

Aniline Point Determination Instruction Sheet

DESCRIPTION

Aniline Point - Lowest temperature at which equal volumes of fresh aniline and an oil are completely miscible.

Field experience and laboratory tests have indicated that oils with a high aromatic content were more detrimental to rubber products than those with a low aromatic content. The relative aromatic content of an oil is indicated by its aniline point. Oils having a high aromatic content have a low aniline point, and oils with a low aromatic content have a high aniline point. Therefore the oils with high aniline points are the most desirable for use in drilling fluid in order to minimize damage to rubber equipment on the rig.

SAFETY

WARNING

MAY BE FATAL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. COMBUSTIBLE. CAUSES IRRITATION. MAY CAUSE METHEMOGLOBINEMIA.

Do not breathe vapor.
Avoid contact with eyes, skin and clothing.
Keep container closed.
Use with adequate ventilation.
Wash thoroughly after handling.

EMERGENCY/FIRST AID: In all cases call a physician immediately. If swallowed, induce vomiting immediately by giving two glasses of water, or milk if available and sticking finger down throat. Never give anything by mouth to an unconscious person. IF INHALED, remove to fresh air. If not breathing, give artificial respiration. DO NOT GIVE MOUTH-TO-MOUTH RESUSCITATION. If breathing is difficult, give oxygen. Keep patient warm and at rest. In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes.

PROCEDURE

- 1. Clean and dry the apparatus. Measure 4 ml of aniline and 4 ml of the oil to be tested into the test tube.
- 2. Place stopper into the test tube and insert thermometer, making sure the bulb does not touch the sides or bottom of the tube.
- 3. Heat the tube slowly while stirring the mixture (stir by moving the thermometer up and down) until complete miscibility (the mixture becomes clear) occurs.
- 4. Remove from heat source and continue stirring until aniline-oil mixture becomes cloudy. Read thermometer temperature at cloud point and report aniline point in °F.

NOTE: If the aniline and oil are miscible at room temperature, the sample will have to be cooled below this temperature to obtain the aniline point. The aniline point of an oil should be 150°F or higher in order to minimize damage to rubber parts in a mud circulating system.

PARTS LIST

PART NO.	DESCRIPTION
206568	POCKET THERMOMETER, 0-220°F
206681	UTILITY CLAMP, FIBERGLASS
210070	PIPETTE DROPPER, 1ML
210071	RUBBER BULB
210154	ANILINE REAGENT GRADE
206676	TEST TUBE, 25 X 150 MM

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Printed in U.S.A.

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