

# PCE Product Data Sheet

## Description and Physical Properties

PCE (Prime, Cure and Emulsion Control) is a slow curing anionic non-asphalt emulsion of petroleum-based material in water and is used for priming of base materials, as a curing seal for stabilized base materials, and for erosion control applications (dust control, soil surface stabilization, or mulch binder). PCE is normally diluted with water to achieve the desired residual concentration.

- Boiling Point (F): 212°F
- Specific Gravity (H<sub>2</sub>O=1): 0.93
- Vapor Pressure: 17.535 (Gauge)
- Percent Volatile: 0
- Solubility In Water: Soluble
- Appearance And Odor: Light Brown Liquid, Faint Petroleum Odor
- Flammability: Non-flammable in Water-based State

## Recommended Use

PCE should be diluted at least 3 parts water to 1 part emulsion before use, and applied at a rate of 0.20 – 0.50 gallons per square yard, depending upon the openness of the surface to be treated. It should be applied with well-calibrated distributors. The distributor nozzles and spray bar should be sized and set to deliver the desired shot rate. The air and pavement temperatures should be sufficiently high to allow the emulsion to fully cure, and there should be no imminent threat of rain.

Specifications Conforms to Texas Department of Transportation Specifications-Item 300.2<sup>1</sup>:

Property	Test Procedure	Min	Max
Viscosity, Saybolt Furol, 77°F, sec.	T72	10	100
Sieve test, %	T59	-	0.1
Miscibility <sup>2</sup>	T59	Pass	
Particle size <sup>5</sup> , % by volume < 2.5 µm	Tex-238-F <sup>3</sup>	90	-
Residue by evaporation <sup>4</sup> , % by wt.	T59	60	-
Tests on residue after all distillation(s):			
Kinematic viscosity <sup>5</sup> , 140°F, cSt	T201	100	350
Flash point C.O.C., °F	T48	400	-

<sup>1</sup> Supply with each shipment of PCE:

- a) a copy of a lab report from an approved analytical lab, signed by a lab official, indicating the PCE formulation does not meet any characteristics of a Resource Conservation Recovery Act (RCRA) hazardous waste;
- b) a certification from the producer that the formulation supplied does not differ from the one tested and that no listed RCRA hazardous wastes or PCBs have been mixed with the product; and
- c) a Material Safety Data Sheet.

<sup>2</sup> Exception to T59: In dilution, use 350 ml of distilled or deionized water and a 1,000-ml beaker.

<sup>3</sup> Use Tex-238-F, beginning at "Particle Size Analysis by Laser Diffraction," with distilled or deionized water as a medium and no dispersant, or use another approved method.

<sup>4</sup> Exception to T59: Leave sample in the oven until foaming ceases, then cool and weigh.

<sup>5</sup> PCE must meet either the kinematic viscosity requirement or the particle size requirement.

## Storage and Handling

The water-based emulsion should not be exposed to freezing temperatures or overheating. The emulsion is a chemically stabilized system, so care should be taken not to upset the chemical balance with contamination by chemicals, over-exposure to air, or adverse mechanical or thermal conditions. Before being filled, tanks and trucks should be examined for possible contaminants. Tanks may be circulated top to bottom with a pump, but over-pumping is to be avoided. Recommended use and storage temperatures are given in the table.

Recommended Temperatures	Min	Max
Storage	60°F	160°F
Application	60°F	160°F

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