AAPA 2012 Study tour
visiting EAPA and Eurobitume

Egbert Beuving
Director EAPA
European Asphalt Pavement Association
Visit EAPA head quarters

- Binders specification harmonisation,
- Health and safety regulations around bitumen, REACH and purchasing models,
- Delivery of high performance pavement systems and products
Overview Presentation

- European asphalt and bitumen standards
- Environmental items in these standards
- Work Zone Safety
- EAPA Environment Group
- Delivery of high performance pavement systems and products
- Purchasing models

- Health and safety regulations around bitumen and REACH and
Organization of the work of CEN/TC 227 "Road materials"

CEN/TC 227/CH'sP
Secr: DE (Cohrs)
Chair: U. Hahn

CEN/TC 227 "Road materials"
Secr: DE (Cohrs)
Chair: U. Hahn

Ad hoc group "Airfields"
Convenor: J. Cook

WG 1
Bituminous mixtures
Secr: NL (E. Beuving)
Conv.: E. Beuving (BE)

WG 2
Surface dressing and slurry surfacing
Secr: N.N.
Conv.: M. Heslop (UK)

WG 3
Materials for concrete roads incl. joint fillers and sealants
Secr: ES (A. Aragón)
Conv.: C. Jofre (ES)

WG 4
Hydraulic bound and unbound mixtures
Secr: DE (R. Cohrs)
Conv.: M. Schumacher (DE)

WG 5
Surface characteristics
Secr: FR (V. Cerezo)
Conv.: M. Boulet (FR)

WG 6
Dangerous substances
Secr: DE (R. Cohrs)
Conv.:
EU Asphalt Standards

CEN TC227 WG1
- TG 2 Test Methods
- TG3 Product Standards
- TG 4 Conformity Assessment Standards + RAP
12697 series

- 1 Soluble Binder Content
- 2 Particle Size Distribution
- 3 Bitumen recovery
- 12 Water sensitivity of bituminous specimens
- 16 Resistance against studded tyres
- 22 Wheel tracking test
- 24 Resistance to fatigue
- 26 Stiffness
- 43 Resistance to fuel
Several Test methods in 5-year review process

New standards (being developed)

- **45**: Saturation Ageing Tensile Stiffness (SATS) Conditioning Test
- **46**: Low temperature cracking and properties
- **47**: Determination of the ash content of natural asphalts
- **48**: Bond strength
- **49**: Friction After Polishing
- **50**: “Scuffing resistance” the ARTe test method was chosen based on blind testing, but …
TG 3 PRODUCT STANDARDS

Product standards in 5-year Review Process

Bituminous mixtures - Material specifications

13108- Part 1: Asphalt concrete
13108- Part 2: Asphalt concrete for very thin layers
13108- Part 3: Soft asphalt
13108- Part 4: Hot rolled asphalt
13108- Part 5: Stone mastic asphalt
13108- Part 6: Mastic asphalt
13108- Part 7: Porous asphalt
13108- Part 8: Recycled asphalt
13108- Part 9: Asphalt for Ultra Thin Layers
In April 2011 it was decided to work only on the ‘normal approach’ for the next generation of product standards, where the options for the two approaches (‘open’ and ‘prescriptive’) are available within one standard, such that individual countries can choose which criteria they wish to adopt.
So for Asphalt Concrete

- the ‘prescriptive’ (Empirical-approach) and
- the ‘open’ (Performance-approach)
will be merged.

For Porous Asphalt and SMA some “performance requirements” will be added to the existing standard.

A line (in careful wording) will be added to avoid over specification.
EN 13108-8 RAP
EN 13108-20 Type Testing
EN 13108-21 FPC

• In 5 Year Review Process
CHALLENGES

• A condition procedure to age asphalt samples
• Specifications for cold mixtures:
  – emulsion mixtures
  – foam mixtures
• Conditioning procedures for (Foamed) Warm Mixes
• Test methods for Warm and half Warm Mixes
EU Bitumen Standards

