



Tack Coat

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The
IMPORTANT
part of
Asphalt Paving
and
Sampling

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Acknowledgement

Stevenson Ganthier, PE
Principal Engineer
Bureau of Materials, NJ DOT

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Why worry about Tack Coat?

Core



Same Core
Days Later!



Courtesy of Road Science



Poor bond causes slippage and shoving,
decreases durability (pavement life)

Direction of traffic



Courtesy of Road Science

Slippage failure due to poor bonding of pavement layers



Lack of Tack Coat – No bonding between asphalt layers



Tech Brief FHWA April 2016



TACK COAT EMULSION SAMPLING

Typical Tack Coat
dispensing trucks



Courtesy of APS



Tack Coat sampling..... RE or Inspector's responsibility

- ▶ 1) *Certificate of Compliance* is required from each truckload to the project. Make sure the *grade of the emulsified asphalt* is on the certificate in order to properly test the sample.
- ▶ 2) The NJDOT RE or inspector will **witness** the sampling. Collect one sample for each type of tack coat on the project.

Tack Coat sample will be collected every day.

- ▶ 3) Use a wide mouth jar of approximately **one quart** made of plastic or glass with a screw lid. The Bureau of Materials keeps one quart plastic containers in stock.
- ▶ 4) Mark the containers (not the lid) name/location of manufacturer, project name/DP#, product grade, lot number, tank number, date sampled, item #. *Proper labeling of bottle.....in after couple of slides*
- ▶ 5) a. **Witness** truck driver takes sample from sample valve
 - b. " " " " " a nozzle on spray bar.
 - c. " " " " " application device ("wand").



Sampling from sampling valve...



Unscrew the cap on sampling spigot, turn valve on & allow min. **one gallon** to flow into “waste container” & discard.

Sample into one quart plastic container w/ screw top, screw lid back on tightly. Wear gloves (hot) and other appropriate safety equipment.



Sampling from Spray Bar Nozzle...



Allow at least **20 yards** to run out before taking sample. Pull the nozzle ring to collect sample.

Sample into one quart plastic container w/ screw top, screw lid back on tightly. Wear gloves (hot) when obtaining sample.



Sampling from Application Device ("Wand")...



Allow minimum **one gallon** to flow into "waste container" and discard.

Sample into one quart plastic container w/ screw top, screw lid back on tightly. Wear gloves (hot) when obtaining sample.



Proper labeling of Sample Bottle

RE or his Inspector's responsibility



Mark the containers
(not the lid)
name/location of
manufacturer,
project name/DP#,
product grade,
lot number,
tank number,
date sampled,
item #.



Construction Procedures Handbook

Section VI, Subsection T 10/03/2018

Construction Operations: Sampling Emulsified Asphalt for Microsurfacing, Slurry Seal, Tack Coat and Prime Coat

Note: This procedure does not cover the sampling of asphalt binder tack coat (PG64 and/or PG76). Metal quart cans are required for asphalt binder and *extreme caution* is needed due to high temperatures.

Caution: Bituminous products are stored at elevated temperatures. Always use appropriate safety equipment and precautions for hot liquids. (i.e. gloves and protective eyeware)



Truck calibration measuring device (only for that truck)



Tack Coat Ticket from Truck Operator

Log ID: TPJGAJE 168A131539

ASPHALT PAVING SYSTEMS
P.O. BOX 530, HAMMONTON, NJ, 08037
Tel: 609 561 4161
Fax: 609 561 0920

Date: 07-28-16 Time: 00:20:13 Ticket No: 19500

Vehicle No: 9 Customer No: 50

Customer: ASPHALT PAVING SYSTEMS
PO BOX 530
HAMMONTON, NJ 08037

Min & Max Temp.
CSS-1H 125 deg. F
CSS-1H PH 100 deg. F

Product: CSS-1HPM ACT: 53.4% PEN: 57 SpGr: 0.000
Product No: 12-12 Visc: 34.0 Lot#: 1 Tank#: 16
Pounds per Gallon: 8.36
GROSS 75000 LBS
TARE 25400 LBS (KEY BOARD TARE)
NET 50000 LBS US GALLONS: 6052.95

SIGNATURE: [Signature]

This Material has been tested & found to be in Conformance with the Dept of Transportation Specs. Pa.

This Material is Compatible with Job Aggregate.

This Material was Free of Contamination Prior to Loading.

LB-88

DP# 16130 Item# 54

Charged To: Rt. 280 WB over Passaic River

Seal No. Sample No. RP-1

Material: Emulsion for Tack Coat

Size & Type: CSS-1H

Producer: Asphalt Paving Systems

Date of Report Submitting Sample: 6/2/16

Signed: Babesh.Patel@DOT.NJ.GOV

THIS SPACE FOR LABORATORY USE ONLY

LB-88 RE's Responsibility

QUESTIONS ?



Thank you !!!



Safe driving on NJ roads

