



UNDERBOLD®

Faster **Build**, Longer **Durability**, and **ECO** Friendly

Ground and base course stabilization
for road construction

Authorized Distributor





What is UNDERBOLD- POD30®

A ground and base course stabilizer for road construction that strengthens the foundation and surface layers of roads.

- It improves soil properties,
- enhances load-bearing capacity, and
- reduces the risk of road damage.

This product ensures a more durable, stable, and longer-lasting road infrastructure



Ingredients

- A purely organic mixture of waxes and oleine, a colorless to yellowish, oily, water-insoluble liquid in many vegetable oils.
- 100% biologically eco-friendly with proven environmental sustainability
- Enthused with Nanotechnology, which has a significant role in enhancing or improving its effectiveness as an ideal ground and base course stabilizer for road construction



30% Cost Savings

- Reduction in additional construction materials, like crushed stones, gravel, or bituminous materials.
- Long logistics for materials are no longer required.
- The use of machines and workers is reduced, shortening project execution time.
- The completed surface is more durable, saving material, time, and personnel, which can reduce overall costs by up to 30% on-site



Pavement Structure in Cross-Section

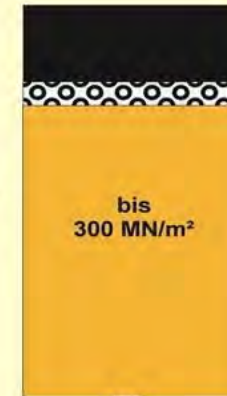
Conventional Road

UNDERBOLD-POD30®

30%
Cost
Savings:
time and
material



5 cm Asphalt – wearing course
7,5 cm Asphalt – base course
7,5 cm Asphalt – base course
15 cm (Sub base)
Road base Type “A”
30 cm (Sub base)
Hard Fill Type “B” Desert Fill
or
Dredged Sand
(Sub base)
existing or Dredged Sand