- CEN TC336
- CEN TC336 WG1
• EN 12591 “Specifications for paving grade bitumen”
• EN 13924 “Specifications for hard paving grade bitumens”
• EN 13924-2 “Multi-grades”
• EN 14023 “Specifications for PMB”
• EN 13808 “Framework for specifying cationic bituminous emulsions”
• EN 15322 “Framework for specifying cut-back and fluxed bituminous binders”
• EN 13808 “Bituminous Emulsions”
## Table 1A — Paving grade bitumen specifications for grades from 20 x 0,1 mm to 220 x 0,1 mm penetration —

Properties applying to all paving grade bitumen listed in this table

<table>
<thead>
<tr>
<th>Property</th>
<th>Test method</th>
<th>Unit</th>
<th>20/30</th>
<th>30/45</th>
<th>35/50</th>
<th>40/60</th>
<th>50/70</th>
<th>70/100</th>
<th>100/150</th>
<th>160/220</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penetration at 25 °C</td>
<td>EN 1426</td>
<td>0,1 mm</td>
<td>20 – 30</td>
<td>30 – 45</td>
<td>35 – 50</td>
<td>40 – 60</td>
<td>50 – 70</td>
<td>70 – 100</td>
<td>100 – 150</td>
<td>160 – 220</td>
</tr>
<tr>
<td>Resistance to hardening at 163 °C</td>
<td>EN 12607-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retained penetration</td>
<td>%</td>
<td>≥ 55</td>
<td>≥ 53</td>
<td>≥ 53</td>
<td>≥ 50</td>
<td>≥ 50</td>
<td>≥ 46</td>
<td>≥ 43</td>
<td>≥ 37</td>
<td></td>
</tr>
<tr>
<td>Increase in softening point, - Severity 1</td>
<td>°C</td>
<td>≤ 8</td>
<td>≤ 8</td>
<td>≤ 8</td>
<td>≤ 9</td>
<td>≤ 9</td>
<td>≤ 9</td>
<td>≤ 10</td>
<td>≤ 11</td>
<td></td>
</tr>
<tr>
<td>or Increase in softening point, - Severity 2 a</td>
<td>°C</td>
<td>≤ 10</td>
<td>≤ 11</td>
<td>≤ 11</td>
<td>≤ 11</td>
<td>≤ 11</td>
<td>≤ 11</td>
<td>≤ 12</td>
<td>≤ 12</td>
<td></td>
</tr>
<tr>
<td>Change of mass b (absolute value)</td>
<td>%</td>
<td>≤ 0,5</td>
<td>≤ 0,5</td>
<td>≤ 0,5</td>
<td>≤ 0,5</td>
<td>≤ 0,5</td>
<td>≤ 0,8</td>
<td>≤ 0,8</td>
<td>≤ 1,0</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>EN ISO 2592</td>
<td>°C</td>
<td>≥ 240</td>
<td>≥ 240</td>
<td>≥ 240</td>
<td>≥ 230</td>
<td>≥ 230</td>
<td>≥ 230</td>
<td>≥ 220</td>
<td></td>
</tr>
<tr>
<td>Solubility</td>
<td>EN 12592</td>
<td>%</td>
<td>≥ 99,0</td>
<td>≥ 99,0</td>
<td>≥ 99,0</td>
<td>≥ 99,0</td>
<td>≥ 99,0</td>
<td>≥ 99,0</td>
<td>≥ 99,0</td>
<td>≥ 99,0</td>
</tr>
</tbody>
</table>

*a* When Severity 2 is selected it shall be associated with the requirement for Fraass breaking point and/or penetration index measured on the unaged binder (see Table 1B).

*b* Change in mass can be either positive or negative.

The properties in Table 1A shall be specified for all paving grade bitumens listed in this table. They are associated with regulatory or HSE requirements and shall be included all specifications.
Table 2A — Paving grade bitumen specifications for grades from 250 x 0,1 mm to 900 x 0,1 mm penetration - Properties applying to all paving grade bitumen listed in this table

