



# Matrix® Technical data sheet

Officina dell'Ambiente Spa

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## IDENTIFICATION OF THE PRODUCT

<b>Name</b>	Matrix®
<b>Producer</b>	Officina dell'Ambiente Spa –Lomello Plant (PV)
<b>Type of product</b>	Matrix® is a secondary raw material used in the production of cement and cement products.
<b>Origin</b>	specific treatment of selected waste of inorganic origin, consisting primarily of bottom ash from the incineration of municipal solid waste.
<b>Appearance</b>	a grey granular material.
<b>Grain size</b>	ranging from 0 to 10 mm

**COMPOSITION:** similar to a natural aggregate, consisting mostly of clay and moderate amounts of lime, with the quality and quantity of macro-components remaining largely stable.

Average chemical composition		Mineralogical composition and average diffraction (Referred to dry material and expressed as oxides)	
LOI	4-6	Anorhite	Ca(Al <sub>2</sub> Si <sub>2</sub> O <sub>8</sub> )
SiO <sub>2</sub>	35-45	Ghelenite	Ca <sub>2</sub> Al <sub>2</sub> SiO <sub>7</sub>
Al <sub>2</sub> O <sub>3</sub>	9-13	Quartz	SiO <sub>2</sub>
Fe <sub>2</sub> O <sub>3</sub>	9-13	Lime and Calcite	CaO e CaCO <sub>3</sub>
CaO	15-25	Ferrous and ferric oxides	FeO e Fe <sub>2</sub> O <sub>3</sub>
MgO	2-3	Metallic Aluminium	Al
SO <sub>3</sub>	0,5-1,5		
Cl	0,3-0,6		
Alcali	4-5		

**PRODUCTION PROCESS:** Matrix® is obtained through specific treatment of selected waste of inorganic origin, consisting primarily of bottom ash from the incineration of municipal solid waste. After undergoing various crushing, comminution, screening and iron and metal removal processes, the product takes on the appearance of a granular material with a grain size ranging from 0 to 10 mm. At the end of these treatments, Matrix is stockpiled in dedicated storage areas for approximately ninety days, during which a particular ageing process takes place, called litho-stabilisation, improving the product's technical and environmental characteristics.

**Environmental advantages:** Matrix® is a secondary raw material that limits the mining works for of natural raw materials and avoids the disposal of special waste in landfills.