5 - 10 cm toplayer with PR-Plast
1 - 2 cm primer and split

**40 cm
UNDERBOLD**

savings through

UNDERBOLD

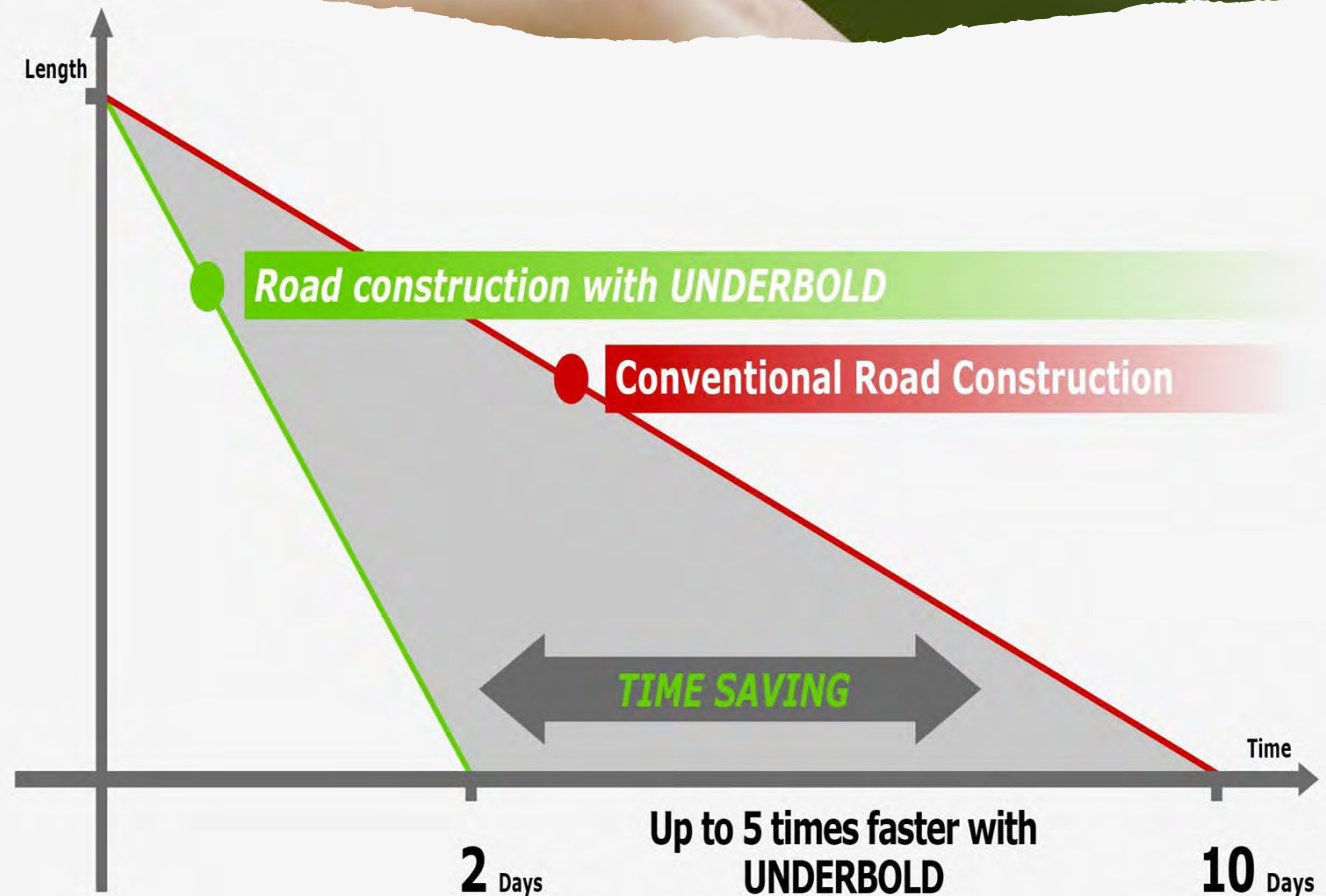
time and material

Norm:
45 MN/m²



Time saving

Five times faster with
UNDERBOLD
POD30®





Cost saving

Fewer people
and machinery
UNDERBOLD
POD30®

Conventional road construction

Asphalt surface
Bedding layer 8cm

Road base layer
(asphalt)

10cm – 18cm

Sub-base layer

15cm

Frost protection
layer

23cm – 45cm



Road construction with UNDERBOLD

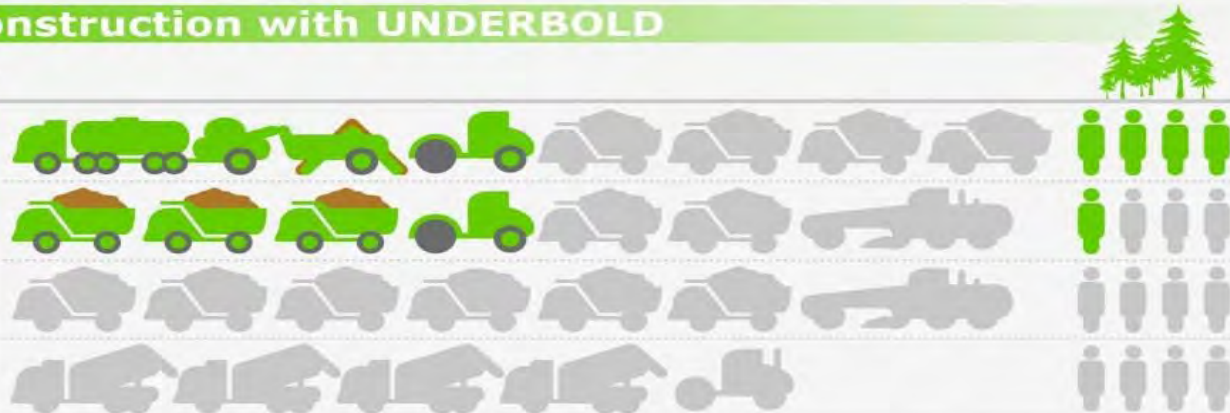
Asphalt surface
Bedding layer 8cm

UNDERBOLD

20cm – 40cm

Ground earth

40cm – 60cm





What are the Benefits?

