

ATT- 75/04 SAMPLING RUBBER CRUMB

1.0 SCOPE

This method describes the procedure for sampling rubber crumb from bags, used in the production of asphalt rubber binder.

2.0 EQUIPMENT

1m chrome plated grain/cereal probe(Seedburo 79A-OH or equivalent)
sample retainer - 1m long 102 mm diameter plastic or PVC pipe capped at one end
(an equivalent sample retainer can be used)
plastic sample bags and ties
Duct tape
Box Cutter Knife

3.0 PROCEDURE

3.1 General

The rubber crumb is usually packaged and delivered to the project site in large bags weighing approximately one tonne. Because of the size of the bag it is necessary to use a grain sampling device (probe) to obtain a representative sample.

The probe is a device that consists of two chrome-plated tubes. One tube slips into the other and is twisted until locked into place. The outer tube is pointed on the end that is inserted into the sample bag. The other end of the inner tube has a knob. Each tube has identical holes in them and when the inner tube is turned while holding the outer tube the holes align with one another and this allows material to fall into the probe.

3.2 Sampling Procedure

1. Randomly pick a bag of rubber crumb from the bags at the job site. The bag should be placed in a safe location and should be accessible from all four sides.
2. Three small holes will be cut into the bag on each of the four sides. The first hole should be located one third from the bottom, the second hole one-third from the top and the third hole in the center of the bag.
3. Make sure the probe is closed and insert the probe into one of the holes. Turn the inner tube to open the probe until the holes are aligned. Slightly move the probe back and forth to allow the rubber crumb to fall into the probe.
4. Close the inner tube and remove the probe from the bag.
5. Tape up the hole using the Duct tape.

6. Place the probe into the sample retainer. The probe should be tilted about 20 degrees to assist in the removal of the rubber crumb material from the probe. Open the probe to allow the rubber crumb to fall into the retainer.
7. Sometimes the rubber crumb clogs the area between the two tubes in the probe. When this happens the inner tube becomes hard to turn. To relieve this problem the inner tube should be removed from the outer tube and the rubber crumb should be cleaned from the tubes.
8. After placing the three samples from one side of the bag into the retainer dump the rubber crumb from the retainer into a plastic bag.
9. Repeat steps 3 – 6 until the 12 samples of rubber crumb are obtained.
10. Double bag the rubber crumb and tie the plastic bag. Mark on the bag with an indelible marker the date sampled, bag and batch number and who sampled.

4.0 HINTS AND PRECAUTIONS

1. Care should be taken to not dent the inner tube during the cleaning process, as it will not fit back into the outer tube if damaged.
2. Care should be taken when using the probe as the holes are very sharp and can easily cut a finger.