DIRECTIONS FOR TEST NO. 14-23-32

SUBJECT: Pour Point Of Aroclors

METHOD: ASTM D97-30 - Cloud and Pour Point

ASTM Definition

"The pour point of a petroleum oil is the lowest temperature at which the oil will pour or flow when it is chilled without disturbance under definite prescribed conditions." The method of test below follows ASTM directions exactly except that observations are made at intervals of 2°C instead of 5°F and results are reported on Centigrade scale.

Apparatus

A sketch of the assembled apparatus is attached. For details of apparatus see ASTM D97-30.

Procedure

Pour the Aroclor into the clean dry test jar to a height of 2 to 2-1/4". Insert cork carrying the test thermometer and adjust so that the thermometer is in the center of the test jar and the beginning of the capillary is 1/8" below the surface of the Aroclor. Warm without stirring to a temperature of 46°C in a bath at 48°C. Cool to 30°C in an air or water bath.

Adjust temperature of the cooling bath so that it is 8 to 16°C below the expected pour point of the Aroclor and maintain in this range throughout the test. Place disk (e) in bottom of jacket and insert test jar (with the ring gasket, f, 1 inch above the bottom) into the jacket. Disk, gasket and inside of jacket must be clean and dry.

Beginning at a temperature 10°C before the expected pour point, at each test thermometer reading which is an even number, carefully remove test jar and tilt just enoug to ascertain whether there is a movement of the Aroclor in the test jar. The complete operation of removal and replacement should not require more than 3 seconds.

If the sample has not ceased to flow when its temperature has reached 8°C, place the test jar directly in a cooling bath of suitable temperature. As soon as the sample in the test jar does not flow when the jar is tilted, hold the test jar in a horizontal position for exactly 5 seconds as measured by a stop watch. If oil shows movement, replace test jar in cooling medium and repeat test at the next temperature 2°C lower.

DSW 330760

STLCOPCB4077404

DIRECTIONS FOR TEST NO. 14-23-32

SUBJECT: Pour Point Of Aroclors

METHOD: ASTM D97-30 - Cloud and Pour Point

Sheet No. 2

Continue testing in this manner until a point is reached at which the sample shows no movement when the test jar is held horizontally for exactly 5 seconds. Note the thermometer reading at this solid point. The pour point is recorded as the temperature 2°C above the solid point.

Notes

The cooling mediums usually employed are shown below:-

Material	Approx. Pour Pt.	Cooling Medium	Lower limit for Medium
Aroclor 1260	28°C	Ice & Water	10°C
Aroclor 1254	10°C	Ice, Water and salt (NaCl)	-
Aroclor 1248	-6°C	Crushed ice and salt	-12°C
Aroclor 1242	-20°C	Gasoline and solid CO_2	-55°C

Crushed ice and calcium chloride crystals may be used for temperatures down to -25°C.

ABC-hp
9/6/34

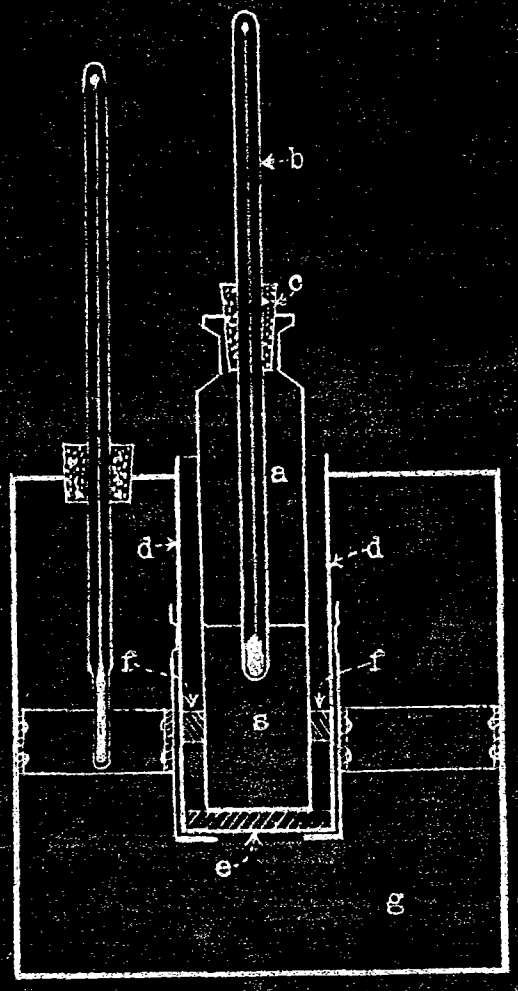
DSW 330761

STLCOPCB4077405

DIRECTIONS FOR TEST NO. 14-23-32

SUBJECT: Pour Point of Aroclors

METHOD: ASTM Designation D97-30



ASSEMBLED APPARATUS FOR POUR TEST

a. Test Jar, 4 oz. oil sample bottle, 1 3/16 to 1 5/16" i.d.
b. Test Thermometer,"ASTM Cloud & Pour -38 to +50°C." placed so that beginning of capillary is 1/8" below surface of oil.
c. Cork to fit test jar, center bored for test thermometer.
d. Jacket, water tight cylinder, with inside diameter 3/8 to 1/2 in. greater than o.d. of test jar.
e. Disk of cork or felt, 1/4" thick, to fit bottom of jacket.
f. Ring gasket, cork or felt, to prevent test jar from touching jacket. Fits test jar tightly and loosely into jacket.
g. Cooling Bath with support for holding jacket vertically.
s. Sample; Height in test jar must be 2 to 2 1/4 inches.

DSW 330762

STLCOPCB4077406