- Treated soil becomes hydrophobic and agglomerated, resulting in **enormous compressive strength** by adding bonding agents (3-5% cement).
- The UNDERBOLD-POD30® mixture significantly enhances the treated soil's **resilience against heavy and aggressive influences**.
- **Water tightness** is achieved almost entirely through the fine distribution of wax particles, which prevent capillary formation and reduce crack formation. Consequently, **damages due to water ingress are substantially minimized**, and the lifespan of the base course is generally extended.

GGT
German Green-Tec



Authorized Distributor

TSC
GLOBAL
building better communities
www.tsc.dev



UNDERBOLD-POD30





1

Cement Spreader

16 m³ = 25 t
capacity

2

Roller

16 t Operating
Weight

3

Recycler

2.4 m
working width

4

Tanker

10,000 Liter
capacity



1

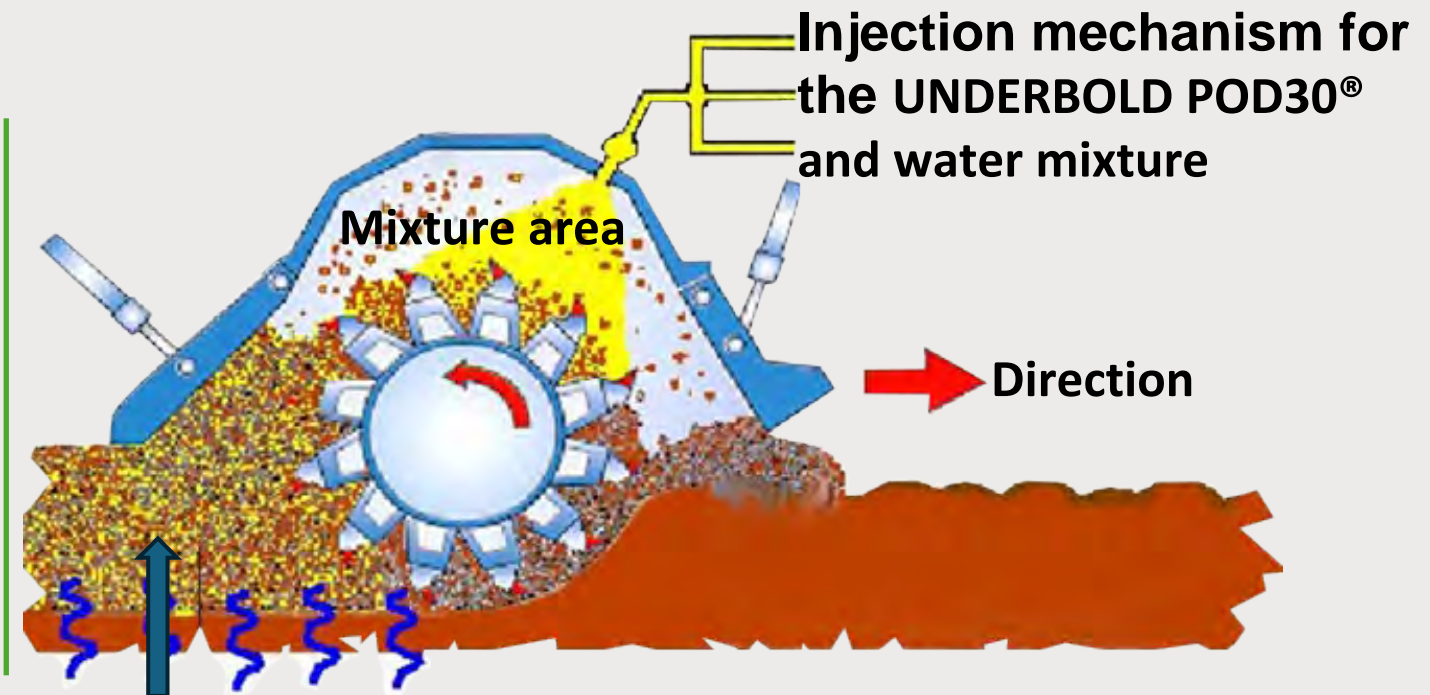
PREPARATION of the surface to be treated with a Motor Grader provides a rough and fine slope formation level.





