
Thermal Conductivity, ASTM C-201/BIS: 9490, W/mK (Kcal/m/hr/˚C), Max														
At 200˚C Mean Temp.	0.21	0.21	0.18	0.18	0.18	0.18	0.19	0.19	0.20	0.20	0.24	0.24	0.26	0.26
At 400˚C Mean Temp.	0.23	0.23	0.20	0.20	0.21	0.21	0.20	0.20	0.23	0.23	0.26	0.26	0.29	0.29
At 600˚C Mean Temp.	0.25	0.25	0.24	0.24	0.24	0.24	0.22	0.22	0.25	0.25	0.28	0.28	0.33	0.33
At 815˚C Mean Temp.	0.28	0.28	0.26	0.26	0.27	0.27	0.25	0.25	0.28	0.28	0.30	0.30	0.34	0.34
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing														
Al2O3, Min	30	30	25	25	26	26	30	30	30	30	26	26	30	30
Fe2O3, Max	6	6	8	8	8.5	8.5	2.5	2.5	4	4	8	8	10	10
SiO2	39	38	42	42	40	40	46	46	42	42	45	45	38	38
CaO	14	15	16	16	17	17	14	14	16	16	14	14	15	15
MgO	3	3	2	2	1.2	1.2	1.5	1.5	2	2	1	1	1.5	1.5
Na2O+K2O	3	3	2	2	2	2	1.5	1.5	2.5	2.5	2	2	1.8	1.8
LOI	2.5	3	1.5	1.5	2.5	2.5	2	2	1	1	1.2	1.2	1.2	1.2

- Customer may contact us for any specific or tailor made requirements
- The data presented is based on a normal distribution with 95% confidence level.
- Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.
- Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.
- Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.
- For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.

PROGRESSIVE REFRACTORY & MONOLITHICS PVT. LTD.
Works & Office : INDUSTRIAL AREA RAMGARH CANTT., P.O.- MARAR, DISTT.- RAMGARH- "JHARKHAND" (INDIA), PIN- 829117.
Website: www.progressiverefractory.com
Email: prmramgarh@gmail.com/info@progressiverefractory.com
Mobile: +91-8789967062, 9304441113

*PRODUCT TYPE : 124 Series Light Weight Low Iron Insulation Castable.

PRODUCT DATA SHEET

Products	PROGCAST 124 HA		PROGCAST 124Li		PROGCAST 124 HT		PROGCAST 124Li HS		PROGCAST 124 H		PROGCAST 124 Li-S		PROGCAST 124 XE	
Properties														
Method of Installation	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun
Max. Service Temperature (˚C)	1260		1100		1200		1300		1230		1100		1300	
Material Consumption (Kg/m3)	970	980	1040	1080	1040	1050	1080	1100	1020	1040	1020	1050	1000	1020
Water % for Installation	40-52	42-54	38-48	38-48	40-50	40-52	38-46	38-46	42-48	42-50	40-52	42-55	40-50	40-50
Max. Grain Size (mm)	6	4	6	4	6	4	6	4	6	4	6	4	6	4
Shelf Life (Months)	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Max.														
Dried at 110 deg. C for 24 hrs	1050	1080	1100	1120	1100	1120	1120	1150	1080	1100	1080	1100	1050	1080
Fired at 815 deg. C for 5 hrs	980	1040	1050	1080	1040	1060	1060	1080	1040	1050	1020	1040	980	1040
Madulus of Rupture, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	7	7	6	6	7	7	10	10	10	10	9	9	5	5
Fired at 815 deg. C for 5 hrs	6	6	5	5	5	5	7	7	8	8	7	7	4	3
Fired at service temp. for 5 hrs	6	6	4	4	7	7	8	8	8	8	8	8	6	3
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	35	35	20	20	30	30	40	42	35	35	40	40	15	20
Fired at 815 deg. C for 5 hrs	20	20	15	15	25	25	28	28	30	30	35	35	8	10
Fired at service temp. for 5 hrs	22	22	18	18	20	20	35	36	28	28	30	30	15	16
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max														
Fired at 815 deg. C for 5 hrs	– 0.30	– 0.30	– 0.30	– 0.30	– 0.60	– 0.60	– 0.40	– 0.40	– 0.50	– 0.50	– 0.40	– 0.40	– 1.00	– 1.00
Fired at 1000 deg. C for 5 hrs	– 0.60	– 0.60	– 0.60	– 0.60	– 1.00	– 0.80	– 0.60	– 0.60	– 0.80	– 0.80	– 0.50	– 0.50	– 1.20	– 1.20
Fired at service temp. for 5 hrs	– 1.00	– 1.00	– 1.00	– 1.00	– 1.50	– 1.50	– 1.00	– 1.00	– 1.00	– 1.00	– 1.00	– 1.00	– 1.50	– 1.50
Thermal Conductivity, ASTM C-201/BIS: 9490, W/mK (Kcal/m/hr/˚C), Max														
At 200˚C Mean Temp.	0.20	0.20	0.18	0.18	0.20	0.20	0.22	0.22	0.22	0.22	0.17	0.17	0.21	0.21
At 400˚C Mean Temp.	0.22	0.22	0.21	0.21	0.23	0.23	0.24	0.24	0.24	0.24	0.20	0.20	0.24	0.24
At 600˚C Mean Temp.	0.25	0.25	0.23	0.23	0.27	0.27	0.27	0.27	0.27	0.27	0.22	0.22	0.27	0.27
At 815˚C Mean Temp.	0.28	0.28	0.26	0.26	0.28	0.29	0.29	0.29	0.29	0.29	0.26	0.26	0.29	0.29
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing														
Al2O3, Min	45	45	29	29	30	30	38	38	34	34	32	32	30	30
Fe2O3, Max	0.6	0.6	1.5	1.5	4	4	1	1	2.5	2.5	1	1	1.2	1.2
SiO2	33	33	44	44	41	41	34	34	39	39	44	44	42	42
CaO	14	14	18	18	16	16	20	20	18	18	16	16	18	18
MgO	1.5	1.5	1.5	1.5	4	3	0.8	0.8	1.5	1.5	2	2	2	2
Na2O+K2O	0.5	0.5	1	1	1.5	1.5	1	1	1.3	1.3	0.8	0.8	1.5	1.5
LOI	2	2	1.5	1.5	2	2.5	1.5	1.5	1.2	1.2	1	1	2	2

- Customer may contact us for any specific or tailor made requirements
- The data presented is based on a normal distribution with 95% confidence level.
- Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.
- Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.
- Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.
- For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.

PROGRESSIVE REFRACTORY & MONOLITHICS PVT. LTD.
Works & Office : INDUSTRIAL AREA RAMGARH CANTT., P.O.- MARAR, DISTT.- RAMGARH- "JHARKHAND" (INDIA), PIN- 829117.
Website: www.progressiverefractory.com
Email: prmramgarh@gmail.com/info@progressiverefractory.com
Mobile: +91-8789967062, 9304441113

*PRODUCT TYPE : Ultra Light Weight Insulation Castable.

PRODUCT DATA SHEET

Products	PROGCAST 4N		PROGCAST 4HS		PROGCAST 4HT		PROGCAST 4Li		PROGCAST 5N		PROGCAST 5HT		PROGCAST 5Li	
Properties														
Method of Installation	Cast	Pour	Cast	Pour	Cast	Pour	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun
Max. Service Temperature (˚C)	650		650		950		1000		650		1050		1095	
Material Consumption (Kg/m3)	420	410	420	410	500	520	520	550	540	560	560	580	550	570
Water % for Installation	90-130	100-140	90-130	100-140	80-120	90-130	80-120	85-120	80-110	85-115	80-105	85-110	80-110	80-110
Max. Grain Size (mm)	6	6	6	6	6	6	6	4	6	4	6	4	6	4
Shelf Life (Months)	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Max.														
Dried at 110 deg. C for 24 hrs	450	450	460	450	520	550	550	580	580	620	600	630	600	620
Fired at 815 deg. C for 5 hrs	420	400	420	410	480	520	520	540	550	570	560	570	540	550
Madulus of Rupture, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	2	1	2	2	3	3	3	3	2.5	2.5	3	3	4	4
Fired at 815 deg. C for 5 hrs					1	1	2	2	2	2	1.5	1.5	2	2
Fired at service temp. for 5 hrs	1	0.5	1.5	1.5	1	1	2	2	2	2	2	2	2	2
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	4	3	4	3	5	5	5	5	5	5	6	6	7	7
Fired at 815 deg. C for 5 hrs					2	2	3	3	4	4	4	4	4	4
Fired at service temp. for 5 hrs	2	1	3	2	3	3	4	4	3	3	5	5	6	6
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max														
Fired at 815 deg. C for 5 hrs					– 1.60	– 1.80	– 1.60	– 1.60			– 1.50	– 1.50	– 1.50	– 1.60
Fired at service temp. for 5 hrs	– 3.00	– 3.00	– 3.00	– 3.00	– 3.00	– 3.00	– 2.50	– 2.50	– 2.50	– 2.50	– 2.50	– 2.50	– 2.20	– 2.20
Thermal Conductivity, ASTM C-201/BIS: 9490, W/mK (Kcal/m/hr/˚C), Max														
At 200˚C Mean Temp.	0.07	0.07	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10
At 400˚C Mean Temp.	0.08	0.08	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.12	0.12	0.12	0.12
At 600˚C Mean Temp.	0.10	0.10	0.11	0.11	0.12	0.12	0.13	0.13	0.12	0.12	0.14	0.14	0.15	0.15
At 815˚C Mean Temp.					0.14	0.14	0.14	0.14			0.16	0.16	0.16	0.16
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing														
Al2O3, Min	20	20	22	22	23	23	28	28	20	20	29	29	32	32
Fe2O3, Max	12	12	12	12	6	6	2.5	2.5	8	8	5	5	1.5	1.5
SiO2	34	34	30	30	36	36	34	34	32	32	32	32	34	34
CaO	24	24	28	28	24	25	23	23	26	26	21	21	22	23
MgO	1	1	1.5	1.5	2	2	2.5	2.5	6	6	3	3	2	2
Na2O+K2O	1.5	1.5	1	1	2	2	2	2	2.5	2.5	3	3	1.5	1.5
LOI	3.5	3.5	4	4	3	3.5	3	3	3	3	2.5	2.5	2	2