<table>
<thead>
<tr>
<th>Property</th>
<th>Test method</th>
<th>Unit</th>
<th>250/330</th>
<th>330/430</th>
<th>500/650</th>
<th>650/900</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penetration at 25 °C</td>
<td>EN 1426</td>
<td>0,1 mm</td>
<td>250 – 330</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Penetration at 15 °C</td>
<td>EN 1426</td>
<td>0,1 mm</td>
<td>70 – 130</td>
<td>90 – 170</td>
<td>140 – 260</td>
<td>180 – 360</td>
</tr>
<tr>
<td>Dynamic viscosity at 60 °C</td>
<td>EN 12596</td>
<td>Pa.s</td>
<td>≥ 18</td>
<td>≥ 12</td>
<td>≥ 7,0</td>
<td>≥ 4,5</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Softening point</td>
<td>EN 1427</td>
<td>°C</td>
<td>30 - 38</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Resistance to hardening at 163 °C</td>
<td>EN 12607-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity ratio at 60 °C</td>
<td></td>
<td></td>
<td>≤ 4,0</td>
<td>≤ 4,0</td>
<td>≤ 4,0</td>
<td>≤ 4,0</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase in softening point</td>
<td></td>
<td>°C</td>
<td>≤ 11</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Change of mass (^{a}) (absolute value)</td>
<td></td>
<td>%</td>
<td>≤ 1,0</td>
<td>≤ 1,0</td>
<td>≤ 1,5</td>
<td>≤ 1,5</td>
</tr>
<tr>
<td>Flash point</td>
<td>EN ISO 2719</td>
<td>°C</td>
<td>≥ 180</td>
<td>≥ 180</td>
<td>≥ 180</td>
<td>≥ 180</td>
</tr>
<tr>
<td>Solubility</td>
<td>EN 12592</td>
<td>%</td>
<td>≥ 99,0</td>
<td>≥ 99,0</td>
<td>≥ 99,0</td>
<td>≥ 99,0</td>
</tr>
</tbody>
</table>

\(^{a}\) Change in mass can be either positive or negative.

Properties in Table 2A shall be specified for all paving grade bitumen listed in this table. They are associated with regulatory or HSE requirements and shall be included in specifications.
Table 2B — Paving grade bitumen specifications for grades from 250 x 0,1 mm to 900 x 0,1 mm penetration - Properties associated with regulatory or other regional requirements

<table>
<thead>
<tr>
<th>Property</th>
<th>Test method</th>
<th>Unit</th>
<th>250/330</th>
<th>330/430</th>
<th>500/650</th>
<th>650/900</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fraass breaking point</td>
<td>EN 12593</td>
<td>°C</td>
<td>≤ - 16</td>
<td>≤ - 18</td>
<td>≤ - 20</td>
<td>≤ - 20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>or</td>
<td>or</td>
<td>or</td>
<td>or</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NR a</td>
<td>NR a</td>
<td>NR a</td>
<td>NR a</td>
</tr>
<tr>
<td>Kinematic viscosity at 135 °C</td>
<td>EN 12595</td>
<td>mm²/s</td>
<td>≥ 100</td>
<td>≥ 85</td>
<td>≥ 65</td>
<td>≥ 50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>or</td>
<td>or</td>
<td>or</td>
<td>or</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NR a</td>
<td>NR a</td>
<td>NR a</td>
<td>NR a</td>
</tr>
</tbody>
</table>

a NR. No Requirement may be used when there are no regulations or other regional requirements for the property in the territory of intended use.

Properties in Table 2B are required to meet specific regional conditions. They are associated with regulatory or other regional requirements.
### Table 1A — Framework specifications for polymer modified bitumens — Properties applying to all polymer modified bitumens

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>TEST METHOD</th>
<th>UNIT</th>
<th>Classes for all polymer modified bitumens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penetration at 25 °C</td>
<td>EN 1426</td>
<td>0.1 mm</td>
<td>2</td>
</tr>
<tr>
<td>Softening Point</td>
<td>EN 1427</td>
<td>°C</td>
<td>≥ 80</td>
</tr>
<tr>
<td>Cohesion</td>
<td>EN 13589 followed by EN 13703</td>
<td>J/cm²</td>
<td>≥ 3 at 5 °C</td>
</tr>
<tr>
<td>Tensile test (100 mm/min traction)</td>
<td>EN 13587 followed by EN 13703</td>
<td>J/cm²</td>
<td>≥ 3 at 5 °C</td>
</tr>
<tr>
<td>Vialil pendulum (impact test)</td>
<td>EN 13588</td>
<td>J/cm²</td>
<td>≥ 0.7</td>
</tr>
<tr>
<td>Retained Penetration</td>
<td>EN 12607-1</td>
<td>%</td>
<td>≥ 35</td>
</tr>
<tr>
<td>Increase in Softening point</td>
<td></td>
<td>°C</td>
<td>≤ 8</td>
</tr>
<tr>
<td>Change of mass c</td>
<td></td>
<td>%</td>
<td>≤ 0.3</td>
</tr>
<tr>
<td>Flash Point</td>
<td>EN ISO 2592</td>
<td>°C</td>
<td>≥ 250</td>
</tr>
</tbody>
</table>