2

BLENDING the
UNDERBOLD
POD30®
mixture
into the soil



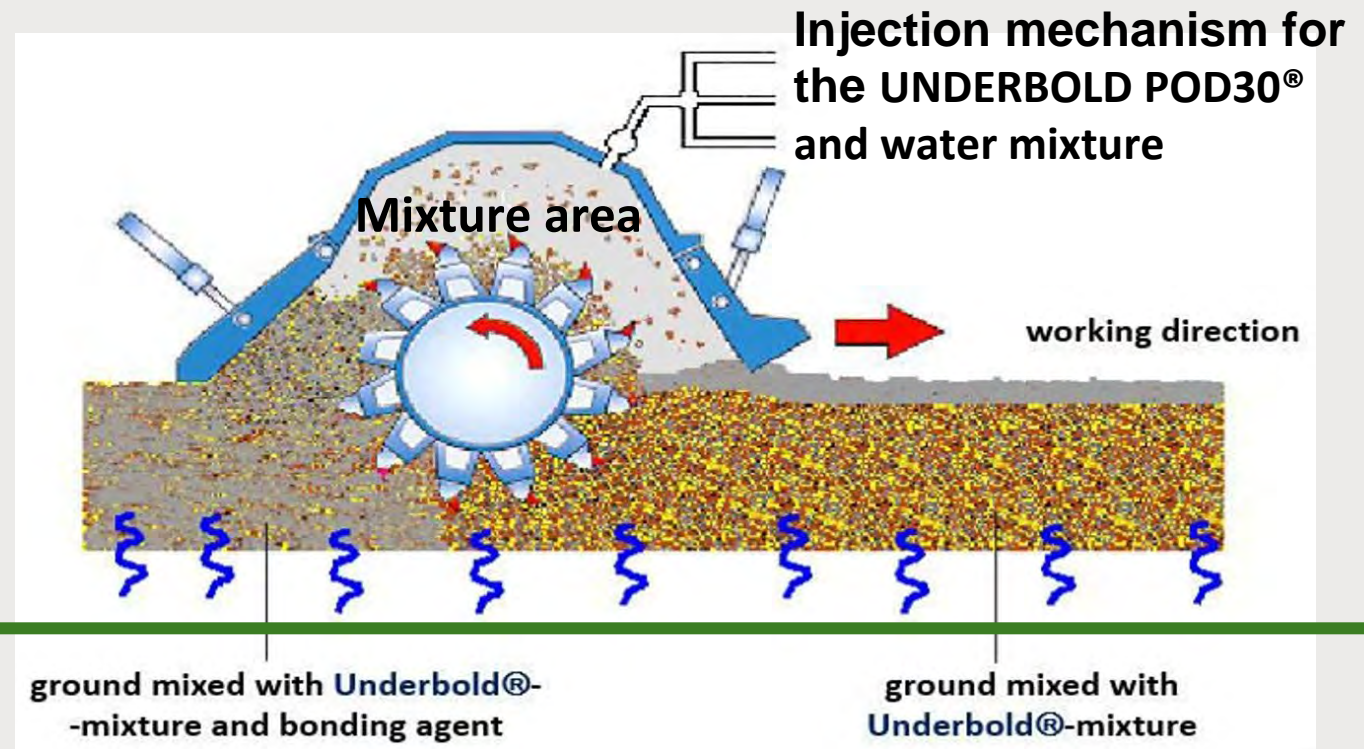
The ground soil is homogeneously mixed with the UNDERBOLD POD30®



2

(continued)