- Customer may contact us for any specific or tailor made requirements
- The data presented is based on a normal distribution with 95% confidence level.
- Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.
- Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.
- Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.
- For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.

*PRODUCT TYPE : High Alumina Medium Purity Dense Castable for BAH

PRODUCT DATA SHEET

Products	PROGCAST BAH		PROGCAST BAH S		PROGCAST 45		PROGCAST 45 NC		PROGCAST 45 N		PROGCAST 45 S		PROGCAST 40 C	
Properties														
Method of Installation	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun
Max. Service Temperature (˚C)	1350		1400		1400		1400		1350		1450		1350	
Min. PCE/Refractoriness (Orton/˚C)	15/1430		15/1430		16/1491		15/1430		15/1430		20/1564		15/1430	
Material Consumption (Kg/m3)	1980	2000	2050	2060	2140	2160	2040	2080	2040	2080	2160	2180	2000	2020
Water % for Installation	12-17	12-17	12-16	12-17	11-15	11-15	10-15	10-15	10-15	10-15	10-14	10-14	14-17	14-17
Max. Grain Size (mm)	5	3	5	3	5	3	5	3	5	3	5	3	5	3
Shelf Life (Months)	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Min.														
Dried at 110 deg. C for 24 hrs	2000	2050	2100	2120	2200	2230	2100	2120	2100	2130	2200	2230	2050	2100
Fired at 815 deg. C for 5 hrs	1920	1970	2040	2060	2150	2160	2040	2080	2040	2080	2150	2200	2000	2020
Madulus of Rupture, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	45	45	54	54	60	55	45	45	40	40	60	60	50	50
Fired at 815 deg. C for 5 hrs	30	30	42	42	35	35	38	38	32	32	45	45	42	40
Fired at 1100 deg. C for 3 hrs	25	25	32	32	30	30	30	30	25	25	35	35	32	30
Fired at 1350 deg. C for 3 hrs			35	35	25	25	35	35			50	50		
Fired at service temp. for 3 hrs	35	35	40	40	30	30	40	40	35	35	50	50	30	30
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	260	250	400	380	400	400	250	250	250	250	400	400	250	250
Fired at 815 deg. C for 5 hrs	180	180	300	280	300	300	200	200	180	180	300	300	200	180
Fired at 1100 deg. C for 3 hrs	140	140	200	200	200	200	160	160	160	160	250	250	180	160
Fired at 1350 deg. C for 3 hrs			260	260	300	300	350	350			300	300		
Fired at service temp. for 3 hrs	260	260	300	300	350	350	360	360	300	300	350	350	270	270
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max														
Fired at 815 deg. C for 5 hrs	– 0.20	– 0.20	– 0.20	– 0.20	±0.30	±0.30	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20
Fired at 1100 deg. C for 3 hrs	– 0.30	– 0.30	±0.30	±0.30	– 0.50	– 0.50	±0.30	±0.30	– 0.50	– 0.50	±0.30	±0.30	– 0.50	– 0.50
Fired at 1350 deg. C for 3 hrs			– 0.80	– 0.80	±0.80	±0.80	– 0.80	– 0.80			– 0.80	– 0.80		
Fired at service temp. for 3 hrs	±1.00	±1.00	±1.00	±1.00	– 1.00	– 1.00	±1.00	±1.00	– 1.00	– 1.00	– 1.20	– 1.20	– 1.20	– 1.20
Thermal Conductivity, ASTM C-201/BIS: 9490, Kcal/m/hr/˚C, Max														
At 300˚C HF	0.68	0.68	0.69	0.70	0.72	0.72	0.76	0.76	0.68	0.68	0.72	0.72	0.66	0.66
At 500˚C HF	0.74	0.74	0.75	0.76	0.76	0.76	0.79	0.79	0.74	0.74	0.76	0.76	0.69	0.69
At 800˚C HF	0.79	0.79	0.78	0.79	0.80	0.80	0.84	0.84	0.80	0.80	0.82	0.82	0.76	0.76
At 1000˚C HF	0.82	0.82	0.82	0.84	0.84	0.84	0.87	0.87	0.83	0.83	0.86	0.86	0.81	0.81
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing														
Al2O3, Min	42	42	45	45	45	45	45	45	45	45	45	45	40	40
Fe2O3, Max	4	4	4	4	4	4	4	4	4.5	4.5	3	3	4.5	4.5
SiO2, Max	40	40	40	40	40	40	41	41	39	39	41	41	43	43
CaO, Max	8	8	8.5	8.5	7.5	7.5	8	8	7	7	7	7	8.5	8.5
MgO	1	1.3	1	1	0.6	0.6	0.3	0.3	1	1	0.5	0.5	1.3	1.3
Na2O+K2O	1.2	1.2	0.6	0.6	1.2	1.2	0.4	0.4	0.8	0.8	0.8	0.8	0.3	0.3
LOI	0.6	0.8	0.5	0.5	0.6	0.6	0.5	0.5	0.6	0.6	1	1	1.5	1.5

- Customer may contact us for any specific or tailor made requirements
- The data presented is based on a normal distribution with 95% confidence level.
- Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.
- Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.
- Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.
- For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.

PROGRESSIVE REFRACTORY & MONOLITHICS PVT. LTD.
Works & Office : INDUSTRIAL AREA RAMGARH CANTT., P.O.- MARAR, DISTT.- RAMGARH- "JHARKHAND" (INDIA), PIN- 829117.
Website: www.progressiverefractory.com
Email: prmramgarh@gmail.com/info@progressiverefractory.com
Mobile: +91-8789967062, 9304441113