---

a One cohesion method shall be chosen based on end application. Vialil cohesion (EN 13588) shall only be used for surface dressing binders.

b The main test is the RTFOT at 163°C. For some highly viscous polymer modified bitumens where the viscosity is too high to provide a moving film it is not possible to carry out the RTFOT at the reference temperature of 163°C. In such cases the procedure shall be carried out at 180°C in accordance with EN 12607-1.

c Change of mass can be positive or negative.
### Table 1B — Framework specifications for polymer modified bitumens – Properties associated with regulatory or other regional requirements

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>TEST METHOD</th>
<th>UNIT</th>
<th>Classes for regional requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Fraass Breaking Point</td>
<td>EN 12593</td>
<td>°C</td>
<td>NR ²</td>
</tr>
<tr>
<td>Elastic recovery 25 °C</td>
<td>EN 13398</td>
<td>%</td>
<td>NR ²</td>
</tr>
<tr>
<td>Elastic recovery 10 °C</td>
<td>EN 13398</td>
<td>%</td>
<td>NR ²</td>
</tr>
</tbody>
</table>

* NR. No Requirement may be used when there are no regulations or other regional requirements for the property in the territory of intended use.

* TBR. To Be Reported may be used when there are no regulations or other regional requirements for the property in the territory of intended use, but the property has been found useful to describe polymer modified bitumens.

The properties in Table 1B are required to meet specific regional conditions. They are associated with regulatory or other regional requirements.
<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>TEST METHOD</th>
<th>UNIT</th>
<th>Classes for the additional properties of polymer modified bitumens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plasticity range</td>
<td>sub-clause 5.2.8.4</td>
<td>°C</td>
<td>0</td>
</tr>
<tr>
<td>Drop in softening point after EN 12607-1</td>
<td>EN 1427</td>
<td>°C</td>
<td>NR³</td>
</tr>
<tr>
<td>Elastic recovery at 25 °C after EN 12607-1</td>
<td>EN 13398</td>
<td>%</td>
<td>NR³</td>
</tr>
<tr>
<td>Elastic recovery at 10 °C after EN 12607-1</td>
<td>EN 13398</td>
<td>%</td>
<td>NR³</td>
</tr>
<tr>
<td>Storage stability b</td>
<td>EN 13399</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference in softening point</td>
<td>EN 1427</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Storage stability b</td>
<td>EN 13399</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference in penetration</td>
<td>EN 1426</td>
<td>0.1 mm</td>
<td></td>
</tr>
</tbody>
</table>

³ NR. No Requirement may be used when there are no requirements for the property in the territory of intended use.

b Storage conditions of the polymer modified binder shall be given by the supplier. Homogeneity is necessary for polymer modified bitumens. The tendency of polymer modified bitumens to separate during storage may be assessed by the storage stability test (see EN 13399). If the product does not fulfill the properties in Table 1C classes 2 to 5, information shall be given by the supplier regarding storage conditions for the polymer modified bitumen to avoid separation of the components and to ensure the homogeneity of the product.

The following data may be given by the supplier of the polymer modified bitumen in the product data sheet:
- polymer dispersion (see EN 13632 [5]);
- solubility (see EN 12592 [4] using the appropriate solvent declared by the supplier);
- handling temperatures;
- minimum storage and pumping temperatures;
- maximum and minimum mixing temperatures; for comparison purposes, EN 13702-1 or EN 13702-2 should be used;
- density (see EN 15326).

