



ZEOLIT
Natural clinoptilolite

ASPHALT PLANTS • CONCRETE PRODUCERS • MUNICIPALITIES

Lay it 25 degrees cooler.

Clinoptilolite carries 10–15% of its weight as water locked inside the crystal. Above 100 °C that water releases as steam, foams the binder and drops its viscosity.



Read more

Warm-mix asphalt and winter grit

Add it to the mix as the bitumen goes in and you can produce, transport and compact at markedly lower temperature. Less fuel at the plant. Fewer fumes at the paver. A longer haul window and a longer laying season.

The technique is established rather than experimental: evaluated independently by the National Center for Asphalt Technology, documented across European practice by the Federal Highway Administration, and

tested on **natural** zeolite through all asphalt layers by the Technical University of Košice.

The same mineral has a second, better-evidenced construction use as a pozzolanic addition in concrete and in autoclaved aerated concrete.

And as winter grit, 1–3 mm angular clinoptilolite gives traction near watercourses, salt-sensitive planting and bridge structures without adding chloride to the runoff.

What has actually been measured

- ✓ 10–15% of its weight is water locked in the crystal — the reservoir the whole process depends on
loss on ignition 6.4–15.8%
- ✓ Lay temperature reduced by about 25 °C at ~0.3% of mix mass
established warm-mix practice
- ✓ Tested on natural zeolite through all asphalt layers
Technical University of Košice
- ✓ Independently evaluated
National Center for Asphalt Technology; FHWA

Specification

CLINOPTILOLITE CONTENT

93–100% (XRD)

BULK DENSITY

650–850 kg/m³

SPECIFIC SURFACE AREA

40 m²/g

HARDNESS (MOHS)

2–3

NA₂O

0.3–1.3%

CATION EXCHANGE CAPACITY

108–146 meq/100 g

PH

7.0–8.0

PORE DIAMETER

0.43 nm

LOSS ON IGNITION

6.4–15.8%

QUARTZ

0–2%

How to use it

- **Warm-mix asphalt:** approximately 0.3% of total mix mass, added with the bitumen. We supply trial quantities and work with your laboratory on the mix design.
- **Delivery:** bulk silo or 1 t big bags — asphalt plants and concrete producers take bulk, not sacks.
- **Concrete:** <50 µm as a pozzolanic addition; 0.5–1 mm for autoclaved aerated concrete.
- **Winter grit:** 1–3 mm angular, spread as you would spread sand.



What it will not do

Winter grit provides **traction**, in the same way sand and grit do. It does **not melt ice**. Zeolite is insoluble and cannot depress the freezing point of water, and any supplier who tells you it replaces road salt is describing something their product does not do. What it offers over sand is that it absorbs water rather than skating on a wet film, it is angular rather than rounded, and it is chloride-free.

An asphalt plant is a two-year qualification, not a purchase order. We start with trial quantities and your own mix design laboratory.

Products and pack sizes

PRODUCT	GRADE	PACK
ASP-WMA-BB	0,1–1,5 mm	1.000 kg big bag
ASP-WMA-BULK	0,1–1,5 mm	24 t bulk
CON-POZ-BULK	<50 µm	24 t bulk
CON-AAC-BB	0,5–1 mm	1.000 kg big bag
WIN-GRIT-BB	1–3 mm	1.000 kg big bag
WIN-GRIT-25	1–3 mm	25 kg sack

Request products

Tell us the application and the volume. We answer with a written quotation.

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