*PRODUCT TYPE : High Alumina Medium Purity Dense Castable Special Type

PRODUCT DATA SHEET

Products	PROGCAST		PROGCAST		PROGCAST		PROGCAST		PROGCAST		PROGCAST		PROGCAST	
	50 N		HA50		50S		60S		65A_(GRADE-A)		SUPER		GRADE-C	
Properties														
Method of Installation	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun
Max. Service Temperature (˚C)	1350		1550		1450		1450		1550		1450		1350	
Min. PCE/Refractoriness (Orton/˚C)	26/1621		32/1717		23/1605		30/1665		32/1717		31/1683		23/1605	
Material Consumption (Kg/m3)	2050	2080	2290	2230	2090	2020	2140	2150	2500	2520	2450	2450	2040	2050
Water % for Installation	11-14	11-14	10-15	10-15	10-14	10-14	10-13	10-13	10-15	10-15	10-13	10-14	10-15	10-15
Max. Grain Size (mm)	5	3	5	3	5	3	5	3	5	3	5	3	5	3
Shelf Life (Months)	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Min.														
Dried at 110 deg. C for 24 hrs	2100	2150	2300	2300	2100	2120	2150	2150	2500	2550	2500	2500	2100	2110
Fired at 815 deg. C for 5 hrs	2050	2080	2290	2230	2090	2020	2110	2110	2500	2520	2450	2450	2040	2050
Madulus of Rupture, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	50	45	50	50	52	52	54	54	50	50	60	60	40	40
Fired at 815 deg. C for 5 hrs	42	40	46	46	42	42	40	40	35	35	48	48	25	25
Fired at 1100 deg. C for 3 hrs	25	25	45	45	34	34	30	30	25	25	40	40	28	28
Fired at 1350 deg. C for 3 hrs			50	50	42	42	32	32	30	30	45	45		
Fired at service temp. for 3 hrs	45	35	52	52	45	45	50	50	40	40	65	65	32	32
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	300	300	350	350	300	300	350	350	300	300	350	350	250	250
Fired at 815 deg. C for 5 hrs	200	200	280	280	250	250	250	250	200	200	280	280	150	150
Fired at 1100 deg. C for 3 hrs	180	180	350	350	220	220	150	150	180	180	200	200	120	120
Fired at 1350 deg. C for 3 hrs			350	350	350	350	280	280	250	250	300	300		
Fired at service temp. for 3 hrs	250	250	380	370	380	380	350	350	275	275	450	450	225	225
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max														
Fired at 815 deg. C for 5 hrs	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20
Fired at 1100 deg. C for 3 hrs	– 0.40	– 0.40	– 0.30	– 0.30	– 0.30	– 0.30	– 0.30	– 0.30	– 0.40	– 0.40	– 0.40	– 0.40	– 0.50	– 0.50
Fired at 1350 deg. C for 3 hrs			– 1.00	– 1.00	±1.20	±1.20	– 1.00	– 1.00	– 0.50	– 0.50	– 0.80	– 0.80		
Fired at service temp. for 3 hrs	±1.00	±1.00	– 1.50	– 1.50	– 1.50	– 1.50	±2.00	±2.00	±0.60	±0.60	±1.00	±1.00	±0.25	±0.25
Thermal Conductivity, ASTM C-201/BIS: 9490, Kcal/m/hr/˚C, Max														
At 300˚C HF	0.72	0.73	1.08	1.10	0.74	0.74	0.78	0.78	0.76	0.76	0.68	0.68	0.69	0.69
At 500˚C HF	0.75	0.76	1.12	1.13	0.78	0.78	0.82	0.82	0.79	0.8	0.72	0.72	0.73	0.73
At 800˚C HF	0.82	0.84	1.18	1.20	0.83	0.83	0.87	0.87	0.82	0.84	0.74	0.74	0.76	0.76
At 1000˚C HF	0.85	0.86	1.22	1.23	0.87	0.87	0.89	0.89	0.88	0.89	0.83	0.83	0.79	0.79
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing														
Al2O3, Min	55	55	50	50	52	52	60	60	65	65	70	70	42	42
Fe2O3, Max	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	5	5	5	5	5	5
SiO2, Max	32	32	38	38	36	36	29	29	21	21	16	16	40	40
CaO, Max	6.5	6.5	6	6	6	6	5	5	5.5	5.5	5.5	5.5	8.5	8.5
MgO	0.5	0.5	0.3	0.3	0.6	0.6	0.5	0.5	0.4	0.4	0.5	0.5	1.3	1.3
Na2O+K2O	0.8	0.8	0.6	0.6	0.5	0.5	0.6	0.6	0.3	0.3	0.8	0.8	0.3	0.3
LOI	0.6	0.7	0.5	0.8	0.6	0.7	0.8	0.8	0.6	0.6	0.4	0.4	1.5	1.5

- Ø Customer may contact us for any specific or tailor made requirements
- Ø The data presented is based on a normal distribution with 95% confidence level.
- Ø Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.
- Ø Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.
- Ø Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.
- Ø For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.

PROGRESSIVE REFRACTORY & MONOLITHICS PVT. LTD.
Works & Office : INDUSTRIAL AREA RAMGARH CANTT., P.O.- MARAR, DISTT.- RAMGARH- "JHARKHAND" (INDIA), PIN- 829117.
Website: www.progressiverefractory.com
Email: prmramgarh@gmail.com/info@progressiverefractory.com
Mobile: +91-8789967062, 9304441113

*PRODUCT TYPE : High Alumina Dense Castable

PRODUCT DATA SHEET

Products	PROGCAST		PROGCAST		PROGCAST		PROGCAST		PROGCAST		PROGCAST		PROGCAST	
	A		C		K		K60		90A		TAB94		TAB97	
Properties														
Method of Installation	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun
Max. Service Temperature (˚C)	1550		1500		1600		1600		1750		1800		1850	
Min. PCE/Refractoriness (Orton/˚C)	30/1665		30/1665		32/1717		32/1717		37/1820		38/1835		39/1880	
Material Consumption (Kg/m3)	2090	2120	2090	2120	2190	2130	2190	2130	2730		2750		2750	
Water % for Installation	11-13.5	11-14	11-13.5	11-14	10-12.5	10-13.5	10-12.5	10-13.5	10-11.5	10-12.5	8-11.5	8-11.5	8-10.5	8-10.5
Max. Grain Size (mm)	5	3	5	3	5	3	5	3	5	3	5	3	5	3
Shelf Life (Months)	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Min.														
Dried at 110 deg. C for 24 hrs	2100	2150	2100	2150	2200	2250	2300	2320	2750		2800		2800	
Fired at 815 deg. C for 5 hrs	2020	2050	2020	2050	2150	2180	2260	2280	2730		2750		2750	
Madulus of Rupture, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	72	72	75	75	70	70	70	70	80		85		70	
Fired at 815 deg. C for 5 hrs	65	65	62	60	50	50	60	60	75		75		60	
Fired at 1100 deg. C for 3 hrs	55	55	50	50	46	46	52	52	70		70		50	
Fired at 1350 deg. C for 3 hrs	60	60	65	62	65	65	75	75	75		60		55	
Fired at 1550 deg. C for 3 hrs					68	68	76	76	80		90		65	
Fired at service temp. for 3 hrs	75	75	70	70										
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	350	350	350	350	350	350	400	400	600		600		400	
Fired at 815 deg. C for 5 hrs	300	300	280	280	300	300	330	320	400		450		280	
Fired at 1100 deg. C for 3 hrs	250	250	250	250	250	250	300	300	350		350		250	
Fired at 1350 deg. C for 3 hrs	320	300	300	300	400	400	550	550	500		600		300	
Fired at 1550 deg. C for 3 hrs					450	450	600	600	550		700		350	
Fired at service temp. for 3 hrs	550	550	500	500										
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max														
Fired at 815 deg. C for 5 hrs	±0.15	±0.15	±0.20	±0.20	±0.15	±0.15	±0.10	±0.10	±0.10	±0.15	±0.10	±0.10	±0.10	
Fired at 1100 deg. C for 3 hrs	±0.30	±0.30	±0.30	±0.30	±0.30	±0.30	±0.30	±0.30	±0.20	±0.20	±0.10	±0.20	±0.20	
Fired at 1350 deg. C for 3 hrs	– 0.80	– 0.80	±1.00	±1.00	±1.00	±1.00	±1.00	±1.00	±0.60	±0.60	– 0.50	– 0.50	±0.50	
Fired at 1550 deg. C for 3 hrs					±1.50	±1.50	±1.50	±1.50	±1.00	±1.00	±1.00	±1.00	±1.00	
Fired at service temp. for 3 hrs	±1.00	±1.00	±1.20	±1.20										
Thermal Conductivity, ASTM C-201/BIS: 9490, W/mK, Max														
At 200˚C Mean Temp.	0.82	0.82	0.78	0.78	0.82	0.82	0.88	0.87	1.60	1.62	1.87	1.88	1.96	1.96
At 400˚C Mean Temp.	0.86	0.86	0.84	0.84	0.86	0.86	0.92	0.92	1.68	1.7	1.95	1.96	1.99	1.99
At 600˚C Mean Temp.	0.90	0.90	0.88	0.88	0.91	0.91	0.98	0.98	1.72	1.75	1.98	1.99	2.02	2.04
At 815˚C Mean Temp.	0.94	0.94	0.92	0.92	0.99	0.99	1.03	1.03	1.80	1.84	1.93	1.92	2.08	2.14
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing														
Al2O3, Min	50	50	50	50	60	60	60	60	90	90	94	94	97	97
Fe2O3, Max	1.5	1.5	1.3	1.3	1.5	1.5	1.5	1.5	0.8	0.8	0.3	0.3	0.1	0.1
SiO2, Max	39	39	40	40	30	30	29	29	3	3	0.3	0.3	0.1	0.1
CaO, Max	5	5	5	5	5	5	6	6	4	4.5	3.5	3.5	2.5	2.5
MgO	0.4	0.4	0.3	0.3	0.6	0.6	1	1	0.4	0.4	0.5	0.5	0	0
Na2O+K2O	0.6	0.6	1	1	0.5	0.5	0.6	0.6	0.2	0.3	0.2	0.2	0.1	0.1
LOI	0.8	1	1	1.2	0.3	0.3	0.8	0.8	0.2	0.2	0.1	0.3	0	0

- Customer may contact us for any specific or tailor made requirements
- The data presented is based on a normal distribution with 95% confidence level.
- Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.
- Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.
- Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.
- For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.

