Introduction
Purphalt **Asphalt reparation**

EM4C
Engineering Materials for Construction

Road SOLUTIONS

Introduction
Purphalt **Asphalt reparation**

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Road

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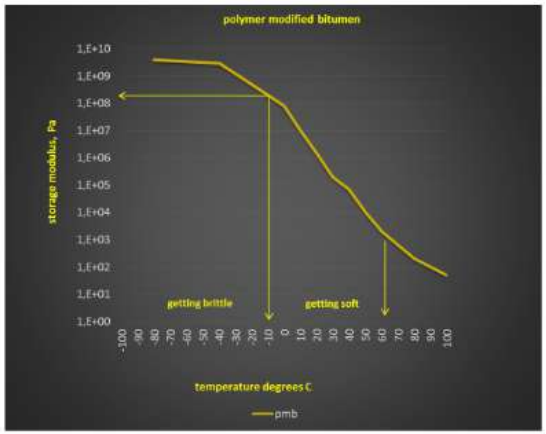
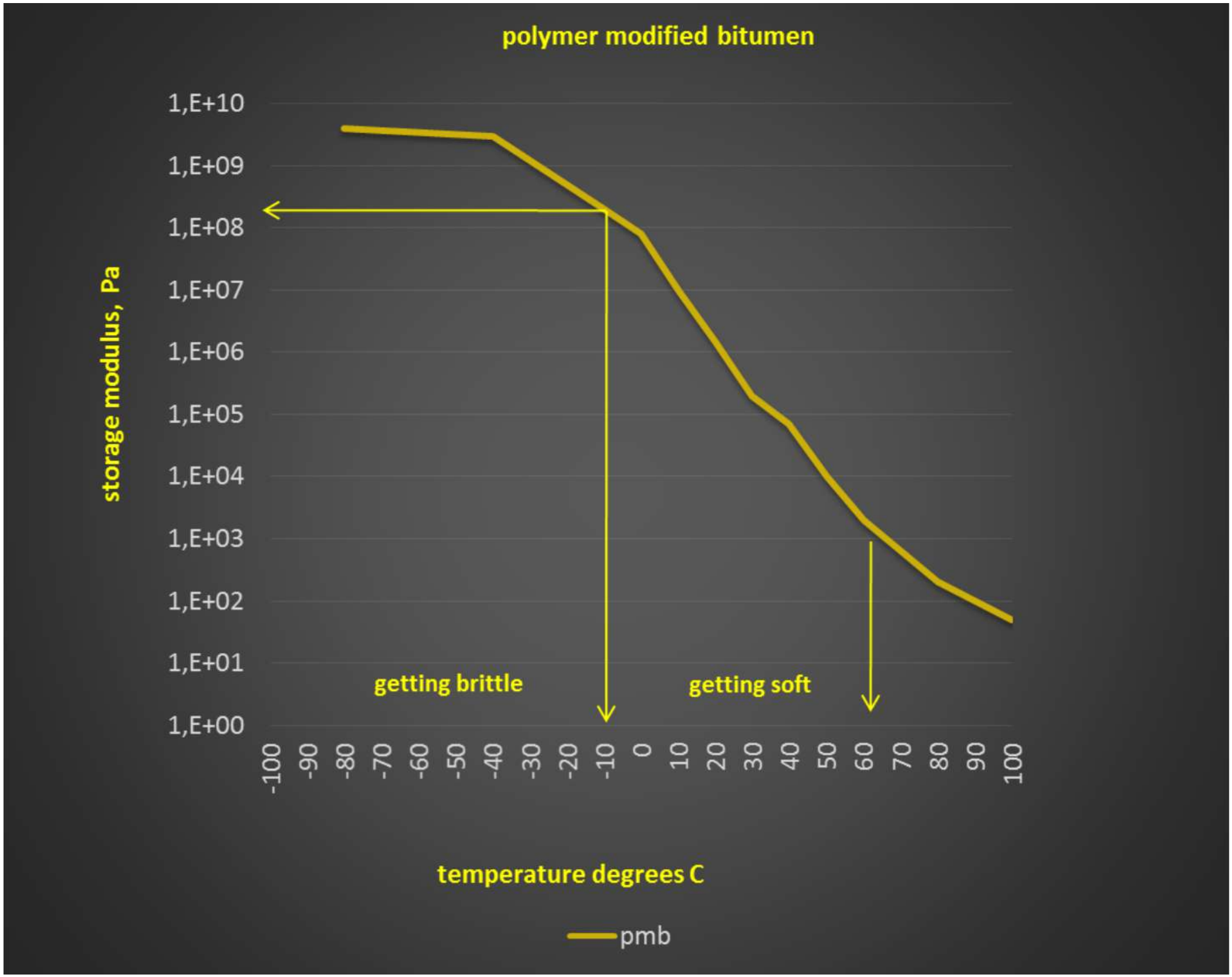
ical stresses in asphalt layers

erature, the better te quality

Features of "traditional asphalt"

- Conventional binder (also modified) shows high level of plastic deformation;
  - rutting at higher temperatures and heavy traffic loads
  - brittleness at low temperatures, causing cracking, ravelling etc.

