



DIMAL Asia Pacific Sdn. Bhd. (219956-D)

PLASTICS (MOULDABLES)

MAJOR APPLICATION AREAS

ROOF AND WALLS OF INDUSTRIAL FURNACES,
TOP CAP AREA OF CORELESS INDUCTION FURNACES,
WATER TUBE BOILERS,
STUDED TUBES IN BOILERS,
FOSSIL FUEL FIRED AND RECOVERY BOILERS,
ROOF AND WALLS OF INCINERATORS,
HEAT GENERATORS, CAT CRACKERS,
BULL NOSE AREA / CEMENT INDUSTRY,
INTERMEDIATE REPAIR OR PATCHING IN INDUSTRIAL FURNACES



“ We create your advantage ”



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PLASTICS (MOULDABLES)

PLASTICS ARE READY TO USE MATERIALS CHARACTERISED BY A COMBINATION OF MOULDABILITY AND STICKY COHESIVENESS. THEY ARE RAMMED INTO PLACE BY LIGHT OR HEAVY DUTY RAMMERS OR TAMPERS, REQUIRE NO FORMS AND CAN BE INSTALLED IN DIFFICULT PLACES BY HAND. *PLASTICS* CAN BE EITHER CLAY, OR PHOSPHATE BONDED.

ADVANTAGES OF USING PLASTICS

- PLASTICS OFFER JOINTLESS REFRACTORY LININGS.
- FURNACE WALLS CAN BE RAMMED TO ANY THICKNESS OR CONTOUR.
- BETTER STABILITY THAN BRICKS, BECAUSE OF ANCHORING.
- EASY TO REPAIR THAN THE BRICK LINING.
- DO NOT NEED TO KEEP AN INVENTORY OF DIFFERENT SHAPES AND SIZES TO COMPLETE THE LINING.

DISADVANTAGES

- STRENGTH DEVELOPS AFTER CURING AT ELEVATED TEMPERATURE AND CAN VARY AT DIFFERENT THICKNESS.
- PHOSPHATE BONDED PLASTICS HAVE SHORTER SHELF LIFE AND IF NOT CURED IN DUE TIME CAN ABSORB WATER FROM THE ATMOSPHERE DETERIORATING SOME PHYSICAL AND THERMO-MECHANICAL PROPERTIES.

“ We create your advantage ”
Steel, Cement, Petrochemical, Aluminium

CLAY BONDED

BRAND	Al ₂ O ₃	SiO ₂	Fe ₂ O ₃	P ₂ O ₅	Cr ₂ O ₃	ZrO ₂	Appl. Temp.	Mat. Req.	CCS		
	%	%	%	%	(SiC) %	%	% °C	kg/M3	110°C M Pa	1000°C M Pa	1200°C M Pa
DIRAM 140	38	52	2.3	-	-	-	1400	2,200	3 - 6	5 - 10	7 - 11
DIRAM 155	54	38	2.0	-	-	-	1550	2,300	4 - 6	7 - 10	8 - 12
DIRAM 155 HS	53	36	2.0	-	-	-	1550	2,300	5 - 9	9 - 13	10 - 15
DIRAM 160	58	32	2.0	-	-	-	1600	2,400	4 - 6	7 - 12	8 - 14
DIRAM 160 HS	60	30	1.8	-	-	-	1600	2,400	5 - 9	10 - 15	11 - 16
DIRAM 170	67	23	1.8	-	-	-	1700	2,430	4 - 8	7 - 12	10 - 15
DIRAM 170 MUL	68	23	1.0	-	-	-	1700	2,550	4 - 7	-	12 - 20
DIRAM 180 HS	80	9	0.8	-	-	-	1750	2,700	7 - 10	-	18 - 25

PHOSPHATE BONDED

BRAND	Al ₂ O ₃	SiO ₂	Fe ₂ O ₃	P ₂ O ₅	Cr ₂ O ₃	ZrO ₂	Appl. Temp.	Mat. Req.	CCS		
	%	%	%	%	(SiC) %	%	% °C	kg/M3	110°C M Pa	1000°C M Pa	1200°C M Pa
DIRAM 160 PHS	60	32	1.8	3.5	-	-	1600	2,400	6 - 12	10 - 16	14 - 20
DIRAM 170 PHS	70	23	1.5	3.5	-	-	1700	2,580	12 - 18	15 - 25	15 - 25
DIRAM 190 PHS	86	8	1.2	3.5	-	-	1900	2,850	12 - 20	20 - 30	20 - 30
DIRAM 180 PT (0.1mm)	90	5	0.3	3.5	-	-	1800	2,800	12 - 20	15 - 25	15 - 25

SPECIAL GRADES

BRAND	Al ₂ O ₃	SiO ₂	Fe ₂ O ₃	P ₂ O ₅	Cr ₂ O ₃	ZrO ₂	Appl. Temp.	Mat. Req.	CCS		
	%	%	%	%	(SiC) %	%	% °C	kg/M3	110°C M Pa	1000°C M Pa	1200°C M Pa
DIRAM SiC 30	45	17	1.5	-	(30)	-	1700	2,650	2 - 7	7 - 14	-
DIRAM 175 CR3 AC	78	5	-	-	3	-	1800	3,050	-	-	-
DIRAM AZS 30 (0-0.4mm)	48	20	-	-	-	30	1600	2,550	-	-	-
DIRAM AZS 30 (0-0.6mm)	48	20	-	-	-	30	1600	2,600	-	-	-
DIRAM AZS 30 (0-5mm)	48	20	-	-	-	30	1600	3,100	-	-	-
									280°C	1000°C	1200°C
DIRAM 160 ZIRMUL PATCH	54	14	-	6.0	-	23	1600	3,350	25-45	40-60	40-60
DIRAM 165 ZIRCON PATCH	4	29	-	6.0	-	58	1650	3,400	15-35	40-60	50-70

Y = Ready Mix with Steel Fibre (can also be delivered with Steel Fiber Addition, e.g. Diram 170 Y)

P = Phosphate Bonded

HS = High Strength

AZS = Alumina - Zirconium Silicate Containing Ramming / Patching Mix



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WE CREATE YOUR ADVANTAGE

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