PROGRESSIVE REFRACTORY & MONOLITHICS PVT. LTD.
Works & Office : INDUSTRIAL AREA RAMGARH CANTT., P.O.- MARAR, DISTT.- RAMGARH- "JHARKHAND" (INDIA), PIN- 829117.
Website: www.progressiverefractory.com
Email: prmramgarh@gmail.com/info@progressiverefractory.com
Mobile: +91-8789967062, 9304441113

**PRODUCT TYPE* : *Light Weight Medium Purity Insulation Castable.*

PRODUCT DATA SHEET

Products	PROGCAST		PROGCAST		PROGCAST		PROGCAST		PROGCAST		PROGCAST		PROGCAST	
	7 HS		8N		9HSV		9SR		10N		10V		10C	
Properties														
Method of Installation	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun
Max. Service Temperature (˚C)	1100		1100		1300		1200		1100		1100		1205	
Material Consumption (Kg/m3)	800	820	830	860	850	870	1000	1020	1000	1020	1040	1060	1050	1080
Water % for Installation	60-70	62-72	60-80	60-80	45-55	45-55	40-50	40-50	42-48	42-50	40-50	40-50	44-54	44-54
Max. Grain Size (mm)	6	4	6	4	6	4	6	4	6	4	6	4	6	4
Shelf Life (Months)	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Max.														
Dried at 110 deg. C for 24 hrs	850	880	880	900	900	930	1050	1080	1040	1080	1100	1120	1100	1150
Fired at 815 deg. C for 5 hrs	800	830	820	850	860	880	980	1000	950	1000	1050	1080	1040	1080
Madulus of Rupture, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	4	5	4	4	8	7	4	4	7	6	12	10	6.5	6.5
Fired at 815 deg. C for 5 hrs	3	3	2	2	5	5	3	3	5	5	7	6	6.5	6.5
Fired at service temp. for 5 hrs	3	3	2	2	6	6	3	3	4	4	6	5	6.0	6.0
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	15	15	12	12	25	22	15	15	25	25	25	22	25	25
Fired at 815 deg. C for 5 hrs	9	9	6	6	20	18	12	12	16	16	18	16	25	25
Fired at service temp. for 5 hrs	12	13	6	6	22	22	10	10	14	14	15	15	31	30
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max														
Fired at 815 deg. C for 5 hrs	±1.00	±1.10	– 1.20	– 1.20	– 0.50	– 0.50	– 0.60	– 0.60	– 0.40	– 0.40	– 0.50	– 0.50	– 0.60	– 0.60
Fired at 1000 deg. C for 5 hrs	– 1.20	– 1.20	– 1.50	– 1.50	– 1.00	– 1.00	– 0.80	– 0.80	– 0.80	– 0.80	– 1.00	– 1.00	– 0.80	– 0.80
Fired at service temp. for 5 hrs	±1.60	±1.60	– 1.80	– 1.80	– 1.50	– 1.50	– 1.00	– 1.00	– 1.50	– 1.50	– 1.20	– 1.20	– 1.00	– 1.00
Thermal Conductivity, ASTM C-201/BIS: 9490, W/mK (Kcal/m/hr/˚C), Max														
At 200˚C Mean Temp.	0.19	0.20	0.14	0.14	0.17	0.17	0.20	0.20	0.17	0.17	0.24	0.24	0.19	0.19
At 400˚C Mean Temp.	0.21	0.22	0.16	0.16	0.19	0.19	0.24	0.24	0.21	0.21	0.27	0.27	0.21	0.21
At 600˚C Mean Temp.	0.24	0.24	0.18	0.18	0.22	0.22	0.27	0.27	0.23	0.23	0.29	0.29	0.23	0.23
At 815˚C Mean Temp.	0.26	0.26	0.21	0.21	0.25	0.25	0.29	0.29	0.26	0.27	0.31	0.31	0.26	0.26
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing														
Al2O3, Min	33	33	26	26	40	40	32	32	25	25	25	25	39	39
Fe2O3, Max	8	8	12	12	6	6	6	6	7	7	6	6	3	3
SiO2	34	34	34	34	32	32	42	42	42	42	48	47	36	36
CaO	15	15	17	17	14	14	13	13	15	15	14	15	16	16
MgO	3	3	3	3	2	2	1.5	1.5	2	2	1	1	0.8	0.8
Na2O+K2O	2.5	2.5	2.5	2.5	0.8	1	1.5	1.5	2.5	2.5	1.5	1.5	1	1
LOI	3	3.5	3	3	1.5	2.5	1.5	1.5	2.5	2.5	2.3	2.5	2	2.5

- Customer may contact us for any specific or tailor made requirements
- The data presented is based on a normal distribution with 95% confidence level.
- Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.
- Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.
- Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.
- For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.

**PRODUCT TYPE* : *Light Weight High Purity Insulation Castables.*

PRODUCT DATA SHEET

Products	PROGCAST 8Li		PROGCAST 8C		PROGCAST 9Li		PROGCAST 9Li S		PROGCAST 9 SPL		PROGCAST 10 HT		PROGCAST 3Li C	
Properties														
Method of Installation	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun
Max. Service Temperature (˚C)	1260		1260		1300		1400		1260		1371		1260	
Material Consumption (Kg/m3)	1050	1080	900	930	1000	1020	850	880	880	930	940	960	1050	1080
Water % for Installation	42-52	42-52	60-80	60-80	42-52	42-52	42-52	42-52	42-52	42-52	40-50	40-50	40-50	40-50
Max. Grain Size (mm)	6	4	6	4	6	4	6	4	6	4	6	4	6	4
Shelf Life (Months)	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Max.														
Dried at 110 deg. C for 24 hrs	1100	1150	960	980	1040	1080	900	930	950	980	980	1000	1150	1180
Fired at 815 deg. C for 5 hrs	1040	1080	880	930	980	1020	850	880	880	930	930	960	1050	1080
Madulus of Rupture, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	13	13	8	7	9	8	4	4	8.5	8.5	8	8	9	10
Fired at 815 deg. C for 5 hrs	10	10	6	6	6	6	3	3	7.5	7.5	7	6	8	8
Fired at 1000 deg. C for 5 hrs	10	10	5	6	5	5	2	2	6	6	6	5	7	7
Fired at service temp. for 5 hrs	9	9	7	7	5	5	2	2	7	7	10	10	10	10
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	55	55	30	30	35	35	15	15	25	25	30	30	35	35
Fired at 815 deg. C for 5 hrs	40	40	22	22	22	22	10	10	20	20	22	20	25	25
Fired at 1000 deg. C for 5 hrs	35	35	20	20	20	20	10	10	18	18	20	20	22	22
Fired at service temp. for 5 hrs	30	30	25	25	18	18	12	12	20	20	35	35	30	30
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max														
Fired at 815 deg. C for 5 hrs	– 0.30	– 0.30	– 0.50	– 0.50	– 0.50	– 0.50	– 0.30	– 0.30	– 0.30	– 0.30	– 0.50	– 0.50	– 0.50	– 0.55
Fired at 1000 deg. C for 5 hrs	– 0.60	– 0.60	– 1.50	– 1.50	– 0.70	– 0.70	– 0.70	– 0.70	– 0.60	– 0.60	– 0.60	– 0.60	– 0.80	– 0.80
Fired at service temp. for 5 hrs	– 1.00	– 1.00	– 1.80	– 1.80	– 1.00	– 1.00	– 0.80	– 0.80	– 1.00	– 1.00	– 1.20	– 1.20	– 1.50	– 1.50
Thermal Conductivity, ASTM C-201/BIS: 9490, W/mK (Kcal/m/hr/˚C), Max														
At 200˚C Mean Temp.	0.19	0.20	0.13	0.14	0.16	0.17	0.26	0.26	0.17	0.17	0.19	0.19	0.19	0.20
At 400˚C Mean Temp.	0.21	0.22	0.16	0.16	0.19	0.19	0.28	0.28	0.20	0.20	0.22	0.23	0.21	0.21
At 600˚C Mean Temp.	0.24	0.24	0.18	0.18	0.21	0.22	0.42	0.42	0.22	0.22	0.23	0.24	0.24	0.24
At 815˚C Mean Temp.	0.27	0.27	0.20	0.21	0.23	0.24	0.50	0.50	0.25	0.25	0.27	0.27	0.26	0.26
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing														
Al2O3, Min	45	45	48	48	45	45	55	55	40	40	36	36	40	40
Fe2O3, Max	1	1	1.5	1.5	0.5	0.5	1	1	1	1	2	2	1	1
SiO2	34	34	28	28	33	33	30	30	40	40	42	42	38	38
CaO	15	15	14	14	15	15	10	10	14	14	15	16	18	18
MgO	1.5	1.5	1.3	1.3	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.8	0.8
Na2O+K2O	0.5	0.5	1	1	0.6	0.6	0.5	0.5	1.5	1.5	0.8	0.8	0.6	0.6
LOI	1.5	1.5	2.5	2.5	1.5	1.5	1	1.2	1	1	1.2	1.5	0.5	0.5

- Customer may contact us for any specific or tailor made requirements
- The data presented is based on a normal distribution with 95% confidence level.
- Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.
- Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.
- Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.
- For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.