The properties in Table 1C are additional properties, which are non-mandated, but have been found useful in some countries to describe polymer modified bitumens.
### Table 1 — Specifications for multigrade bituminous binders: properties applying to all multigrade paving grade bitumens

<table>
<thead>
<tr>
<th>Property</th>
<th>Test method</th>
<th>Unit</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penetration at 25 °C</td>
<td>EN 1426</td>
<td>0.1 mm</td>
<td>1</td>
</tr>
<tr>
<td>Softening point</td>
<td>EN 1427</td>
<td>°C</td>
<td>2</td>
</tr>
<tr>
<td>Resistance to hardening at 163°C</td>
<td>EN 12607-1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Retained penetration</td>
<td>EN 1426</td>
<td>%</td>
<td>3</td>
</tr>
<tr>
<td>Increase in softening point</td>
<td>EN 1427</td>
<td>°C</td>
<td>4</td>
</tr>
<tr>
<td>Change in mass</td>
<td>EN 1426</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Penetration Index ( I_p )</td>
<td>Annex A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>EN ISO 2592</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Solubility</td>
<td>EN 12592</td>
<td>m-%</td>
<td></td>
</tr>
</tbody>
</table>
## Table 2 — Specifications for multigrade paving grade bitumens: properties associated with regulatory or other regional requirements

<table>
<thead>
<tr>
<th>Property</th>
<th>Test method</th>
<th>Unit</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Fraass breaking point</td>
<td>EN 12593</td>
<td>°C</td>
<td>NR&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Dynamic viscosity at 60 °C</td>
<td>EN 12596</td>
<td>Pa · s</td>
<td>NR&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Kinematic viscosity at 135 °C</td>
<td>EN 12595</td>
<td>mm²/s</td>
<td>NR&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>a</sup> NR. No Requirement may be used when there are no regulations or other regional requirements for the property in the territory of intended use.

<sup>b</sup> TBR. To Be Reported may be used when there are no regulations or other regional requirements for the property in the territory of intended use, but the property has been found useful to describe multigrade bitumens.
Problems / challenges

• Adhesion
• Constancy / consistency of quality (ITT)
• Long Term Ageing
• PRS for complex binders
• PRS process will be without “field validation”
• “Move forward and fill the current gaps”
• Simple binders described by EN 12591, and complex binders by future PRS
• CEN Data Collection to be incorporated
• The new PRS: a separate standard or something linked to each current bitumen standard?
• Which test for which property?
  • TG1 – High Service Temperatures
  • TG2 – Low Service Temperatures
  • TG3 – Ageing-conditioning
<table>
<thead>
<tr>
<th>Rutting - Method</th>
<th>Suggestion</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSR $G^\ast/\sin (\delta)$</td>
<td>Yes/no</td>
<td>for addressing only linear zone</td>
</tr>
<tr>
<td>DSR MSCR test</td>
<td></td>
<td>Relevant for addressing also non linear zone</td>
</tr>
<tr>
<td>DSR LSV-EVT1</td>
<td></td>
<td>Not suitable for high mod PMBs</td>
</tr>
<tr>
<td>DSR ZSV at 60°C creep mode</td>
<td></td>
<td>Not suitable for high mod PMBs</td>
</tr>
<tr>
<td>stiffness at service temp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DSR Complex mod</td>
<td></td>
<td>To clarify temp &amp; freq</td>
</tr>
<tr>
<td>Method</td>
<td>Suggestion</td>
<td>Comments (3 different properties)</td>
</tr>
<tr>
<td>-------------</td>
<td>------------</td>
<td>-----------------------------------------------------------------------</td>
</tr>
<tr>
<td>BBR</td>
<td>Yes/no</td>
<td>Not the most suitable for continuous network PMBs (stiffness at low temp)</td>
</tr>
<tr>
<td>Fracture Tough.</td>
<td></td>
<td>In due course for EN (crack propagation)</td>
</tr>
<tr>
<td>Fraass</td>
<td></td>
<td>Not the suitable for continuous network PMBs (crack formation)</td>
</tr>
</tbody>
</table>
## TG3 AGEING-CONDITIONING

<table>
<thead>
<tr>
<th>Method</th>
<th>Suggestion for reference method</th>
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<td>Safety</td>
<td>EN ISO 2592 Cleveland</td>
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Challenges

- Takes a lot of time
- Moving forward (very slowly)
- Good test methods are needed
CEN TC351
• Release of dangerous substances to air and groundwater

CEN TC350 Sustainability of construction works
• Environmental product declarations - Core rules for the product category of construction products: **EN 15804**
Work Zone Safety

