

**Declaration of Performance No.: 6/10-2023****Unique identification code of the product type:**

MagnaDense 2, 8s, 20s

**Intended use:**

Heavy aggregate for concrete

**Manufacturer:**

LKAB Minerals GmbH, Am EUROPA-CENTER 1a, 45145 Essen, Germany

**System for evaluating and checking performance:**

System 2+

**Harmonised standard:**

EN 12620:2002+A1:2008

**Notified body:**Baustoffüberwachungs- und Zertifizierungsverband Nordrhein-Westfalen (BÜV NW) e.V.,  
(0778)**Declared services:**

See attached overview of the declared performance dated 14.12.2023

The performance of the above product is in conformity with the declared performance.  
This declaration of performance is issued in accordance with Regulation (EU) No  
305/2011 under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

Thomas Tepper



Essen, 14.12.2023

Annex: Overview of the declared performance from

**Annex - Declared performance**  
**Harmonised technical specification: DIN EN 12620:2008**

Key features	Performance		
	MagnaDense 2	MagnaDense 8s	MagnaDense 20s
Grain shape	---*	---*	---*
Grain size	0 - 2 mm	0 - 8 mm	0 - 20 mm
Grain density <sub>ssd</sub> [Mg/m <sup>3</sup> ]	5,13 – 5,17	4,84 – 4,89	4,84 – 4,86
Raw grain density <sub>rd</sub> [Mg/m <sup>3</sup> ]	5,12 – 5,16	4,83 – 4,87	4,83 – 4,85
Purity			
-Content of fines	f <sub>10</sub>	f <sub>16</sub>	f <sub>10</sub>
-Quality of the fines			
Methylene blue value)	MB <sub>0,1 indicated</sub>	MB <sub>0,1 indicated</sub>	MB <sub>0,1 indicated</sub>
-Shell content			
Resistance to shattering	---*	---*	---*
Resistance to polishing	---*	---*	---*
Resistance to abrasion	---*	---*	---*
Resistance to wear and tear	---*	---*	---*
Resistance to spike tyres	---*	---*	---*
Composition			
-Chlorides [M.-%]	<0,04	<0,04	<0,04
-Acid soluble sulphate	AS <sub>0,2</sub>	AS <sub>0,2</sub>	AS <sub>0,2</sub>
-Total sulphur content [M.-%]	<0,01	<0,01	<0,01
-Components that influence the setting and hardening behaviour of the concrete	Passed	Passed	Passed
Carbon content	---*	---*	---*
Room resistance	---*	---*	---*
Shrinkage due to drying out			
Water absorption [M.-%]	0,3	0,3	0,3
Radiation of radioactivity	---*	---*	---*
Release of heavy metals	---*	---*	---*
Release of polyaromatic hydrocarbons	---	---	---
Release of other hazardous substances	---	---	---
Durability			
-Magnesium sulphate value	---	---	---
Resistance to freeze-thaw cycles	---	F <sub>1</sub>	F <sub>1</sub>
Alkali sensitivity class according to Alkali Directive (06/2019)	EI	EI	EI

\*= No performance specified; mixtures of the individual grain sizes are possible.

Product name	Grain group	Typical grain composition (coarse aggregates)										Tolerances according to
		Sieve throughput (mm) in M.-%										
		0,063	1	4	6,3	8	12,5	16	20	31,5		
MagnaDense 8S	0/8	<12	36	80	94	99	100					special application
		0,063	2	4	16	20						
MagnaDense 20S	0/16	<3	3	8		42		94	99	100		special application