

Polymer Modified Asphalt The Canadian Perspective

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PMA in Canada



- Specifications
 - Don't really have any except ...
 - Québec uses a version of an ASTM ER procedure
 - LC-25/005 based on a modified ASTM D113
- Some major municipalities use an ER spec for certain grades
 - Atlantic – Halifax
 - Ontario – Ottawa, Toronto
 - Prairies – Calgary
 - British Columbia – Delta
- In most cases, Polymer is specified in the contract documents but no verification testing is done
- Most provincial authorities have carried out trial contracts

PMA production in Canada



- Informal producers survey
 - about 15% of material supplied in Canada is polymer modified.
- Use varies across the country
 - Used for SMA (Ontario)
 - Most of the low temperature grades in Québec
 - In Québec about 25% of binder is PMA
 - High traffic surface course in municipalities
 - Trans-Canada Highway

HMA Volumes across Canada

- Atlantic – 2.7 million tons
 - Québec – 7.8 million tons
 - Ontario – 14.8 million tons
 - Prairies – 6.3 million tons
 - BC – 4.5 million tons
 - Total – 36.1 million tons
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- About 1.8 million tons of AC or about 270,000 tons of PMA

AC Grading



■ Atlantic

- Use PGAC – 58-28 and 58-34 most common
- 70-28 and 64-28 for intersections or high traffic (Halifax, TCH)
- No ER specification – must meet PG grade

■ Québec

- Use PGAC – 58-34 and 64-34 most common
- 52-40 in north (40% ER) and 70-28 in cities and principal highways (60% ER)
- Only premium grades must meet ER specifications

AC Grading

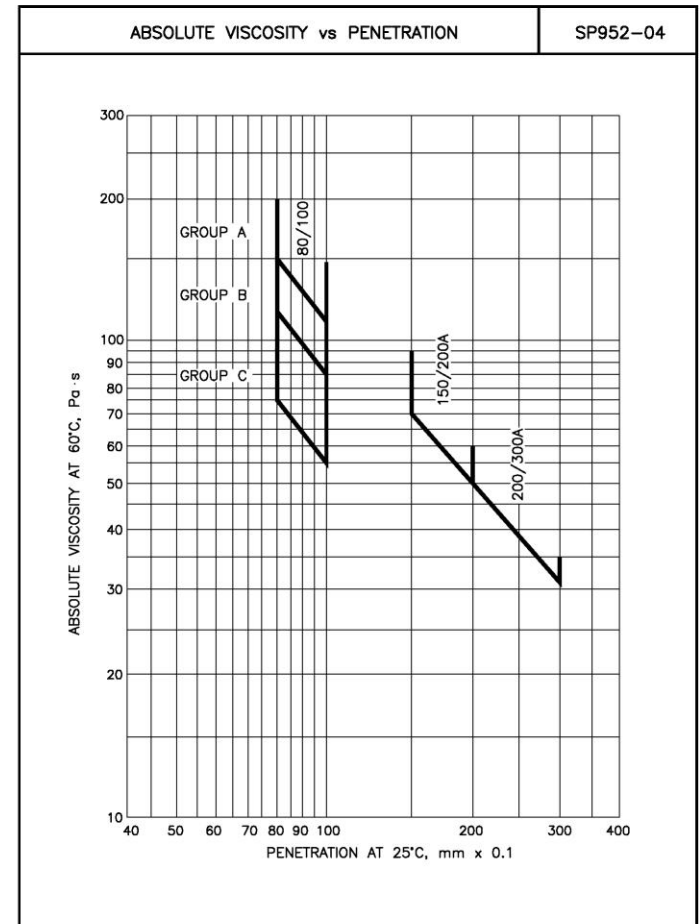


■ Ontario

- PGAC – 58-28 main grade in SW and Central
- 52-34 in rest of province
- Provincial 400 series highways
 - Change from 64-34 to 70-34 for SMA and DFC or FC-1 in 2003
 - No ER specification BUT ...
 - 70-28, 70-34 and 64-34 only allow 0.5% PPA
 - Hwy 401 through Toronto – AADT > 370,000
 - For single grade modification – allow 1% PPA
- Some municipalities use ER type specification on high volume roads

AC Grading

- Prairies and BC
 - Penetration grading according CGSB Group A, B and C
 - Mostly use Group A – higher viscosity
 - Looking at adopting PGAC but using half grades
 - 67-31 etc.
 - May be forced to PG as local refiners export to US
 - Reluctant to move because PG grading will allow Group B sources that are currently rejected
 - PMA on used on trial contracts for evaluation of properties



Conclusions



- No consistent standard for grading AC
- Practically no testing for PMA properties
- Situation is changing slowly but the market is limited so little incentive to change