- ERF and CEN TC226
- CEDR
- EAPA
ERF Working Group

OBJECTIVES

Raise the safety level for road workers and road users dealing with work zones on public roads by contributing to European guidelines for use of road equipment in work zones
ERF WZS Working Group

WORK ITEMS

• produce an overview and synthesis of national guidelines, legislations and practices in selected European countries
• detect and transfer good practices
• identify improvements adapted to the state of the art
• propose uniform approach throughout Europe
DELIVERABLES

• format of a TR – Technical report
  • “Technical info not included in a standard”

CEN TC226 Resolution:

Group with o.a. ERF to prepare for the next plenary meeting in June 2013, a proposal on a draft guide(s) for safe work zones for the products covered by CEN/TC 226.
CEDR TRANSNATIONAL ROAD RESEARCH PROGRAMME
Call 2012

Safety:

- Safety of road workers and interaction with road users
- Use of vehicle restraint systems
The task of the EAPA Task Group is to:

- provide member states with good examples of raising awareness of the safety of the road workers
- create a document that can be used by the EAPA members to start their own campaign at company level or at national level
- create a document that can be used as a lobbying tool for EAPA at European level.
- collect data to show how big the problem is (data of fatalities caused by general public).
Examples

My dad works on this site
Please Drive Carefully

10
• In the Netherlands about 2% of the total number of people killed in traffic accidents are in Work Zones.

• In the USA it is also around 2% (2010: 1.75%; 2009: 2.00% and 2008: 1.91%)

• In Europe 50,000 peoples killed in accidents would result in an estimate of : 1,000 per year.

• In Europe-27 countries in 2009: 34,550.

• 2% would be: about 700 in Work Zones.
Work plan 2012-2014

Sustainability

- Warm Mix Asphalt
  Stimulating use of WMA
- Recycling
  EAPA TC is leading
- Carbon Footprint
- Energy Reduction
  Following the EU developments
- Rolling Resistance
- EU ETS
- Waste Framework Directive
  with EPRA
- Green Public Procurement
  (not a main priority)
Example of Environmental Product Declaration as developed in Norway was presented and explained.

Each asphalt producer can produce its own EPD and he can show the environmental advantages of his product.

In the future this EPD will play a role in tendering, but not yet (in Norway).

The EPD produced in Norway is following the European Standard (EN 15804 of CEN TC350).

EAPA will translate Norwegian EPD as an example/template.
• Update asPECT (UK - for free). Adding maintenance
• Update SEVE (Système d’Évaluation des Variantes Environnementales) (France – not free / fee). v2.0
• Need revision of the LCI of 2000 discussed
• Germany UK France have national data, so for them there is no update needed.
• No LCI updated need but: Guidance document “Carbon Footprint Calculators”
  – How to calculate - input data - use – tips and tricks
• Goal to have it ready in 2013.
• EU Emission Trade System
• ≥ 35 MW: in EU-ETS
• > 20 - < 35 depends on member state
• update regarding EU-ETS by Simon van der Byl
• In the UK it is often a plant by plant decision.
• Some mentioned that it might be good to be in the exemption group. It was also mentioned that the quota trade is complex and more like a nightmare
• It is impossible to say what is the right decision.
• Roar Telle explained the Warm Mix Asphalt studies they did on 11 test sections in Norway in 2011

• USIRF WMA Recommendation
Climate Change

- Adapting road system to climate change is primary task of the road owners.
- Good drainage, sewerage systems and ditches along the road are important to keep the road structure dry.
- Norway is using adhesion promoters in every project.
- The EAPA members are ready.
- We have the techniques and knowledge to adapt to the climate change consequences.
- Update
- European Platform for Recycled Aggregates – EPRA
- Mostly regulated at national level
- We keep it in the agenda
• Update TC 154 TG13 / CEN TC227 WG6
• Release of Regulated Dangerous Substances (CEN TC 351)
• We get Mandate: ± 2015
• EPD (CEN TC350): ± 2018
At a certain moment a response is needed regarding this document

EAPA needs a plan and a budget

Next meeting
• Delivery of high performance pavement systems and products
• Purchasing models
• Health and safety regulations around bitumen
• REACH