



Important Note When Recovering Binders Containing PPA

There is an issue with extraction and recovery of asphalt binders containing Polyphosphoric Acid (PPA). This information includes binders that use PPA as a co-modifier or catalyst, such as some suppliers of SBS and Ethylene Terpolymer modified binders, as well as binders that are produced using PPA as the sole modifier.

The problem is that commercial grades of n-propyl bromide and trichloroethylene contain a stabilizer (typically 1,2 epoxy butane) that reacts with acid in the binder, including PPA, and renders it ineffective as a modifier for asphalt. These stabilizers are not present in all solvents used to extract binders from bituminous mixtures. As such, it is recommended that PPA-modified asphalt binders need to be extracted using solvents that are known not to contain acid scavengers such as lab-grade trichloroethylene and n-propyl bromide, toluene, toluene/ethanol, and tetrahydrofuran (THF).

Research has shown that when the same bituminous mixture produced with a PPA modified binder is extracted using a solvent containing the acid scavenger the $G^*/\sin(d)$ test results can be reduced by 50% compared to the use of a solvent that does not contain the acid scavenger.

Note: Take precautions to read and follow all manufacturers' warnings and precautions when handling these materials.