PROGRESSIVE REFRACTORY & MONOLITHICS PVT. LTD.
Works & Office : INDUSTRIAL AREA RAMGARH CANTT., P.O.- MARAR, DISTT.- RAMGARH- "JHARKHAND" (INDIA), PIN- 829117.
Website: www.progressiverefractory.com
Email: prmramgarh@gmail.com/info@progressiverefractory.com
Mobile: +91-8789967062, 9304441113

*PRODUCT TYPE : Medium Weight Medium Purity Insulation Castable.(GROUP-A)

PRODUCT DATA SHEET

Products	PROGCAST 11N		PROGCAST 11HT		PROGCAST 11C		PROGCAST 12D		PROGCAST 13N		PROGCAST 14S		PROGCAST 14RV	
Properties														
Method of Installation	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun
Max. Service Temperature (˚C)	1100		1300		1100		1100		1300		1300		1100	
Material Consumption (Kg/m3)	1150	1180	1200	1230	1230	1350	1150	1180	1450	1480	1340	1350	1340	1380
Water % for Installation	35-45	35-45	30-45	30-45	38-48	38-48	35-45	35-45	28-42	28-42	28-40	28-40	28-40	28-40
Max. Grain Size (mm)	6	4	6	4	6	4	6	4	6	4	6	4	6	4
Shelf Life (Months)	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Max.														
Dried at 110 deg. C for 24 hrs	1200	1230	1250	1260	1300	1320	1200	1250	1500	1520	1380	1400	1400	1430
Fired at 815 deg. C for 5 hrs	1140	1160	1200	1230	1230	1350	1150	1180	1440	1480	1340	1350	1340	1380
Madulus of Rupture, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	12	12	13	13	12	12	8	8	14	14	15	15	12	12
Fired at 815 deg. C for 5 hrs	9	9	10	10	9	9	6	6	11	11	10	10	6	6
Fired at 1000 deg. C for 5 hrs	8	8	8	8	8	8	5	5	9	9	8	8	5	5
Fired at service temp. for 5 hrs	6	6	10	10	10	10	5	5	13	12	12	12	4.0	4.0
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	45	45	60	60	55	55	35	35	60	60	50	50	65	65
Fired at 815 deg. C for 5 hrs	35	35	45	45	30	30	20	20	45	45	40	40	45	45
Fired at 1000 deg. C for 5 hrs	30	30	40	40	30	30	19	19	40	38	35	35	40	40
Fired at service temp. for 5 hrs	25	25	60	60	50	50	18	18	55	50	50	50	32	32
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max														
Fired at 815 deg. C for 5 hrs	±0.30	±0.30	– 0.40	– 0.40	– 0.50	– 0.50	– 0.50	– 0.50	– 0.40	– 0.40	– 0.30	– 0.30	– 0.40	– 0.40
Fired at 1000 deg. C for 5 hrs	±0.80	±0.80	– 0.60	– 0.60	– 0.70	– 0.70	– 0.80	– 0.80	– 0.60	– 0.60	– 0.60	– 0.60	– 0.60	– 0.60
Fired at service temp. for 5 hrs	– 1.00	– 1.00	– 1.00	– 1.00	– 1.00	– 1.00	– 1.50	– 1.50	– 0.70	– 0.70	– 1.50	– 1.50	– 0.80	– 0.80
Thermal Conductivity, ASTM C-201/BIS: 9490, W/mK (Kcal/m/hr/˚C), Max														
At 200˚C Mean Temp.	0.30	0.30	0.23	0.23	0.38	0.38	0.34	0.34	0.32	0.32	0.36	0.36	0.36	0.36
At 400˚C Mean Temp.	0.35	0.35	0.26	0.26	0.42	0.42	0.36	0.36	0.35	0.35	0.40	0.40	0.39	0.39
At 600˚C Mean Temp.	0.41	0.41	0.30	0.30	0.45	0.45	0.39	0.39	0.40	0.40	0.44	0.44	0.42	0.42
At 815˚C Mean Temp.	0.47	0.47	0.32	0.32	0.47	0.47	0.42	0.42	0.43	0.43	0.48	0.48	0.45	0.45
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing														
Al2O3, Min	35	35	35	35	30	30	30	30	35	35	37	37	30	30
Fe2O3, Max	8	8	5	5	8	8	6	6	7	7	6	6	5	5
SiO2	38	38	36	36	40	40	45	45	35	35	40	40	44	44
CaO	12	12	14	14	14	14	12	12	14	14	14	14	15	15
MgO	2	2	2.5	2.5	2	2	2	2	2.5	2.5	0.3	0.3	0.8	0.8
Na2O+K2O	1	1	1.5	1.5	1	1	0.8	0.8	0.7	0.7	0.5	0.5	1.5	1.5
LOI	1.5	1.5	2.3	2.5	2	2	1.5	1.5	2.5	2.5	1.2	1.5	1	1.5

- Ø Customer may contact us for any specific or tailor made requirements
- Ø The data presented is based on a normal distribution with 95% confidence level.
- Ø Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.
- Ø Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.
- Ø Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.
- Ø For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.

*PRODUCT TYPE : Medium Weight Medium Purity Insulation Castable.(GROUP-B)

PRODUCT DATA SHEET

Products	PROGCAST		PROGCAST		PROGCAST		PROGCAST		PROGCAST		PROGCAST		PROGCAST	
	14SXR		14N		14SR		15HSR		15N C		15S		15M	
Properties														
Method of Installation	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun
Max. Service Temperature (˚C)	1100		1350		1320		1370		1200		1370		1260	
Material Consumption (Kg/m3)	1250	1260	1380	1420	1380	1420	1380	1400	1430	1460	1380	1420	1400	1420
Water % for Installation	35-45	35-45	28-38	28-38	28-38	28-38	25-35	25-35	25-35	25-35	28-40	28-40	28-38	28-38
Max. Grain Size (mm)	6	4	6	4	6	4	6	4	6	4	6	4	6	4
Shelf Life (Months)	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Max.														
Dried at 110 deg. C for 24 hrs	1300	1320	1450	1480	1440	1470	1440	1460	1500	1520	1440	1480	1440	1480
Fired at 815 deg. C for 5 hrs	1260	1280	1380	1420	1380	1420	1370	1390	1440	1470	1380	1420	1400	1420
Madulus of Rupture, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	12	12	13	13	15	15	16	16	18	18	14	14	13	13
Fired at 815 deg. C for 5 hrs	8	8	10	10	12	12	13	13	14	14	10	10	9	9
Fired at 1000 deg. C for 5 hrs	8	8	8	8	10	10	10	10	12	12	8	8	8	8
Fired at service temp. for 5 hrs	7	7	14	14	16	16	18	18	10	10	15	15	14	14
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	55	55	50	50	75	75	110	110	130	130	70	70	60	60
Fired at 815 deg. C for 5 hrs	30	30	35	35	50	50	75	75	100	100	50	50	40	40
Fired at 1000 deg. C for 5 hrs	28	28	30	30	45	45	70	70	80	80	50	50	42	42
Fired at service temp. for 5 hrs	25	25	50	50	80	80	120	120	70	70	80	80	65	65
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max														
Fired at 815 deg. C for 5 hrs	– 0.50	– 0.50	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.30	– 0.30
Fired at 1000 deg. C for 5 hrs	– 1.00	– 1.00	– 0.20	– 0.20	– 0.50	– 0.50	– 0.40	– 0.40	– 0.30	– 0.30	– 0.50	– 0.50	– 0.50	– 0.50
Fired at service temp. for 5 hrs	– 1.50	– 1.50	– 1.00	– 1.00	– 1.50	– 1.50	– 1.50	– 1.50	– 0.50	– 0.50	– 1.50	– 1.50	– 1.50	– 1.50
Thermal Conductivity, ASTM C-201/BIS: 9490, W/mK (Kcal/m/hr/˚C), Max														
At 200˚C Mean Temp.	0.38	0.38	0.37	0.37	0.40	0.40	0.36	0.36	0.38	0.38	0.40	0.40	0.39	0.39
At 400˚C Mean Temp.	0.42	0.42	0.41	0.41	0.44	0.44	0.40	0.40	0.41	0.41	0.43	0.43	0.45	0.45
At 600˚C Mean Temp.	0.45	0.45	0.46	0.46	0.47	0.47	0.44	0.44	0.44	0.44	0.47	0.47	0.49	0.49
At 815˚C Mean Temp.	0.47	0.47	0.49	0.49	0.51	0.51	0.50	0.50	0.47	0.48	0.51	0.52	0.54	0.54
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing														
Al2O3, Min	30	30	35	35	35	35	35	35	30	30	38	38	32	32
Fe2O3, Max	8	8	3.5	3.5	4.5	4.5	6	6	10	10	3.5	3.5	5	5
SiO2	42	42	40	40	42	42	38	38	38	38	44	44	44	44
CaO	12	12	14	14	12	12	12	13	14	14	10	10	12	12
MgO	2	2	2.5	2.5	1.5	1.5	2	2	2.5	2.5	1	1	3	3
Na2O+K2O	1	1	1.2	1.2	0.6	1	1.5	1.5	0.5	0.5	0.8	0.8	1.5	1.5
LOI	1.5	1.5	1.4	1.5	1.5	1.8	1.5	1.5	2.5	2.5	1.2	1.5	1	1.2

- Ø Customer may contact us for any specific or tailor made requirements
- Ø The data presented is based on a normal distribution with 95% confidence level.
- Ø Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.
- Ø Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.
- Ø Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.
- Ø For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.

