1. What is PG System?

A new Asphalt Binder Specification for selecting the appropriate binder for pavement performance in terms of rutting, fatigue cracking, and low temperature cracking.

2. How is asphalt binder is defined in a PG System (the notation)?

PG system is based on project climate. The standard notation for PG binder is PG XX-YY where XX is the average-seven day maximum pavement design temperature and YY is the minimum pavement design temperature.

3. What does the Climate map have to do with PG Binders?

There are infinite grades of PG binders for each of the vast variations of project climatic conditions around the State. However, for practical applications of the PG System, Industry and Caltrans PG Task Group identified the number of PG grades that would meet the State needs. The Task Group also generated a climatic map for the State of California with the recommended PG grade for each of the climatic zone.

4. What is the difference between Viscosity Grade System and Performance Graded System?

The viscosity grading system is based on binder viscosity at 60 degree Celsius. In the case of AR graded binder, the binder is Rolling Thin Film Oven (RTFO) aged binder. Viscosity grading is related to the consistency of the binder at a specific temperature and not directly related to its performance throughout the anticipated life of the pavement. The PG System measures the fundamental properties (stresses and strains) of the binder at the various stages of binder conditions (service temperatures and binder aging) throughout the expected life of the pavement.

5. What is the difference between a PG binder and a PBa binder?

The PG binders and PBA binders are conceptually similar. The PBA binders are a major building block for the PG System. PBA binders, mostly based on the traditional viscosity testing protocols, introduces the concept of specifying binders based on the project climatic conditions and binder performances in the pavement. Later, PBA binders adopted some of the fundamental properties (stresses and strains) binder tests developed for PG System. The current PBA binders has evolved to exclusively characterized polymer-modified binder. It is expected that the PBA binders will be replaced by the PG Grades for modified binder (PG Modified) in the near future.

6. How to select an asphalt binder grade?

Please go to http://www.dot.ca.gov/hq/oppd/pavement/pgb.htm and click on the link Caltrans Climate Regions for PG and PG Policy Handout.

7. Why Caltrans uses PG Binders?

Caltrans believed that the PG System better characterized the fundamental engineering properties of binder. This will leads to better specification of "the best suited" binder for a particular projects leading to better performing and longer lasting pavement.

8. What are the policies on using PG Binders in California?

California began specifying PG grades for unmodified binder since January 1, 2006.

9. What are the common PG binders used in California?

California specifies PG grades for unmodified binder. The common grades used in California are PG 58-22, PG 64-10, PG 64-16, PG 64-28, and PG 70-10. California expects to specify PG grades for modified binder (PG Modified) in the near future. The expected grades for PG Modified are PG 58-34M, PG 64-28M, and PG 76-22M.

10. Do other States use PG Binders?

Currently, all states use PG Binders.