

BASIC BRICKS

Chemical and physical properties - typical

Product		MgO (%)	Cr ₂ O ₃ (%)	Fe ₂ O ₃ (%)	Al ₂ O ₃ (%)	CaO (%)	SiO ₂ (%)	Bulk density (g.cm ⁻³)	Apparent porosity (%)	Cold crushing strength (MPa)	Refractoriness under load Tb (°C)	Thermal conductivity (W.m ⁻¹ .K ⁻¹)	
												600°C	1200°C
I	SLI (M85)	87,5	-	8,0	0,4	2,5	1,0	2,90	19	70	1500	5,3	3,1
	SLIH (M85)	87,5	-	8,0	0,4	2,5	1,1	3,08	15	70	1500	6,3	3,3
	SLID (M85)	87,5	-	8,0	0,4	2,5	1,1	3,05	17	70	1500	4,5	2,9
	SLIDH (M85)	87,5	-	8,0	0,4	2,5	1,1	3,05	16	70	1500	5,0	3,3
	SLIQ (M95)	96,0	-	0,5	0,2	2,2	0,5	2,97	16	50	>1700	4,4	3,6
	SLIQZ (M90)	91,0	-	5,0	0,4	2,3	0,8	3,00	16	70	1550	5,3	3,2
	SLI 90 (M90)	92,0	-	2,3	0,6	2,0	3,0	2,95	16	60	1500		
	SLI 97X (M95)	97,0	-	0,5	0,4	1,3	0,4	3,10	15	50	>1700		
	SLIEB-A(G) (M90)	92,0	-	0,3	6,5	0,9	0,1	2,90	18	70	>1700		
	SLI X2Z (M95)	96,5	-	0,8	0,3	1,7	0,6	3,00	16	50	>1700	4,3	3,5
II	SLIIC (MCr70)	78,0	8	8,0	2,0	2,5	1,5	3,00	17	40	1500	4,0	2,9
	SLIIK (MCr70)	74,0	9	10,0	2,5	2,3	1,5	3,05	19	50	1500	4,0	2,9
	SLIIC (MCr70)	73,0	10	10,0	2,5	2,2	1,4	3,05	18	50	1550	3,1	2,5
	SLIIK (MCr60)	67,0	14	10,5	3,5	2,0	2,0	3,00	19	40	1600	2,7	2,3
	SLIIK (MCr60)	67,0	14	10,5	3,7	2,0	2,0	3,15	17	40	1650	2,2	2,4
	SLIIKDT (MCr60)	61,0	16	14,5	5,0	2,0	1,1	3,20	15	40	>1700		
III	SLV 20 (MCr70)	74,0	10	10,0	2,5	2,0	1,1	3,10	15	50	1600		
	SLV 28D (MCr60)	68,0	14	10,6	3,2	2,0	1,6	3,15	17	30	1650		
	SLV 30 (MCr60)	67,0	15	10,5	3,5	2,0	1,2	3,15	16	50	1670	2,9	2,8
	SLV 30D (MCr60)	66,0	16	10,5	3,5	2,0	1,2	3,15	16	45	1650		
	SLV 30QZ (MCr60)	69,0	16	8,5	3,5	2,0	1,0	3,15	16	45	1660		
	SLV 40 (MCr60)	60,0	20	11,0	5,0	2,0	1,5	3,20	16	40	1670	2,5	2,4
	SLIIKTZ (MCr60)	60,0	18	14,5	5,2	1,5	0,8	3,25	15	45	>1700		
	SLIIITQ (MCr50)	58,0	20	13,5	6,5	1,2	0,6	3,25	16	35	>1700		
	SLIIITQZ (MCr50)	58,0	20	13,5	6,5	1,3	0,6	3,25	15	40	>1700		
	SLIIITL (MCr50)	57,0	20	14,5	6,0	1,5	0,6	3,25	16	40	1680		
	SLIIIDQ (MCr60)	66,0	20	6,2	4,8	1,5	1,2	3,20	16	40	>1700		
IV	SLIII (MCr50)	59,0	20	12,0	5,0	2,0	2,0	3,15	18	40	1630	2,1	2,2
	SLIIID (MCr50)	58,0	20	11,5	5,0	2,0	2,2	3,20	17	35	1650	1,9	2,2
	SLIIIDD (MCr60)	60,0	20	11,0	5,3	1,5	1,3	3,25	16	50	1650		
	SLIIHK (MCr40)	48,0	29	12,3	6,7	1,5	2,5	3,15	20	30	1600	1,7	1,9
V	SLIS (M85)	87,5	-	8,0	0,4	2,0	1,0	2,90	-	45	-		
VI	SLIIIS (MCr50)	59,0	20	12,0	5,0	2,0	2,0	3,00	-	40	-	2,1	2,2
	SLIIIS (MCr60)	67,0	14	10,5	3,5	2,0	2,0	3,00	-	50	-	2,1	2,2
	SLIIIS (MCr60)	67,0	14	10,5	3,7	2,0	2,0	3,05	-	50	-	2,7	2,3
	SLIIIS (MCr40)	48,0	29	12,3	6,7	1,5	2,5	3,25	-	40	-	1,7	1,9