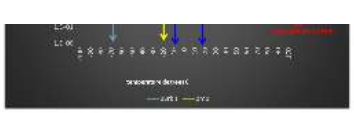



polymer modified bitumen
storage modulus, Pa
1,E+10
1,E+09
1,E+08
1,E+07
1,E+06
1,E+05
1,E+04
1,E+03
1,E+02
1,E+01
1,E+00
getting brittle
getting soft
-100
-90
-80
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70
80
90
100
temperature degrees C
pmb

Features of "traditional asphalt"

- Produced at high temperatures (>170 degr. C)
  - high energy consumption and emissions
  - requires long start up time of production units
  - requires specially designed isolated trucks
  - risk of cooling down at the job site:
- Unevitable mechanical stresses in asphalt layers

The lower the temperature, the better te quality

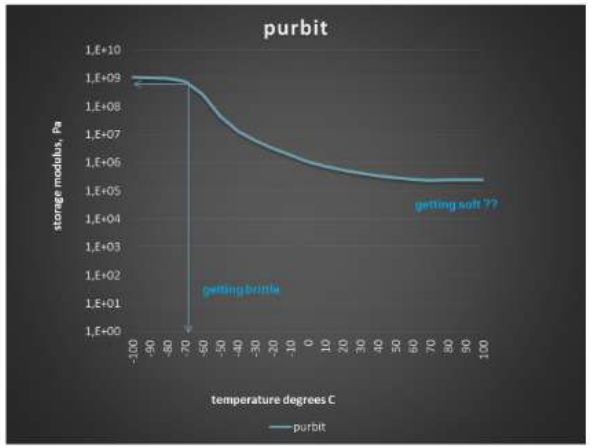


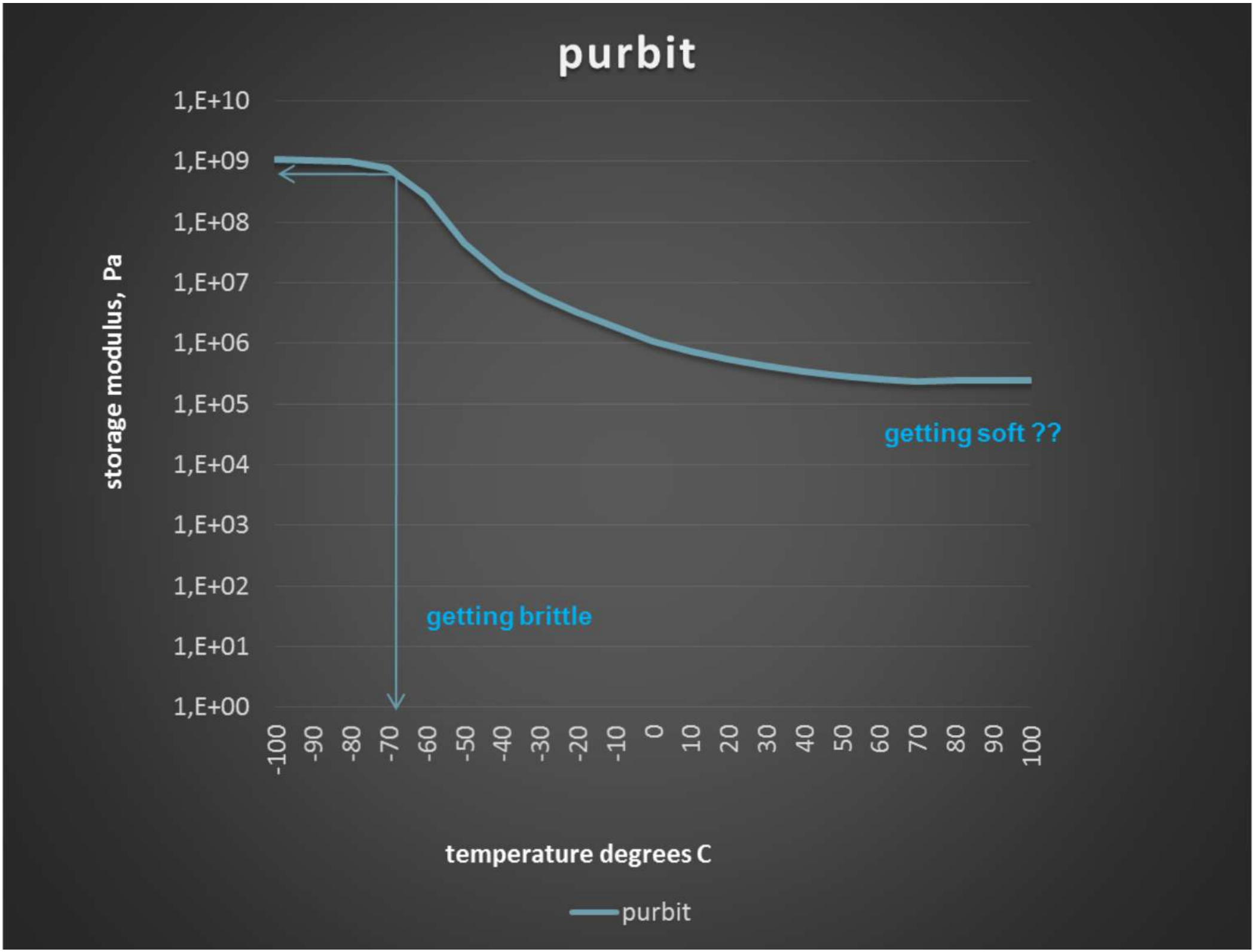
PURBIT modified asphalt

Improve the **binder** by using a new combination of resins and bitumen:

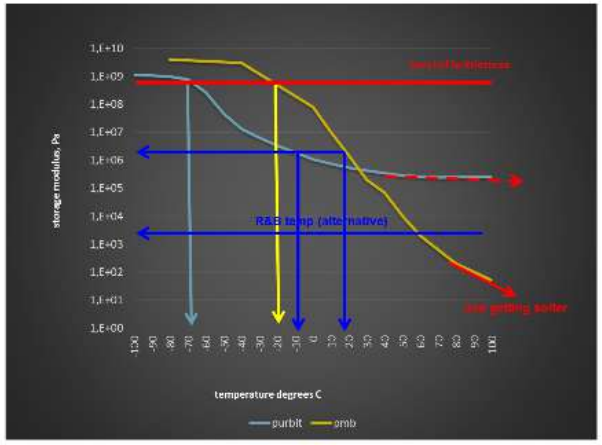
PURBIT

an alternative binder to (polymer modified) bitumen binders for hot mix asphalt



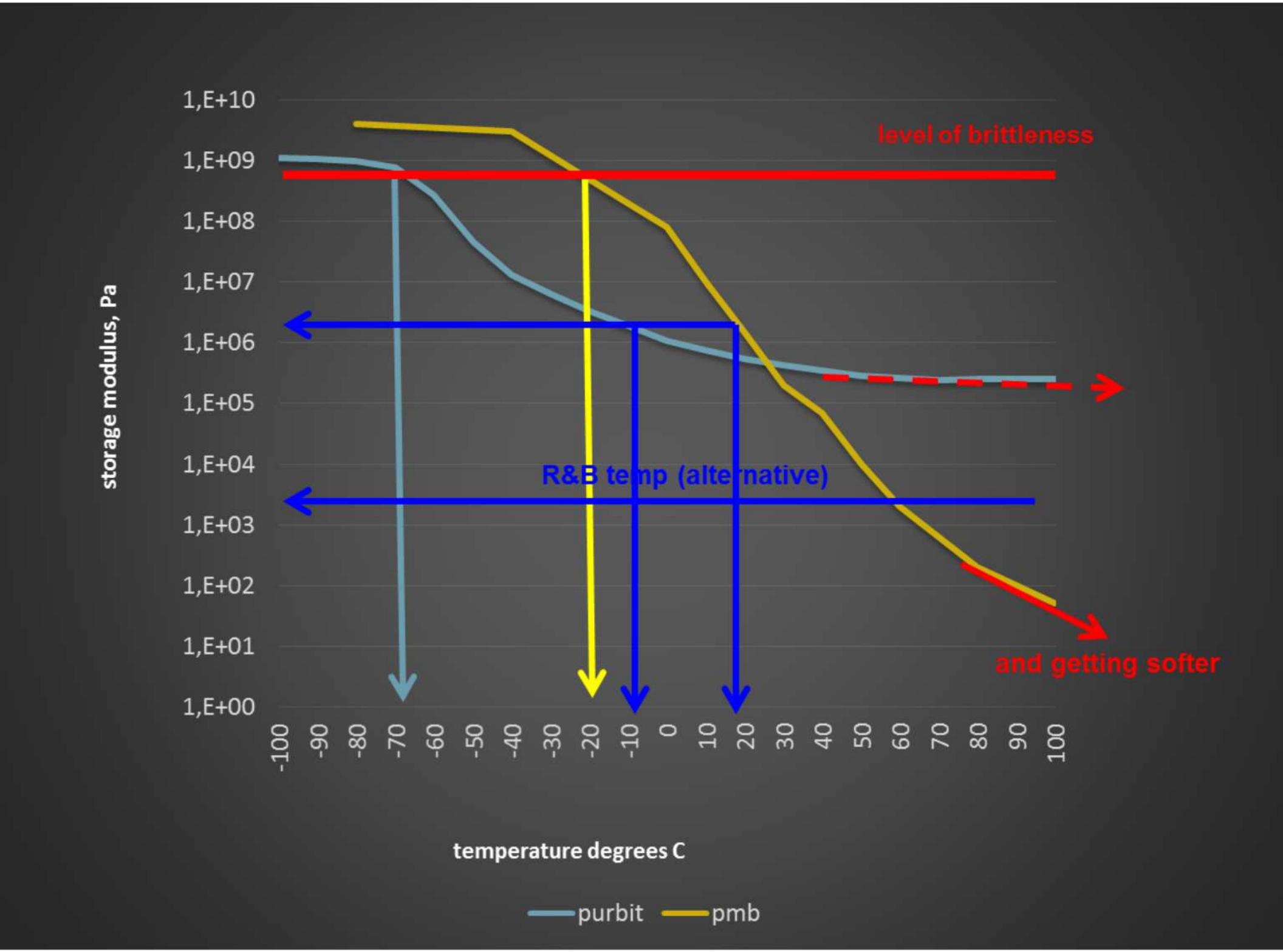

purbit
1,E+10
1,E+09
1,E+08
1,E+07
1,E+06
1,E+05
1,E+04
1,E+03
1,E+02
1,E+01
1,E+00
storage modulus, Pa
getting soft ??
getting brittle
-100
-90
-80
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70
80
90
100
temperature degrees C
purbit

Purbit vs. pmb



Asphalt with premium binder after 10.000 passes at 60 degr. C

PURBIT modified asphalt


storage modulus, Pa
1,E+10
1,E+09
1,E+08
1,E+07
1,E+06
1,E+05
1,E+04
1,E+03
1,E+02
1,E+01
1,E+00
level of brittleness
R&B temp (alternative)
and getting softer
-100
-90
-80
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70
80
90
100
temperature degrees C
purbit
pmb

Asphalt with premium binder after 10.000 passes at 60 degr. C

PURBIT modified asphalt

Purphalt®

dual component cold applied road repair system

