PLAINTIFF'S EXHIBIT

UC-3974



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THICKENING AGENTS FOR NITROCELLULOSE AND ALKYD LACQUERS

The information on the following pages is a translation of work done in the laboratories of our European Distributor. RG-244 is compared to Bentone 27, 34 and 38.

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Bentone 27, 24 and 38 were tested together with RG-244 for their properties as thickening agents. An NC-lacquer and an alkyd-lacquer were used. From the Bentone-products a 10% paste was prepared in a mixture alcohol-xylol. The paste and the RG-244 were dispersed with a dissolver for 10 minutes at 2,000 r.p.m. All products could be dispersed very easily.

The concentrations of the thickening agents were:

in NC-lacquer	1.6%
in alkyd-lacquer	0.8%

After a 5-day storage test Bentone 27 in NC-lacquer showed a soft settlement, while all the other samples were perfectly stable.

As can be seen from the attached graphs, the thickening effect of RG-244 was much higher than that of the Bentone-types.

One obvious advantage of RG-244 is that it can be incorporated directly.

Recipe for the Bentone Paste

Bentone	10%
Methanol	10%
Xylol	75%
Anti-Terra U	5%

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Nitrocellulose Lacquer Formulation

Non-Polishable Flat Nitrocellulose Lacquer NC 223

Nitrocellulose, Normtype 24 E (wetted with 35 % Isobutanol) (WASAG-Chemie)	125.0
Heso-Alkyd 40 E, 60 % in Xylol (Hendricks und Sommer)	208.0
Palatinol BB (BASF) = butyl benzyl phthalate	16.6
Edenol 344 (Dehydag) = Dimethyl cyclohexyl phthalate	25.0
Silicone oil L 050 (Wacker) 10 % solution in MIBK	9.0
Methyl ethylketone	121.0
Methyl isobutyl ketone	152.0
Toluol	220.0
White spirits 100/140	86.4
Ethyl glycol acetat	37.0
	1000.0

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Non volatile solid content: 25 %

Viscosity DIN 4 Cup 20 ^{o} C 90 Seconds

Alkyd Lacquer Formulation

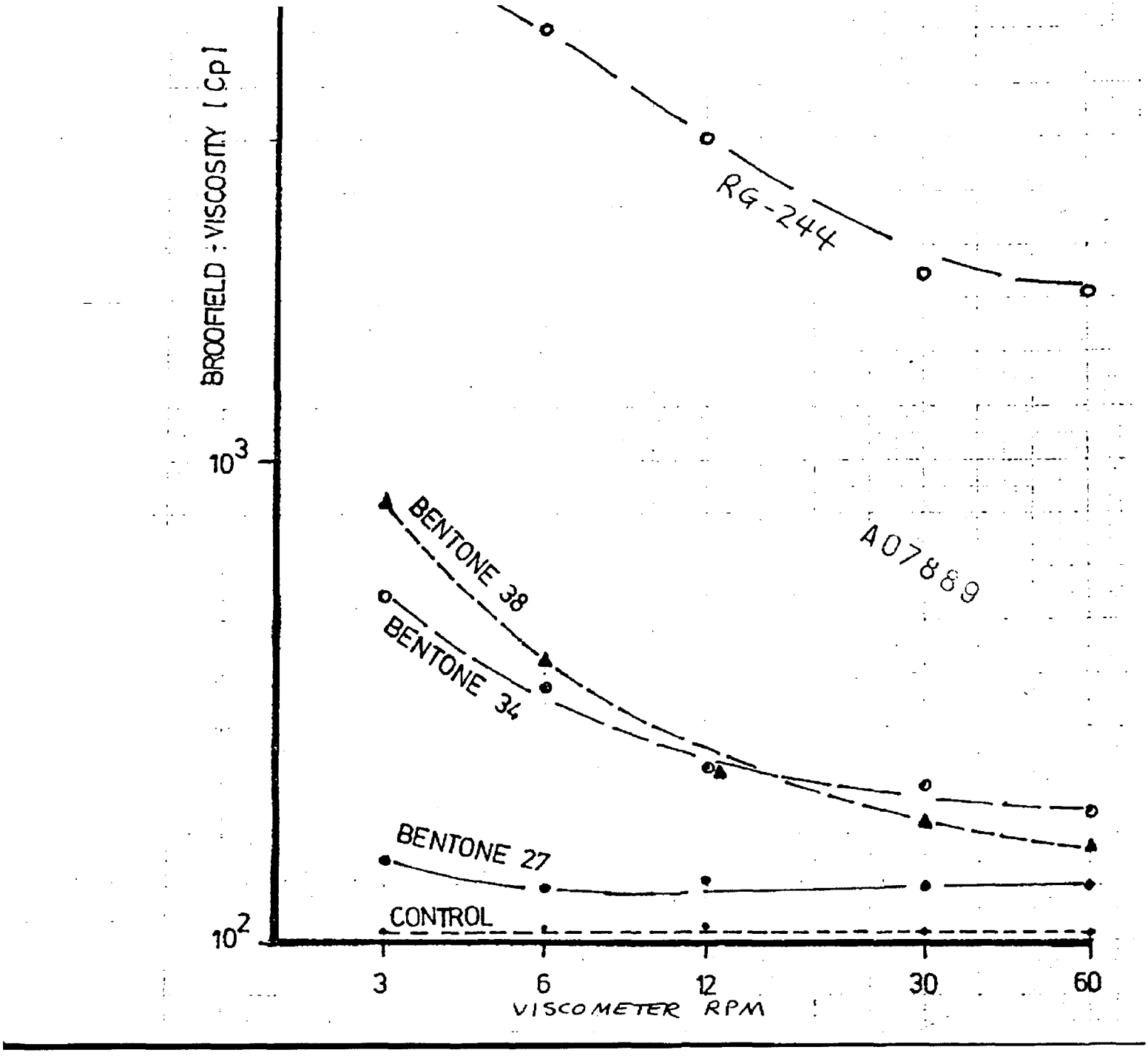
Polyurethane - Alkyd U 60

Alkydal U 6o (Bayer) 55 % on white spirit		913.2
Turpentine		1o.4
White Spirit K 3o		39.6
Nuodex Lead Octoate 24 % P 6	Gebr. Borchers AG	8.3
Nuodex Cobalt Octoate 6 % Co		3.3
Nuodex Calcium Octoate 4 % Ca		12.6
Ascinin R (Bayer)		12.6
		1ooo.o

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52 % Weight solids

Viscosity 17o Seconds DIN 4 Cup 20 ^{o} C


BROOFIELD : VISCOSITY [cp]
10^3
10^2
RG-244
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BENTONE 38
BENTONE 34
BENTONE 27
CONTROL
3
6
12
30
60
VISCOMETER RPM

THICKENING AGENT AT 0.8% IN ALKYD RESIN