I - burnt magnesia bricks

II, III, IV - burnt magnesia-chromite

V - chemically bonded magnesia bricks

VI - chemically bonded magnesia – chromite

Product		Charakteristics
I	SLI (M85)	Magnesia brick made of natural iron magnesia.
	SLIH (M85)	High-dense magnesia brick made of natural iron magnesia.
	SLID (M85)	Magnesia brick made of natural iron magnesia with increased resistance to thermal shocks.
	SLIDH (M85)	Dense magnesia brick made of natural iron magnesia.
	SLIQ (M95)	Magnesia brick made of low iron magnesia.
	SLIQZ (M90)	Magnesia brick made of low iron magnesia and iron magnesia.
	SLI 90 (M90)	Magnesia brick made of low iron siliceous magnesia.
	SLI 97X (M95)	Magnesia brick made of large-crystal fused magnesia resistant to melt and slag-corrosion.
	SLIEB-A(G) (M90)	Brick made of low iron magnesia - can be additionally impregnated (marked "G").
SLI X2Z (M95)	High-burnt magnesia brick made of the mixture containing low iron, sintered and fused magnesia.	
II	SLIIC (MCr70)	Magnesia-chromite brick resistant to thermal shocks.
	SLIIK (MCr70)	Magnesia-chromite brick resistant to thermal shocks.
	SLIIIC (MCr70)	Magnesia-chromite brick resistant to thermal shocks.
	SLIIIK (MCr60)	Magnesia-chromite brick resistant to thermal shocks.
	SLIIIKD (MCr60)	Magnesia-chromite brick burnt at higher temperatures with increased resistance to thermal shocks and effects of vessel atmosphere as well.
	SLIIIKDT (MCr60)	High-burnt magnesia-chromite brick with direct bond.
III	SLV 20 (MCr70)	Direct-bonded magnesia-chromite brick.
	SLV 28D (MCr60)	High-burnt magnesia-chromite brick with direct bond.
	SLV 30 (MCr60)	Direct-bonded magnesia-chromite brick.
	SLV 30D (MCr60)	Direct-bonded magnesia-chromite brick.
	SLV 30QZ (MCr60)	Direct-bonded magnesia-chromite brick.
	SLV 40 (MCr60)	High-dense magnesia-chromite brick with direct bond.
	SLIIIKTZ (MCr60)	Dense magnesia-chromite brick with direct bond made of low siliceous chrome ore.
	SLIIITQ (MCr50)	Dense magnesia-chromite brick with direct bond made of low siliceous chrome ore.
	SLIIITQZ (MCr50)	Magnesia-chromite brick with direct bond made of low siliceous chrome ore.
	SLIIITL (MCr50)	High-burnt magnesia-chromite brick made of low iron magnesia.
SLIIIDQ (MCr60)	High-burnt magnesia-chromite brick.	
IV	SLIII (MCr50)	Magnesia-chromite brick resistant to thermal shocks and effect of vessel atmosphere.
	SLIIID (MCr50)	High-burnt shaped magnesia-chromite brick.
	SLIIIDD (MCr60)	Magnesia-chromite brick with increased density.
	SLIIHK (MCr40)	Magnesia-chromite brick resistant to thermal shocks, slag-attacks and high temperature from the vessel atmosphere.
V	SLIS (M85)	Magnesia brick chemically bonded.
VI	SLIIIS (MCr50)	Magnesia-chromite brick chemically bonded, resistant to thermal shocks and increased chemical stress.
	SLIIIKS (MCr60)	Magnesia-chromite brick chemically bonded.
	SLIIIKDS (MCr60)	Magnesia-chromite brick chemically bonded.
	SLIIHK (MCr40)	Magnesia-chromite brick chemically bonded with increased resistance to thermal shocks and increased chemical stress as well.