BLENDING the
UNDERBOLD
POD30®
mixture
into the soil



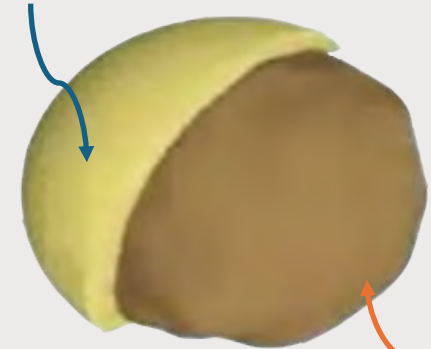


2

(continued)

BLENDING the UNDERBOLD POD30® homogeneously, the bonding agent settles around and in between the soil

UNDERBOLD POD30®
mixture



Blown-up image of
soil grain covered in
bonding agent



2

(continued)

BLENDING the
UNDERBOLD
POD30®
mixture
into the soil





2

(continued)

BLENDING the UNDERBOLD POD30® *in the field*





2

(continued)

BLENDING machinery





3

CEMENT: Spreading





3

CEMENT: milling binder





3

CEMENT: Milling





3

CEMENT: Milling





4

COMPRESSION

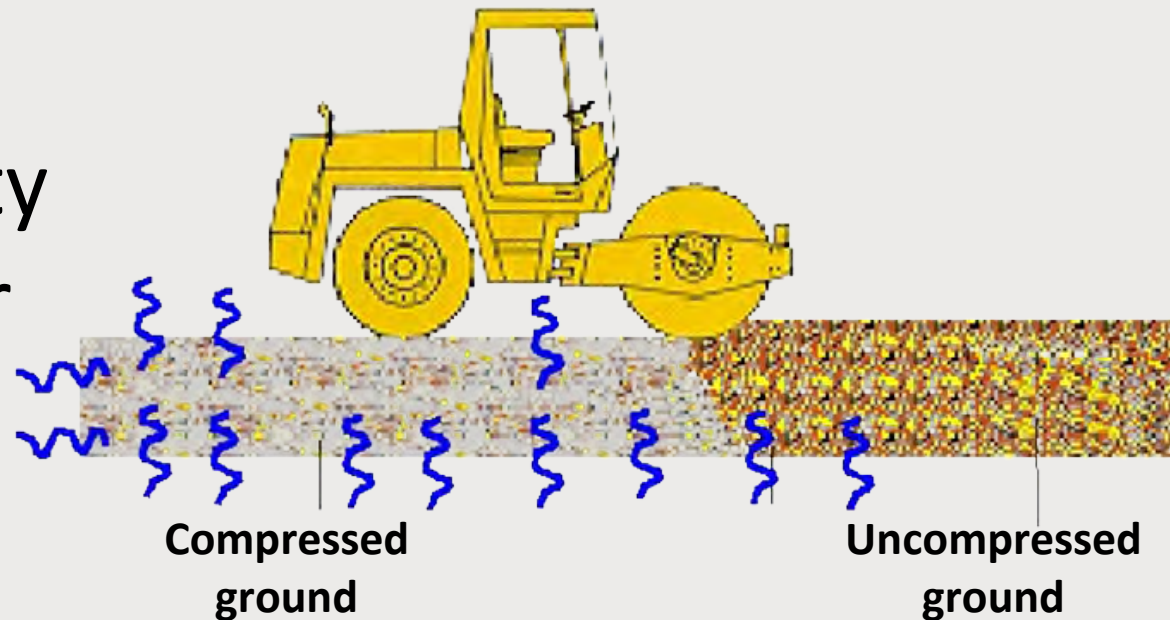




4

COMPRESSION:

Any remaining humidity is delivered into the air and soil (hydrophobicity) after the compression process.





5

PROFILING:

After the compression process, the grader constructs the profile.





6

PROCESSING:

Undertake compression of the treated surface optimally with a minimum roller of 16-20 tonnes.





EXAMPLES:

Mercedes-Benz
parking area in
Germany



Existing Area



EXAMPLES:

Mercedes-Benz
parking area in
Germany



Finished Sub-grade



EXAMPLES:

Mercedes-Benz
parking area in
Germany





RECYCLING EXISTING ROADS

... with asphalt
up to 10 cm !!