*PRODUCT TYPE : *Medium Weight Medium Purity High Strength Insulation Castable.*

PRODUCT DATA SHEET

Products	PROGCAST 11S		PROGCAST 13R		PROGCAST 13S		PROGCAST 14HS		PROGCAST 15		PROGCAST 15V		PROGCAST 16S	
Properties														
Method of Installation	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun
Max. Service Temperature (˚C)	1205		1250		1300		1450		1320		1400		1370	
Material Consumption (Kg/m3)	1180	1230	1540	1520	1350	1370	1520	1520	1520	1550	1480	1540	1540	1550
Water % for Installation	35-45	35-45	25-35	25-35	28-38	28-38	22-34	22-34	25-35	25-35	28-40	28-40	28-38	28-38
Max. Grain Size (mm)	6	4	6	4	6	4	6	4	6	4	6	4	6	4
Shelf Life (Months)	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Max.														
Dried at 110 deg. C for 24 hrs	1250	1300	1600	1600	1420	1450	1600	1600	1600	1620	1560	1600	1600	1600
Fired at 815 deg. C for 5 hrs	1200	1250	1540	1520	1350	1370	1500	1500	1520	1550	1480	1540	1540	1550
Madulus of Rupture, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	12	12	18	18	22	20	25	25	20	20	22	25	30	30
Fired at 815 deg. C for 5 hrs	8	8	15	14	20	18	22	22	16	16	18	18	22	22
Fired at 1000 deg. C for 5 hrs	6	6	12	12	20	18	20	20	15	15	18	18	20	20
Fired at service temp. for 5 hrs	7	7	15	15	22	20			18	18			26	26
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	65	65	140	145	100	100	150	150	110	110	150	150	200	200
Fired at 815 deg. C for 5 hrs	45	45	90	85	70	70	100	100	75	75	80	80	150	150
Fired at 1000 deg. C for 5 hrs	35	35	80	80	80	80	90	90	70	70	80	80	130	130
Fired at service temp. for 5 hrs	40	40	85	85	100	100			90	90			180	180
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max														
Fired at 815 deg. C for 5 hrs	– 0.50	– 0.50	– 0.30	– 0.30	– 0.40	– 0.40	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20
Fired at 1000 deg. C for 5 hrs	– 0.60	– 0.60	– 0.50	– 0.50	– 0.50	– 0.50	– 0.60	– 0.60	– 0.40	– 0.40	– 0.60	– 0.60	– 0.50	– 0.50
Fired at service temp. for 5 hrs	– 1.00	– 1.00	– 0.80	– 0.80	– 1.50	– 1.50			– 1.00	– 1.00	– 1.50	– 1.50	– 1.20	– 1.20
Thermal Conductivity, ASTM C-201/BIS: 9490, W/mK (Kcal/m/hr/˚C), Max														
At 200˚C Mean Temp.	0.25	0.25	0.39	0.39	0.29	0.29	0.38	0.38	0.38	0.38	0.40	0.40	0.46	0.46
At 400˚C Mean Temp.	0.27	0.27	0.43	0.43	0.32	0.32	0.40	0.40	0.42	0.42	0.43	0.43	0.48	0.48
At 600˚C Mean Temp.	0.29	0.29	0.46	0.46	0.35	0.35	0.45	0.45	0.47	0.47	0.47	0.47	0.52	0.52
At 815˚C Mean Temp.	0.32	0.32	0.49	0.49	0.38	0.38	0.48	0.48	0.51	0.51	0.52	0.52	0.56	0.56
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing														
Al2O3, Min	43	43	30	30	40	40	52	52	40	40	40	40	45	45
Fe2O3, Max	3.5	3.5	3	3	6	6	1	1	4	4	4	4	3	3
SiO2	32	32	48	48	40	40	35	35	38	38	44	44	36	36
CaO	15	15	12	12	10	10	8	8	12	12	8	8	10	10
MgO	1	1	1.5	1.5	1	1	0.5	0.5	1.5	1.5	1	1	2	2
Na2O+K2O	1.5	1.5	2	2	0.6	0.6	0.8	0.8	1	1	0.8	0.8	0.5	0.5
LOI	1	1.5	1.2	1.5	0.8	1	0.5	0.5	1.5	1.5	1	1.2	1	1.2

Ø Customer may contact us for any specific or tailor made requirements

Ø The data presented is based on a normal distribution with 95% confidence level.

Ø Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.

Ø Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.

Ø Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.

Ø For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.

*PRODUCT TYPE : Medium Weight High Purity Insulation Castables.

PRODUCT DATA SHEET

Products	PROGCAST 4Li C		PROGCAST 12Li		PROGCAST 13Li C		PROGCAST 14Li		PROGCAST 14S		PROGCAST 15Li S		PROGCAST 16HS	
Properties														
Method of Installation	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun
Max. Service Temperature (˚C)	1371		1320		1320		1320		1350		1400		1430	
Material Consumption (Kg/m3)	1480	1520	1330	1350	1340	1420	1320	1350	1380	1400	1550	1560	1720	1740
Water % for Installation	25-35	28-38	28-40	28-40	28-38	28-38	28-38	28-38	28-38	28-38	28-38	28-38	28-38	28-38
Max. Grain Size (mm)	6	4	6	4	6	4	6	4	6	4	6	4	6	4
Shelf Life (Months)	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Max.														
Dried at 110 deg. C for 24 hrs	1550	1600	1420	1440	1400	1480	1400	1420	1440	1450	1600	1620	1800	1800
Fired at 815 deg. C for 5 hrs	1480	1520	1330	1350	1340	1420	1320	1350	1380	1400	1550	1560	1720	1740
Madulus of Rupture, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	18	18	14	14	12	12	13	13	15	15	22	22	30	30
Fired at 815 deg. C for 5 hrs	14	14	10	10	9	9	10	10	13	13	16	16	25	25
Fired at 1000 deg. C for 5 hrs	12	12	10	10	8	8	10	10	10	10	14	14	22	22
Fired at service temp. for 5 hrs	21	21	15	15	14	14	14	14	14	14	20	20		
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	65	65	85	85	50	50	70	70	85	85	120	125	200	200
Fired at 815 deg. C for 5 hrs	60	60	70	70	45	45	50	50	60	60	90	90	150	150
Fired at 1000 deg. C for 5 hrs	55	55	65	65	40	40	50	50	50	50	70	70	100	100
Fired at service temp. for 5 hrs	65	65	90	90	55	55	80	80	70	70	150	150		
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max														
Fired at 815 deg. C for 5 hrs	– 0.30	– 0.30	– 0.50	– 0.50	– 0.20	– 0.20	– 0.20	– 0.20	– 0.25	– 0.25	– 0.20	– 0.20	– 0.20	– 0.20
Fired at 1000 deg. C for 5 hrs	– 0.50	– 0.50	– 0.60	– 0.60	– 0.50	– 0.50	– 0.30	– 0.30	– 0.40	– 0.40	– 0.40	– 0.40	– 0.50	– 0.50
Fired at service temp. for 5 hrs	– 1.50	– 1.50	– 1.50	– 1.50	– 1.00	– 1.00	– 1.50	– 1.50	– 1.00	– 1.00	– 1.00	– 1.00		
Thermal Conductivity, ASTM C-201/BIS: 9490, W/mK (Kcal/m/hr/˚C), Max														
At 200˚C Mean Temp.	0.36	0.36	0.27	0.27	0.26	0.26	0.26	0.26	0.35	0.35	0.38	0.38	0.52	0.52
At 400˚C Mean Temp.	0.41	0.41	0.31	0.31	0.28	0.28	0.27	0.27	0.37	0.37	0.42	0.42	0.56	0.56
At 600˚C Mean Temp.	0.44	0.44	0.34	0.34	0.31	0.31	0.32	0.32	0.39	0.39	0.48	0.48	0.60	0.60
At 815˚C Mean Temp.	0.46	0.46	0.36	0.36	0.35	0.35	0.36	0.36	0.41	0.41	0.51	0.51	0.63	0.63
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing														
Al2O3, Min	43	43	38	38	45	45	45	45	45	45	40	40	45	45
Fe2O3, Max	2.2	2.2	1	1	1	1	1	1	1	1	1.5	1.5	1.5	1.5
SiO2	35	35	40	40	36	36	37	37	41	41	42	42	38	38
CaO	16	16	15	15	14	14	13	13	10	10	14	14	12	12
MgO	1	1	1	1	1	1	1.2	1.2	0.5	0.5	0.5	0.5	0.8	0.8
Na2O+K2O	1	1	0.8	0.8	1	1	0.5	0.5	0.8	0.8	0.8	0.8	0.6	0.6
LOI	0.5	0.5	1	1	0.6	0.6	0.9	1	0.2	0.5	0.4	0.5	0.8	1

- Ø Customer may contact us for any specific or tailor made requirements
- Ø The data presented is based on a normal distribution with 95% confidence level.
- Ø Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.
- Ø Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.
- Ø Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.
- Ø For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.

