

# TEX-500-C

Sampling Asphalt Binder and Emulsions



## Why

Proper sampling procedures to obtain representative materials for laboratory testing and acceptance. These materials are used to produce hot mix asphalt, tack coat, and for the placement of seal coats.

***Testing samples that are representative of what is being used during production and placed on the roadway is important to ensure quality is delivered to the project.***



## When

Take a sample of asphalt material once per day or lot. Sample at approximately the same time a random sample of mixture is required for testing during production.

One sample of tack coat is required per project. The Engineer determines when sampling will occur.



## How

### Minimum Safety Precautions

- Personal Protective Equipment (PPE)
  - *Gloves*
  - *Glasses, goggles, or face shield*
  - *Long sleeve shirt*
  - *Long pants*
  - *Apron*
  - *Shoes that cover the entire foot*
- Use proper sample containers and lids.
- Slowly open all sample valves with caution.
  - *Storage tanks and pipelines are under pressure.*
  - *Valve stems may not be heated and have a cold plug of material that needs to be removed.*
- Seal sample containers immediately after sampling.
- Not recommended to sample from the top of distributors, storage tanks, and transport trucks.

### Sampling Containers

- Minimum capacity of one quart.
- Dry, clean, and dust-free to avoid contamination with lids.
  - Asphalt Binder
    - Double-seal, friction-top metal cans
  - Emulsion
    - Wide-mouth plastic jars
  - Cutback
    - Screw-top metal cans

### Reference Document

TxDOT Asphalt Binder Inspection and Sampling Guidance, October 2021  
<https://www.txdot.gov/inside-txdot/division/materials-and-tests.html>



## QUICK FACTS: LEVEL 1A

### Sampling Locations

- Part I - Storage Tanks
  - *Located at the refinery, asphalt producer, or asphalt mix plant.*
- Part II - Pipelines
  - *Asphalt line feeding the mix plant.*
- Part III - Transport trucks or distributors
  - *Located at the asphalt mix plant or roadway.*

### Sampling Procedures

- Sampling from a valve, drain cock, or pipe fitting (Parts I, II, and III).
  - *Slowly open the valve or drain cock and allow at least one gallon of asphalt material to flow into a waste container.*
  - *This will flush and clear the line of old material and ensure a representative sample is taken.*
- Sampling from a distributor (Part III).
  - *Circulate and mix the asphalt material thoroughly with the pump.*
- Sampling from the spray bar distributor nozzle (Part III).
  - *Allow one full shot after the start of the workday, or after cleaning the spray bar to ensure any cleaning agent has been cleared from the spray bar.*
- Asphalt Binder and Cutback
  - *Fill the container to approximately 95% capacity.*
    - A small amount of space is needed for stirring the sample before laboratory testing.
  - *Tightly close and seal the sample container.*
- Emulsion
  - *Fill the container to the top.*
  - *Place the lid on the container and squeeze the side slightly to raise the level of emulsion to the top. Screw the lid on tightly.*
    - This will remove the air gap to the lid that will avoid any air entrapment in the sample.

### Labeling of Sample Containers

- Producer
- Producer facility location
- Grade
- District
- Date sampled
- Project information (highway & CSJ #)

### Storage

- Asphalt binders and cutback in a designated area for a minimum of one year.
- Emulsions are two months.
- Organize by sample, type, date, and project.

### Packaging

- Place in shipping box with Form 202 for each sample.
- Attach two bar codes to container in vertical direction and another on box.
- Do not include any other materials, only samples of asphalt.
- Use wadded paper as packing material. Do not use shredded paper, bubble wrap, or Styrofoam pellets.