## **Engobe** solution range

#### **OPAL** clays

Engopal	powdered	DE
SH	powdered	DE
A	powdered	DE
RA	powdered	DE

#### **OPAL** kaolins

Kerasan	powdered	DE
KDG	powdered	CZ

#### Mineral composites

SK1	spray dried	DE
ET-T	dry mixed powder	DE
Red Roof	spray dried	DE

#### Feldspar

K-Feldspar (K <sub>2</sub> O)	powdered	NO
Na-Feldspar (Na <sub>2</sub> O)	powdered	NO

#### Nepheline syenite (quartz free)

Nepheline syenite	powdered	NO

#### Silica

M500	powdered	BE
M6	powdered	BE
M10	powdered	BE

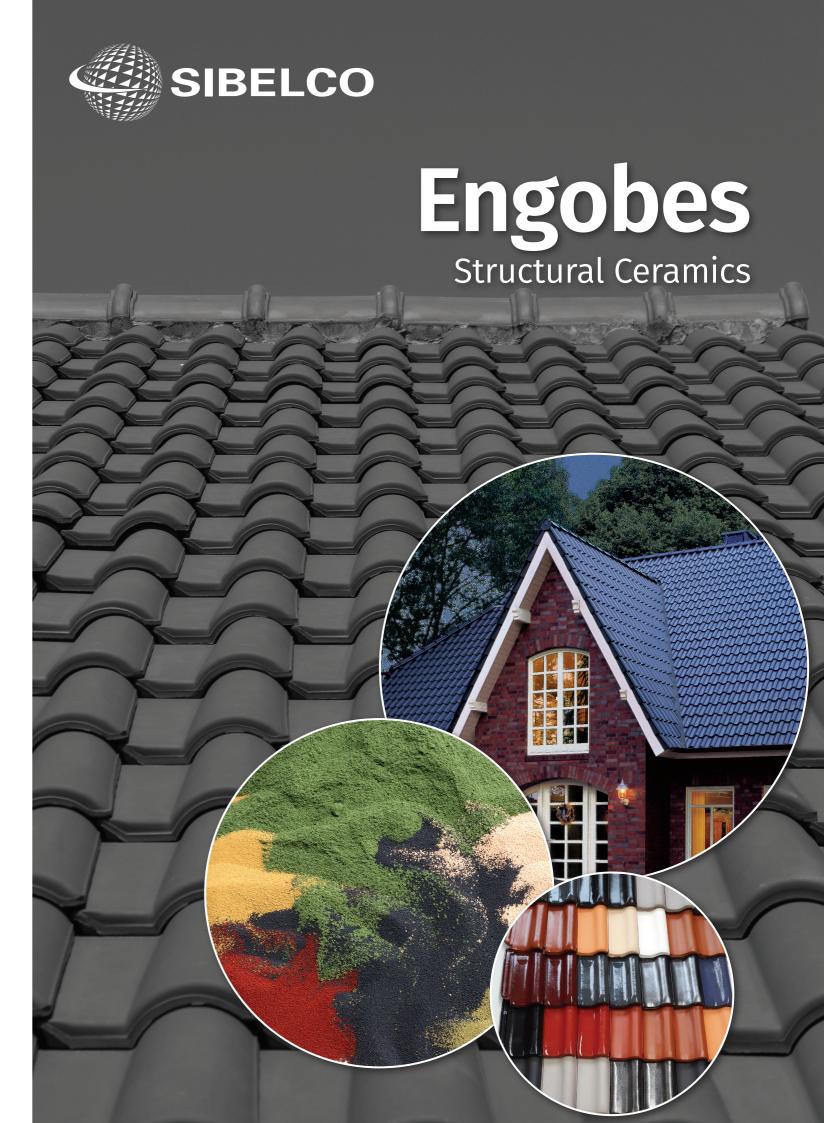
#### Wollastonite

Casiflux	powdered	NL
Casillax	povvacica	IVL

### Material solutions advancing life









## Mineral Solutions For Engobes

## Structural market

Engobes are low-viscosity suspensions containing clay minerals, used as coatings on ceramic bodies. Their sintering behaviour can be influenced by adding frits, alkali oxides and colourants to guarantee a stable and flawless surface.

Different engobe clays are characterised by unique mineralogical properties and can be tailored for any coloured engobe. By combining our extensive structural industry experience and our unique range of raw materials, we created a new portfolio of engobes covering the full colour spectrum.

## Sibelco Engobes range - performance products for structural engobes

Today Sibelco Engobes range provides the entire colour range required by the roofing tile industry; from brick red, to copper red, black, anthracite, blue-grey, brown, cream, white, green, yellow – and every colour in between. Each one is tailored to customers' requirements by taking into consideration their production bodies and the prevailing production conditions.

Two of our basic engobes, Red Roof and Opal, are particularly popular with our customers.

The Red Roof engobe, developed out of a unique raw material from the Eisenberg Pfalz area (formerly known as 'Terra Sigillata'), can be used directly as a ready-to-use engobe and provides a brilliant and even red-brown surface. It is suitable as a standalone engobe, but can also be used in combination with other pigments, oxides or frits to meet specific requirements.

The Opal range of plastic clays (ball clays and kaolins) are designed for individually colouring engobes and glazes due to their brightness. They provide an ideal and stable palette for brilliant colour development in combination with colouring oxides, pigments and frits. With their stable rheology and good workability properties, they complement high-quality ceramic applications.

# Innovation & quality assurance

Our engobes range can be consistently produced using a wet processing method, followed by spray drying, or via a dry mix process using a plough shear mixer. Our unique processing capabilities offer tailor-made products for almost every application.

Quality characteristics such as the firing colour, rheology, surface gloss and thermal expansion are tested using soluble samples in our production laboratories. In line with our ISO 9001:2015 certification, products are only released if all the stipulated parameters lie within specification.

A final inspection takes place during filling, when the mixed powder is placed in big bags or plastic sacks. Sibelco engobes can be supplied in 25 kg sacks through to 1 tonne bags.



For the preparation of our spray dried granules, our raw materials are blunged and screened using a vibratory sieve, maintaining a maximum grain size of 80 µm. The spray drying process involves the creation of spherical granules by slurry being sprayed through an atomiser into a hot gas stream.

For our dry mixed products, carefully selected ingredients, additives, (deflocculants, suspension agents, binders) and specially blended raw materials are mixed at room temperature using our plough shear process technology.



## Advantages

	Spray dry	Dry mixed
Multi mineral portfolio	Χ	Χ
Long-term supply reliability	Χ	X
Production of large batches	Χ	X
Short delivery items	Χ	X
High flexibility		X
Include all chemical + organic additives		Χ
Dust free	Χ	
Excellent surface finish due to wet processing	Χ	X
Easy to handle granulate (free flowing)	Χ	
Packed in all well-known packaging systems	X	X