- Workable in all seasons (-20C - +40C)
- Easy to apply, without heating
- Fast curing, resulting in minimum interruption to traffic flow
- 100% solvant-free and fully recycable
- durable sustainable solution, not temporary
- possible to be compacted in layers > 250mm thickness by single process
- optional multi-coloured


1 2 3 4 5 6 7 8 9 10 11 15 16 17 18 19 20 21 22 23 24

Purphalt®
Patching mortar

Application pothole repair


SPE AIR

Purphalt®
Patching mortar

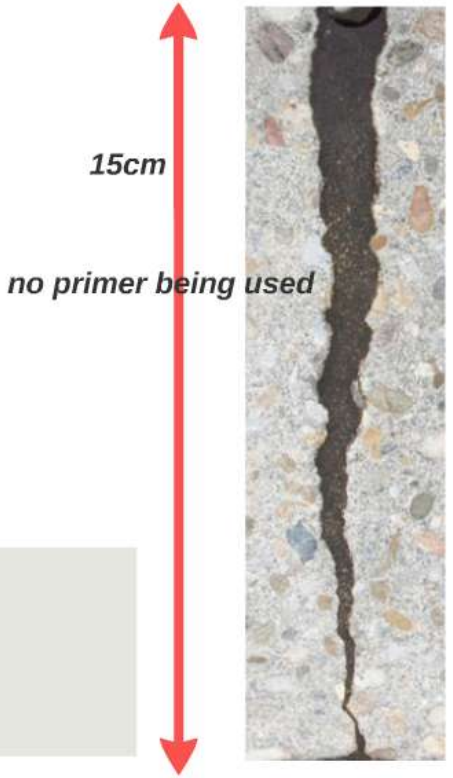
Application pothole repair

Purphalt® *JOINT*

Crack filler;

- no water, no solvents:
  - original volume is maintained
- Application at ambient temperatures:
  - no temperature-induced shrinkage

Purphalt Joint penetrates deep into the smaller parts of cracks, providing waterproofing.




Purphalt JOINT
Crack Filler


Purphalt JOINT
Crack Filler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Patching mortar