

MATERIALS / PAINTS

FNHA-2-J-001.30

FINENESS OF GRIND

1. SCOPE

This procedure is used to determine the degree of dispersion of the pigment in a pigment-vehicle system. It may also be used to assess the inclusion of particulates by a cleanliness rating.

2. REFERENCE STANDARD

ASTM D1210 - Fineness of Dispersion of Pigment - Vehicle Systems

3. MATERIALS AND EQUIPMENT

3.1 Hegman grind gage constructed of hardened steel, stainless steel, or chrome plated steel and hardened scraper (Gardco 5254 or equivalent). See Figure 1.

3.2 Spatula

3.3 Clean solvent

3.4 Soft cloth, Kleenex, or equivalent

4. PROCEDURE

4.1 Place the gage on a flat horizontal surface.

4.2 Wipe the gage and scraper thoroughly with solvent and allow to dry.

4.3 Mix the paint well with the spatula for about two minutes. To be sure of accurate readings, the paint must be free of air bubbles.

4.4 Place a sample of paint in the deep end of the two paths so that it overflows slightly.

4.5 Holding the scraper firmly in both hands, nearly vertical, but inclined slightly toward the operator, draw the paint down the length of the paths toward the shallow end with a uniform, brisk motion. Use only enough pressure to clean excess material from the gage.

NOTE: The quantity of paint used to fill the deep end of the paths must be sufficient to fill the shallow ends completely after completing 4.5.

4.6 View the gage from the side, perpendicular to the length of the paths. Keep the gage between the operator and the light source and view at about a 20° - 30° angle.

4.7 Observe the point where the material shows a definite speckled pattern, not just isolated specks (Figure 2).

4.8 After the first drawdown used only for establishing preliminary test conditions, clean the gage and repeat steps 4.4 through 4.7 twice more.

4.9 Inspect for cleanliness also which is shown only at a 6 Hegman level, but also applicable to any fineness level by counting nibs or particles coarser than the selected fineness level.

4.10 The following is the rating for cleanliness:

A = 0-8 specks

B = 9-15 specks

C = 16 or more specks

See Figure 3.

					NAME	STD FINENESS OF GRIND		
					 NEW HOLLAND			
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ALL	A	RE	104739	950123			FRAME 1	OF 4
FRAME NO.	REV	BY	ECN NO.	DATE			PART NUMBER	
APP.	DRAWN		AP	JAN 94				
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5. REPORT

5.1 Record and report the two readings to the nearest 1/4 Hegman unit.

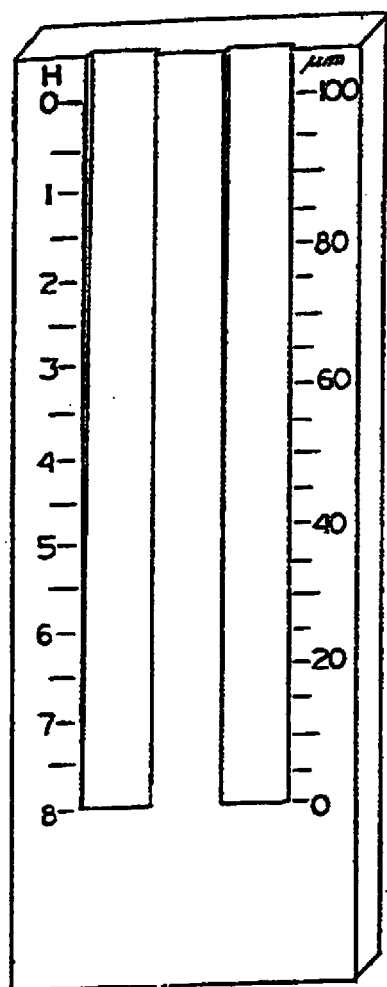
5.2 Report the average of the two readings as the Hegman grind.

5.3 Record the cleanliness and report.

5.4 The sample passes if the grind meets the requirement for the specific coating and the cleanliness level is A.

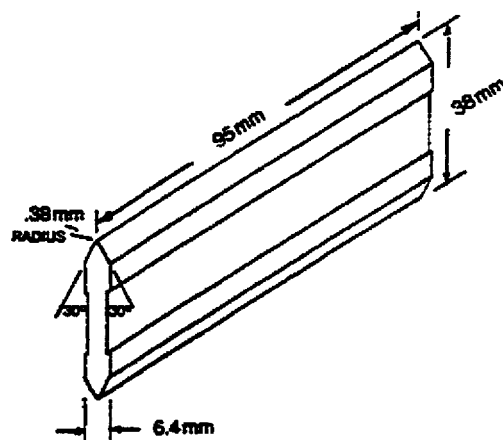
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Figure 1



Two-Path Gage

Fineness Gage



Scraper

	NAME				PART NUMBER	
	STD FINENESS OF GRIND				86507665	
ENGINEERING SPECIFICATION				REV. B	FRAME 2	OF 4