



Hydrated lime
extends pavement
life by 25%



HYDRATED LIME

A PROVEN ADDITIVE
FOR DURABLE ASPHALT PAVEMENTS



Over the past 40 years, hydrated lime has become one key additive for asphalt mixtures. Its benefits are well-known in Europe, where it is being increasingly used.

North American State agencies estimate that hydrated lime increases the durability of asphalt mixtures from 20 to 50%. In Europe, French road managers suggest that the beneficial effects of hydrated lime **give increased durability of 25%** in terms of wearing course service life expectancy.



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Hydrated lime a multi-functional modifier

Using hydrated lime as an additive in asphalt mixes increases their durability through the improvement:

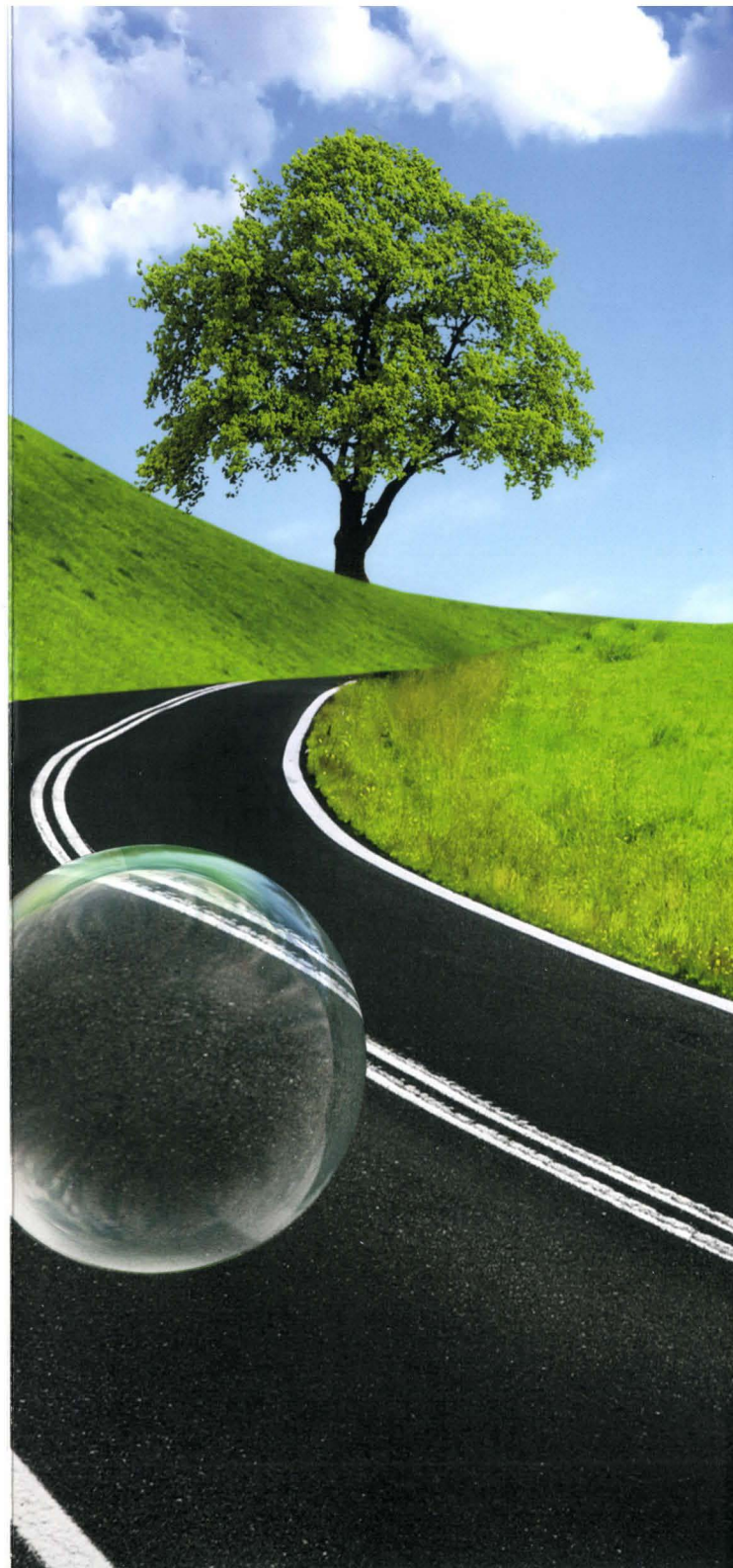
- of resistance to **moisture damage and frost**,
- of resistance to **chemical ageing**,
- of **mechanical properties**, in particular modulus, strength, rutting resistance and fatigue.



Hydrated lime a cost-effective solution

Using hydrated lime as an additive in asphalt mixes is the most cost-effective solution, allowing:

- **better financial return** from pavement investments,
- **minimizing the public inconvenience** that results from the repair and maintenance of pavements.



Lime an essential raw material



Lime is a product derived from limestone in an industrial process. Naturally occurring limestone, which is composed almost exclusively of **calcium carbonate** [CaCO_3], transforms into quicklime [**calcium oxide** (CaO)] by heating. When slaked with water, quicklime transforms into hydrated lime, which is a dry powder composed of **calcium hydroxide** [$\text{Ca}(\text{OH})_2$].

Due to its particular chemical characteristics, lime is extensively used in several industries and is therefore important to **many aspects of peoples' every-day lives**. Lime is widely used in **environmental protection** (purification of water, waste water treatment, flue gas cleaning, hygienisation). Lime is extensively used in the **iron and steel industry** and in numerous other downstream **manufacturing industries** (chemical, glass, paper, plastics, paints, cosmetics, rubber and many other applications). Lime is an important element in **construction materials** and in **civil engineering** (bricks, mortars, roads, asphalt, railways). Lime finds applications in **farming, agriculture and forestry** (fertilizing, hygienisation, neutralization).

Hydrated lime for asphalt mixtures is **CE** marked and specified under the building lime standard (**EN 459-1**).