*PRODUCT TYPE : Medium Weight High Temperature Insulation Castables.

PRODUCT DATA SHEET

Products	PROGCAST		PROGCAST		PROGCAST		PROGCAST		PROGCAST		PROGCAST		PROGCAST	
	12S		12Li		13Li SPL		14 HT		15Li SP		15HTC		BA94	
Properties														
Method of Installation	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun	Cast	Gun
Max. Service Temperature (˚C)	1430		1320		1480		1400		1430		1500		1800	
Material Consumption (Kg/m3)	1200	1230	1330	1340	1350	1380	1420	1450	1430	1460	1580	1600	1620	1650
Water % for Installation	35-45	35-45	28-38	28-38	28-38	28-38	25-35	25-35	25-32	25-32	25-35	25-35	28-38	28-38
Max. Grain Size (mm)	6	4	6	4	6	4	6	4	6	4	6	4	6	4
Shelf Life (Months)	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Max.														
Dried at 110 deg. C for 24 hrs	1250	1280	1350	1380	1400	1420	1500	1520	1520	1550	1550	1580	1650	1680
Fired at 815 deg. C for 5 hrs	1200	1230	1330	1340	1350	1380	1420	1450	1460	1480	1580	1600	1620	1650
Madulus of Rupture, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	14	14	16	16	14	14	20	20	18	18	15	15	18	18
Fired at 815 deg. C for 5 hrs	11	11	13	13	12	12	14	14	14	14	12	12	14	14
Fired at 1000 deg. C for 5 hrs	8	8	11	11	10	10	12	12	12	12	10	10	12	12
Fired at 1450 deg. C for 5 hrs					13	13					14	14	16	16
Fired at service temp. for 5 hrs	12	12	14	14			15	15	16	16				
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min														
Dried at 110 deg. C for 24 hrs	60	60	90	90	80	80	110	110	120	120	80	80	110	110
Fired at 815 deg. C for 5 hrs	45	45	70	70	60	60	75	75	80	80	60	60	75	75
Fired at 1000 deg. C for 5 hrs	40	40	60	60	55	55	70	70	70	70	50	50	70	70
Fired at 1450 deg. C for 5 hrs					75	75					70	70	100	100
Fired at service temp. for 5 hrs	55	55	80	80			90	90	130	130				
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max														
Fired at 815 deg. C for 5 hrs	– 0.25	– 0.25	– 0.25	– 0.25	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20	– 0.20
Fired at 1000 deg. C for 5 hrs	– 0.50	– 0.50	– 0.50	– 0.50	– 0.50	– 0.50	– 0.50	– 0.50	– 0.50	– 0.50	– 0.50	– 0.50	– 0.50	– 0.50
Fired at service temp. for 5 hrs	– 1.50	– 1.50	– 1.20	– 1.20			– 1.50	– 1.50	– 1.50	– 1.50				
Thermal Conductivity, ASTM C-201/BIS: 9490, W/mK (Kcal/m/hr/˚C), Max														
At 200˚C Mean Temp.	0.35	0.35	0.20	0.20	0.32	0.32	0.48	0.48	0.42	0.42	0.40	0.40	0.6	0.6
At 400˚C Mean Temp.	0.38	0.38	0.31	0.31	0.36	0.36	0.45	0.45	0.44	0.44	0.47	0.47	0.65	0.65
At 600˚C Mean Temp.	0.42	0.42	0.34	0.34	0.39	0.39	0.48	0.48	0.47	0.47	0.52	0.52	0.72	0.72
At 815˚C Mean Temp.	0.45	0.45	0.36	0.36	0.43	0.43	0.52	0.52	0.48	0.48	0.56	0.56	0.84	0.84
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing														
Al2O3, Min	60	60	38	38	60	60	45	45	45	45	58	58	94	94
Fe2O3, Max	1	1	1	1	1	1	2	2	2	2	1.5	1.5	0.2	0.2
SiO2	22	22	40	40	26	26	36	36	39	39	28	28	0.3	0.3
CaO	12	12	15	15	8	8	12	12	10	10	8	8	3.5	3.5
MgO	1.2	1.2	1	1	0.8	0.8	2	2	1	1	0.6	0.6	0.2	0.2
Na2O+K2O	0.5	0.5	1.05	1.05	0.8	0.8	0.5	0.5	0.5	0.5	0.8	0.8	0.3	0.3
LOI	0.8	0.8	1	1	1.2	1.2	1	1	1.2	1.5	0.5	1	0.3	0.3

- Customer may contact us for any specific or tailor made requirements
- The data presented is based on a normal distribution with 95% confidence level.
- Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.
- Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.
- Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.
- For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.

PROGRESSIVE REFRACTORY & MONOLITHICS PVT. LTD.
Works & Office : INDUSTRIAL AREA RAMGARH CANTT., P.O.- MARAR, DISTT.- RAMGARH- "JHARKHAND" (INDIA), PIN- 829117.
Website: www.progressiverefractory.com
Email: prmramgarh@gmail.com/info@progressiverefractory.com
Mobile: +91-8789967062, 9304441113

*PRODUCT TYPE : High Performance Low Cement Castables.

PRODUCT DATA SHEET

Products	PROGCAST LC40	PROGCAST LC45	PROGCAST LC50	PROGCAST LC60	PROGCAST LC70	PROGCAST LC80	PROGCAST LC90
Properties							
Method of Installation	VIBRATION	VIBRATION	VIBRATION	VIBRATION	VIBRATION	VIBRATION	VIBRATION
Nature of Bond	HYDROULIC	HYDROULIC	HYDROULIC	HYDROULIC	HYDROULIC	HYDROULIC	HYDROULIC
Max. Service Temperature (°C)	1400	1450	1550	1600	1650	1700	1800
Min. PCE/Refractoriness (Orton/°C)	20/1564	30/1665	32/1717	35/1785	36/1804	38/1835	40/1920
Water % for Installation	6.5-7.5	5.0-7.0	5.0-6.5	5.0-6.5	4.5-6.0	4.0-5.5	4.0-5.5
Max. Grain Size (mm)	5 OR 8	5 OR 8	5 OR 8	5 OR 8	5 OR 8	5 OR 8	5 OR 8
Shelf Life (Months)	9	9	9	9	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Max.							
Dried at 110 deg. C for 24 hrs	2100	2300	2400	2600	2700	2800	2900
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min							
Dried at 110 deg. C for 24 hrs	500	700	700	750	750	800	900
Fired at 800 deg. C for 3 hrs	600	750	800	800	850	900	1000
Fired at 1100 deg. C for 3 hrs	700	850	900	900	950	1050	1100
Fired at 1400 deg. C for 3 hrs		1000	1000	1050			
Fired at 1500 deg. C for 3 hrs			1100	1150	1200	1200	1250
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max							
Fired at 800 deg. C for 5 hrs	±0.40	±0.20	±0.20	±0.20	±0.20	±0.10	±0.10
Fired at 1100 deg. C for 3 hrs	±0.60	±0.30	±0.30	±0.30	±0.20	±0.20	±0.20
Fired at 1400 deg. C for 3 hrs	±1.50	±1.20	±0.80	±0.60	±0.50	±0.30	±0.30
Fired at 1500 deg. C for 3 hrs			±1.20	±1.00	±0.80	±0.60	±0.50
Thermal Conductivity, ASTM C-201/BIS: 9490, (Kcal/m/hr/°C), Max							
At 500°C Hot Face	0.99	1.08	1.15	1.32	1.50	1.68	1.85
At 1000°C Hot Face	1.20	1.30	1.35	1.52	1.80	2.04	2.24
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing							
Al2O3, Min	40	45	50	60	70	80	92
Fe2O3, Max	3	2.5	1.5	1	1.5	1	0.3
SiO2 (Approx)	49	45	42	32	22.5	14	4.5
CaO, Max	2.5	2.5	2.5	2.3	2.2	2	1.9
Na2O+K2O	2	2	1	0.6	0.6	0.4	0.2
TiO2	2.2	2.5	1.5	1	1.5	0.6	0.2

- Customer may contact us for any specific or tailor made requirements
- The data presented is based on a normal distribution with 95% confidence level.
- Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.
- Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.
- Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.
- For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.