Recycle roads without removing the
existing asphalt beforehand





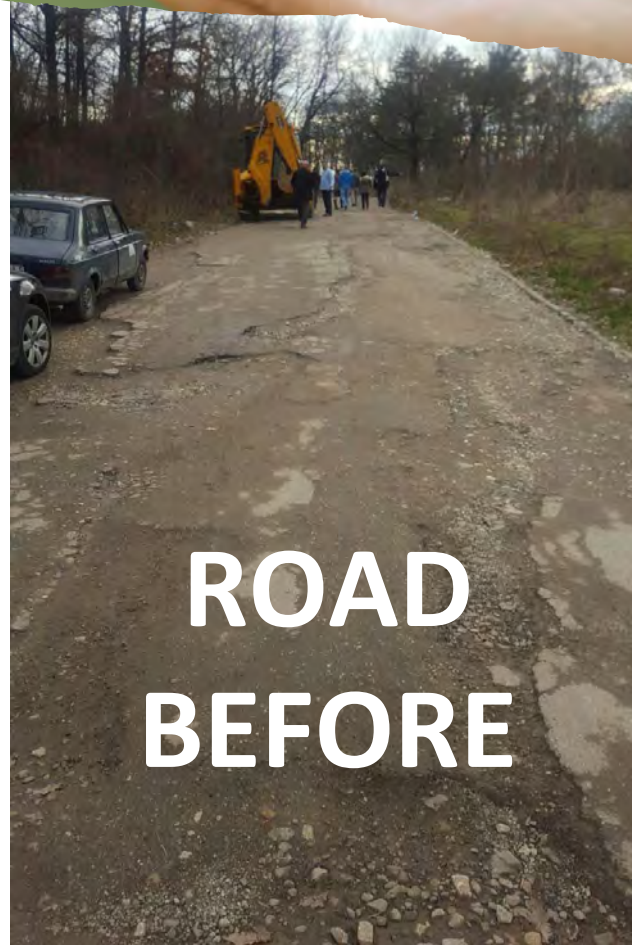
RECYCLING EXISTING ROADS



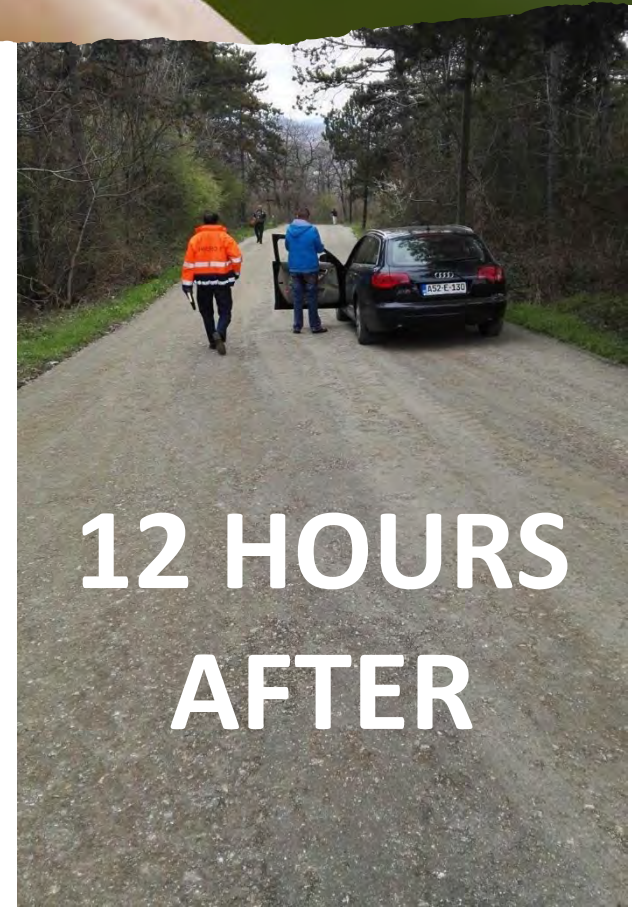
**Milling machine in progress with
asphalt**