MAGNESIA - CARBON BRICKS

Chemical and physical properties - typical

Product	MgO-content in magnesia (%)	Residual carbon (%)	Bulk density (g.cm ⁻³)	Apparent porosity (%)	Cold crushing strength (MPa)
SMAG C3/96 (M 95)	96,0	3	3,0	7,0	60
SMAG C3/96X100 (M 95)	96,0	3	3,1	5,0	85
SMAG C6/96 (M 95)	96,0	6	3,1	4,0	35
SMAG C10/96 (MC 95/10)	96,0	10	3,0	3,5	40
SMAG C10/96 R3 (MC 95/10)	96,0	10	2,9	4,5	45
SMAG C10/96 R5 (MC 95/10)	96,0	10	2,9	6,0	45
SMAG C10/96X50 (MC 95/10)	96,0	10	3,0	3,5	45
SMAG C10/96X100 (MC 95/10)	96,0	10	3,0	3,5	40
SMAG C15/96 (MC 95/15)	96,0	15	2,9	3,5	35
SMAG C15/96 R5 (MC 95/15)	96,0	15	2,9	5,0	40
SMAG C15/96X50 (MC 95/15)	96,0	15	2,9	3,2	35
SMAG C15/96X100 (MC 95/15)	96,0	15	3,0	3,0	35
SMAG C15/97X100 (MC 95/15)	96,5	15	3,0	3,0	35
SMAG C15/98X100 (MC 98/15)	97,5	15	3,0	2,5	35
SMAG C10/99 (MC98/10)	99,0	10	3,0	3,5	35
SMAG C15/99 (MC 98/15)	99,0	15	3,0	3,0	35
SMAG C6/99 (M 98)	99,0	6	3,0	4,0	35

Remarks: X – content of fused magnesia

Available on request:

T – additional impregnation

A – addition of antioxidant

Product	Charakteristics
SMAG C3/96 (M 95)	Magnesia brick made of low iron sintered magnesia with natural graphite content and organic chemical bond.
SMAG C3/96X100 (M 95)	Magnesia brick made of low iron fused magnesia with natural graphite content and organic chemical bond.
SMAG C6/96 (M 95)	Magnesia brick made of low iron sintered magnesia with natural graphite content and organic chemical bond.
SMAG C10/96 (MC 95/10)	Magnesia-carbon brick made of low iron sintered magnesia with natural graphite content and organic chemical bond.
SMAG C10/96 R3 (MC 95/10)	Magnesia-carbon brick made of low iron sintered magnesia with natural graphite content and organic chemical bond.
SMAG C10/96 R5 (MC 95/10)	Magnesia-carbon brick made of low iron sintered magnesia with natural graphite content and organic chemical bond.
SMAG C10/96X50 (MC 95/10)	Magnesia-carbon brick made of low iron sintered and fused magnesia mixtur with natural graphite content and organic chemical bond.
SMAG C10/96X100 (MC 95/10)	Magnesia-carbon brick made of low iron fused magnesia with natural graphite content and organic chemical bond.
SMAG C15/96 (MC 95/15)	Magnesia-carbon brick made of low iron sintered magnesia with natural graphite content and organic chemical bond.
SMAG C15/96 R5 (MC 95/15)	Magnesia-carbon brick made of low iron sintered magnesia with natural graphite content and organic chemical bond.
SMAG C15/96X50 (MC 95/15)	Magnesia-carbon brick made of low iron sintered and fused magnesia mixtur with natural graphite content and organic chemical bond.
SMAG C15/96X100 (MC 95/15)	Magnesia-carbon brick made of low iron fused magnesia with natural graphite content and organic chemical bond.
SMAG C15/97X100 (MC 95/15)	Magnesia-carbon brick made of low iron fused magnesia with natural graphite content and organic chemical bond.
SMAG C15/98X100 (MC 98/15)	Magnesia-carbon brick made of low iron fused and large-crystal magnesia with natural graphite content and organic chemical bond.
SMAG C10/99 (MC98/10)	Magnesia-carbon brick made of low iron sintered magnesia with natural graphite content and organic chemical bond.
SMAG C15/99 (MC 98/15)	Magnesia-carbon brick made of low iron sintered magnesia with natural graphite content and organic chemical bond.
SMAG C6/99 (M 98)	Magnesia brick made of low iron sintered magnesia with natural graphite content and organic chemical bond.