**PRODUCT TYPE* : *Zero Cement, Self Flow & Chemical Bonded(Plastic Mass) Castables.*

PRODUCT DATA SHEET

Products	PROGCAST ZC90	PROGCAST SF60	PROGCAST SF70	PROGCAST SF95	PROGCAST PR60	PROGCAST PR70	PROGCAST PR90
Properties							
Method of Installation	VIBRATION	FREE FLOW	FREE FLOW	FREE FLOW	RAMMING	RAMMING	RAMMING
Nature of Bond	CERAMIC	HYDROULIC	HYDROULIC	HYDROULIC	CHEMICAL	CHEMICAL	CHEMICAL
Max. Service Temperature (˚C)	1800	1600	1650	1800	1500	1600	1650
Min. PCE/Refractoriness (Orton/˚C)	40/1920	32/1717	36/1804	39/1880	32/1717	34/1763	35/1785
Water % for Installation	5.0-6.5	7.5-9.5	7.5-9.0	4.0-5.5			
Binder % for Installation (Supplied with Powder)					9.5-11.5	9.5-11	9-10
Max. Grain Size (mm)	5	5	5	5	3	3	3
Shelf Life (Months)	9	6	6	6	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Max.							
Dried at 110 deg. C for 24 hrs	2700-3100	2400	2500	2850	2200	2500	2700
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min							
Dried at 110 deg. C for 24 hrs		300	350	400	350	450	650
Fired at 1000 deg. C for 3 hrs		500	500	550	550	600	
Fired at 1300 deg. C for 3 hrs	500				650	700	850
Fired at 1500 deg. C for 3 hrs		700	750	700			875
Fired at 1600 deg. C for 3 hrs	700			850			
Madulus of Rupture, ASTM C-133/BIS: 10570, Kg/cm2, Min							
Dried at 110 deg. C for 24 hrs		50	50	55	55	60	100
Fired at 1000 deg. C for 3 hrs		55	55	60	62	70	
Fired at 1300 deg. C for 3 hrs					75	80	160
Fired at 1500 deg. C for 3 hrs		70	75	80			200
Fired at 1600 deg. C for 3 hrs				100			
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max							
Fired at 1000 deg. C for 3 hrs	±0.20				±0.30	±0.25	±0.20
Fired at 1300 deg. C for 3 hrs	±0.30	±0.50	±0.30		±1.00	±1.00	±1.00
Fired at 1500 deg. C for 3 hrs		±1.00	±1.00	±0.50			±1.50
Fired at 1600 deg. C for 3 hrs	±0.50	±1.50	±1.50	±1.00			
Thermal Conductivity, ASTM C-201/BIS: 9490, (Kcal/m/hr/˚C), Max							
At 1000˚C Hot Face	1.9	1.42	1.6	2	1.65	1.72	2.2
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing							
Al2O3, Min	90-94	58-60	68-70	92-95	60	70	90
Fe2O3, Max	0.6	1.5	1.2	0.3	1	1	0.3
SiO2 (Approx)	6	35	25.5	2.5	34	24.5	6
CaO, Max	0.1	2	1.7	1.5	0.5	0.4	0.3
Na2O+K2O	0.1	0.5	0.4	0.1	0.6	0.4	0.3
TiO2	Trace	0.8	0.6	0.2	1.5	1	0.8

- Ø Customer may contact us for any specific or tailor made requirements
- Ø The data presented is based on a normal distribution with 95% confidence level.
- Ø Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.
- Ø Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.
- Ø Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.
- Ø For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.

*PRODUCT TYPE : High Performance Ultra Low Cement Castables.

PRODUCT DATA SHEET

Products	PROGCAST ULCC45	PROGCAST ULCC50	PROGCAST ULCC60	PROGCAST ULCC70	PROGCAST ULCC80	PROGCAST ULCC90	PROGCAST ULCC95
Properties							
Method of Installation	VIBRATION	VIBRATION	VIBRATION	VIBRATION	VIBRATION	VIBRATION	VIBRATION
Nature of Bond	HYDROULIC	HYDROULIC	HYDROULIC	HYDROULIC	HYDROULIC	HYDROULIC	HYDROULIC
Max. Service Temperature (°C)	1500	1550	1600	1600	1700	1750	1800
Min. PCE/Refractoriness (Orton/°C)	28/1646	30/1665	32/1717	35/1785	36/1804	38/1835	40/1920
Water % for Installation	4.8-6.5	4.7-6.0	4.7-6.0	4.5-5.8	4.5-5.5	4.0-5.2	4.0-5.0
Max. Grain Size (mm)	6	6	6	6	6	6	6
Shelf Life (Months)	9	9	9	9	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Max.							
Dried at 110 deg. C for 24 hrs	2300	2400	2600	2700	2900	3000	3100
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min							
Dried at 110 deg. C for 24 hrs	350	380	420	440	460	480	500
Fired at 800 deg. C for 3 hrs	800	820	840	850	870	1050	750
Fired at 1100 deg. C for 3 hrs	820	850	860	940	1020	1080	1100
Fired at 1500 deg. C for 3 hrs	900	950	1000	1000	1200	1220	1250
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max							
Fired at 800 deg. C for 5 hrs	±0.20	±0.20	±0.20	±0.20	±0.20	±0.20	±0.20
Fired at 1100 deg. C for 3 hrs	±0.60	±0.30	±0.30	±0.30	±0.30	±0.30	±0.30
Thermal Conductivity, ASTM C-201/BIS: 9490, (Kcal/m/hr/°C), Max							
At 300°C Hot Face	0.80	0.86	0.95	1.12	1.56	2.16	2.30
At 500°C Hot Face	0.96	1.02	1.10	1.20	1.70	2.28	2.33
At 800°C Hot Face	1.05	1.12	1.20	1.34	1.79	2.38	2.40
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing							
Al2O3, Min	45	50	60	70	80	90	94
Fe2O3, Max	1	1.5	1.5	1.5	1.8	1	0.3
SiO2 (Approx)	49	47	34	23	12	6.5	4.3
CaO, Max	1	1	1	1	1	1	1
Na2O+K2O	2	2	0.8	0.7	0.6	0.4	0.2
TiO2	1	1.2	1.5	1	1.5	0.6	0.2

- Ø Customer may contact us for any specific or tailor made requirements
- Ø The data presented is based on a normal distribution with 95% confidence level.
- Ø Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.
- Ø Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.
- Ø Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.
- Ø For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.

*PRODUCT TYPE : High Alumina Air-Setting Mortar.

PRODUCT DATA SHEET

Products	PROGSET 40	PROGSET 40S	PROGSET 50S	PROGSET 50	PROGSET 60K	PROGSET 70K	PROGSET 90K
Properties							
Method of Installation	TROWELING	TROWELING	TROWELING	TROWELING	TROWELING	TROWELING	TROWELING
Nature of Bond	CERAMIC	CERAMIC	CERAMIC	CERAMIC	CERAMIC	CERAMIC	CERAMIC
Max. Service Temperature (°C)	1400	1450	1550	1500	1600	1650	1800
Min. PCE/Refractoriness (Orton/°C)	23/1605	28/1646	30/1665	32/1717	33/1743	36/1804	40/1920
Water % for Troweling	22-35	22-30	20-25	20-25	20-25	15-22	15-22
Water % for Ramming	14-18	14-17	12-15	12-15	12-15	10-12	10-12
Max. Grain Size (mm)	0.5	1	1	0.5	0.5	0.5	0.5
Shelf Life (Months)	12	12	12	12	9	9	9
Material Density, ASTM C-134/BIS: 10570, Kg/m3, Min.							
Dried at 110 deg. C for 24 hrs	1750-2000	1800-2050	1900-2100	1900-2100	2000-2200	2400-2600	2500-2700
Cold Crushing Strength, ASTM C-133/BIS: 10570, Kg/cm2, Min							
Dried at 110 deg. C for 24 hrs	12	15	25	25	35	40	75
Fired at 1300 deg. C for 3 hrs	100	150	200	210	200	220	300
Fired at 1400 deg. C for 3 hrs					300	350	450
Permanent Linear Change, ASTM C-113/BIS: 10570, %, Max							
Dried at 110 deg. C for 24 hrs	– 0.80	– 0.60	– 0.50	– 0.50	– 0.50	– 0.30	±0.10
Fired at 1300 deg. C for 3 hrs	– 1.50	±1.00	±1.00	– 1.00	– 1.00	– 0.80	±0.20
Fired at 1400 deg. C for 3 hrs			– 1.20	– 1.30	– 1.20	±1.00	– 0.80
Chemical Analysis, ASTM C-573/BIS: 12107, % Weight basis after firing							
Al2O3, Min	35-40	40	50	42	60	70	92
Fe2O3, Max	2.5	2.6	2	1.5	1.5	1	0.3
SiO2 (Approx)	52	53	43	52	35	24	6
LOI	3	2.5	2	2	2	1.5	0.8

- Ø Customer may contact us for any specific or tailor made requirements
- Ø The data presented is based on a normal distribution with 95% confidence level.
- Ø Samples mean values will meet these values for the properties listed when sample are prepared and tested in accordance with ASTM C-401/BIS: 10570-2011.
- Ø Properties indicated above are for Rammed/Vibration casted samples only unless specified otherwise.
- Ø Water requirement indicated above is offered as guide. Actual water required may be subject to field conditions. Please contact us for any assistance. We will provide our application procedure.
- Ø For any more details like **Complete Product Specification/Compliance Data Sheet/Material Safety Data Sheet** please contact us.