

Magnesium Oxide (ZR1)

Description: Magnesium oxide (MgO) is an inorganic compound that is widely used in various industries and has several important properties and applications. Its natural occurrence occurs naturally as the mineral periclase. It is found in large deposits in various geological formations. MgO has excellent thermal stability and is used as a refractory material in furnaces and kilns. It acts as a basic oxide and can neutralize acids, forming magnesium salts.

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| 1. Chemical Name | Magnesium Oxide |
| 2. Chemical formula | MgO |
| 3. Molecular Weight | 40.30 g/mol |
| 4. CAS No. | 1309-48-4 |
| 5. Density | ~ 3.58 g/cm ³ |
| 6. Melting Point | ~2852°C |
| 7. Boiling Point | ~3600°C |
| 8. Appearance | white compound in crystalline form or in powder form |
| 9. Solubility | low solubility in water (~0,0086g/100 mL water), but well soluble in acids. |
| 10. pH | Alkaline when dissolved in water due to the formation of magnesium hydroxide |



SPECIFICATION TABLE

Parameters Parametreler	Unit Birim	Guaranteed Specifications	Unit Birim	Typical Specification		
MgO	%	min.83	%	85		
SiO ₂	%	max.6	%	5,4		
CaO	%	max.3	%	2,8		
Fe ₂ O ₃	%	max.1	%	0,8		
LOI	%	max.6,5	%	--		
Dioxins			Unit Birim	Guaranteed	Unit Birim	Typical
Non Dioxinlike (WHO-PCDD/F-TEQ/kg)			max.	0,75	ng/kg	0,137
Dioxins + DioxinlikePCB's (WHO-PCDD/FPCBTEQ/kg)			max.	1	ng/kg	0,269
PCB's			max.	10	µg/kg	3

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| 12. Applications | Used in the production of magnesium oxide boards and as a component in cement and concrete. Acts as a soil conditioner and a magnesium source for plants. Used as a food additive (E528) and a source of magnesium in fortification. Pharmaceuticals. For industrial applications it is used in the manufacture of glass, ceramics, and as an additive in various chemical processes. Also serves as a mineral supplement in livestock feed. |
| 13. Packaging | 25 Kg bags |
| 14. Safety & Env. | Magnesium oxide is generally considered safe for use in food and pharmaceuticals at appropriate dosages. It can cause respiratory irritation when in powder form. When taken in high doses, it can lead to digestive problems. Environmental impacts are habitat disruption and emissions from production processes. |
| 15. Geo.Location | Eskisehir / Türkiye (Middle Anatolia) |
| 16. Particle size | 0 - 100 micron / 0-2 mm |