**ACHIEVE
AMAZING
RESULTS**



**ROAD
BEFORE**



**12 HOURS
AFTER**

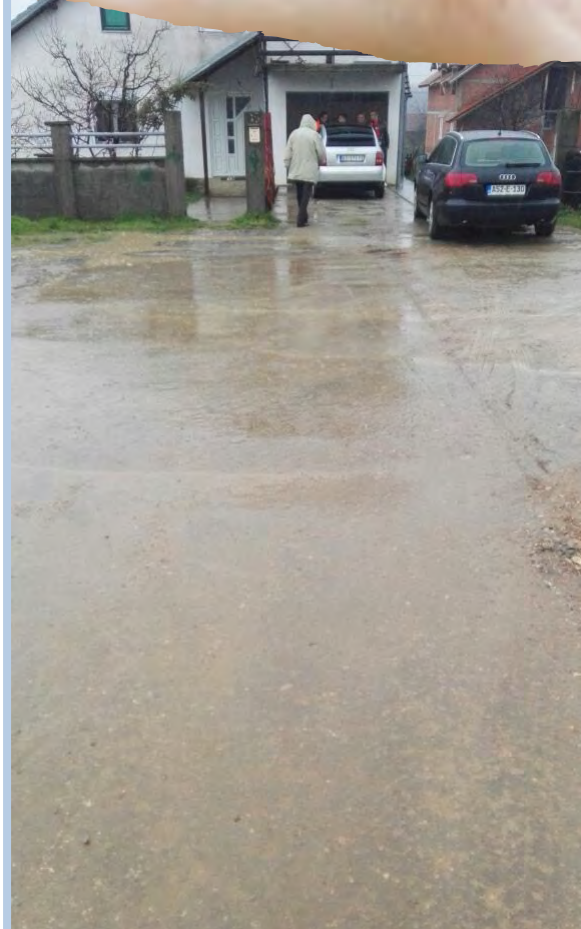


CLAY-SUBGRADE
UNDERBOLD POD30®
NOW
ready for asphalt!





Maximum Water Resistance UNDERBOLD POD30® Finished roads in Serbia





Suitable for Desert Sand UNDERBOLD POD30® Finished roads in Oman





Developing countries UNDERBOLD POD30[®] Finished roads in Liberia



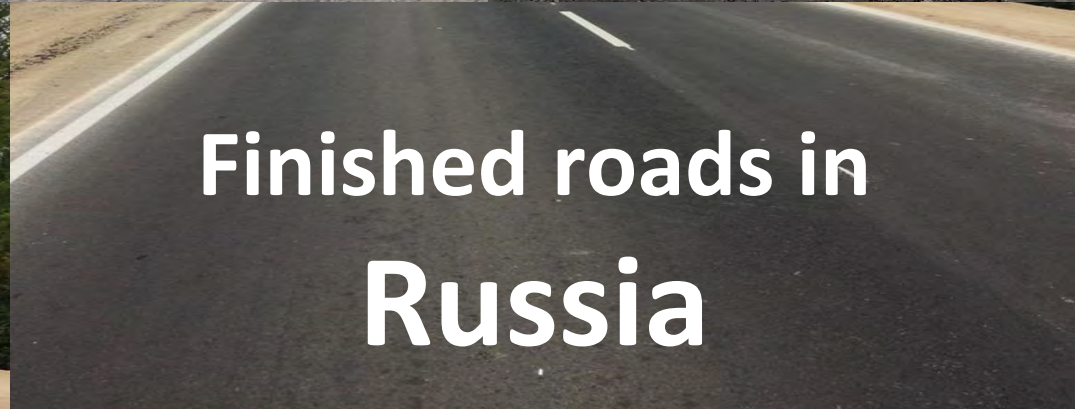
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UNDERBOLD
POD30®



Finished roads in
Russia