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COMMERCIAL CHEMICALS
ANALYTICAL REPORT #244

To: M. T. PIKE - 236-2A

From: L. D. WINTER - 236-2B

Subject: CS 2070/CS 2151 THERMAL ANALYSIS

Date: July 29, 1981

3M

Reference: Commercial Chemicals Analytical Request #16565

Introduction:

A light yellow liquid labeled CS-2151 and a light yellow solid labeled CS-2070 were received from V. Pothapragada 18 November 1980. The CS-2070 was reported to be the dried solid from CS-2151 which is 25% solids in water. The samples were submitted for PMN characterization. CS-2070 was subjected to thermal analysis and the melting point determined.

Experimental:

CS-2070 was submitted to Central Research analytical for TGA. The sample was heated in air at 10°C/min. The request # was TA-2497.

The melting point of CS-2070 was determined by CIPAC Method #MP2 employing a Thomas Hoover Uni-Melt apparatus.

Results:

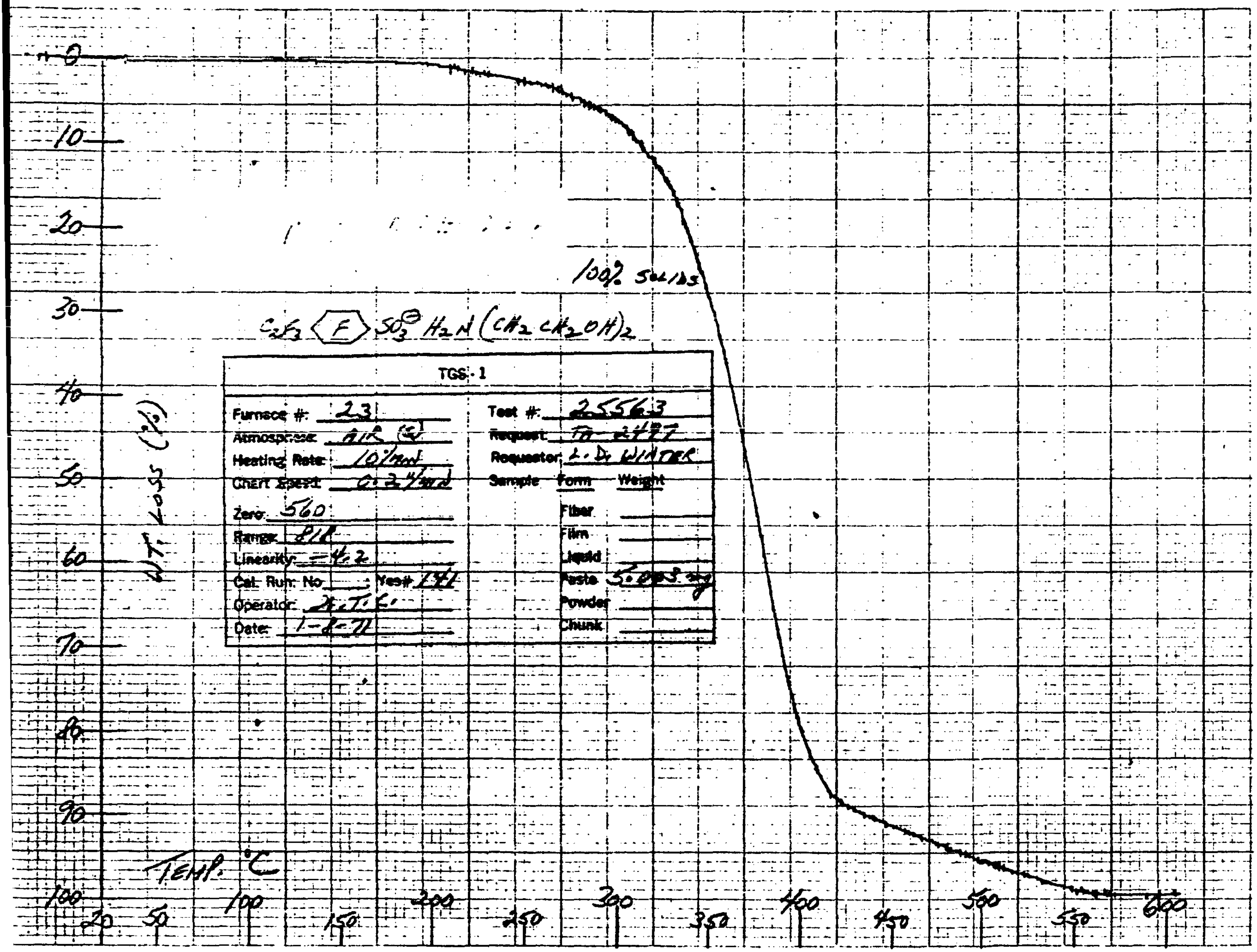
A copy of the thermal analysis attached indicates only 5% wt. loss by 280°C and stable to 200°C. The 50% weight loss occurs at about 370°C. TGA Curve attached.

The melting point range indicates liquid first at 75°C and complete melt at 145°C. The sample appears waxy at room temperature. The sample was soft through the melting range and appeared like a gel. Benzoic acid melted at 122°C.

L. D. Winter

LDW/hc

Attachment


0
10
20
30
40
50
60
70
80
90
100
WT. LOSS (%)
100% SOLIDS
TGS - 1
Furnace #: 23
Atmosphere: AIR
Heating Rate: 10°/min
Chart Speed:
Zero: 560
Range:
Linearity:
Cal. Run. No
Operator:
Date: 1-8-71
Test #: 25563
Request:
Requestor: L. D. WINTER
Sample Form Weight
Fiber
Film
Liquid
Paste
Powder
Chunk
TEMP. °C
20
50
100
150
200
250
300
350
400
450
500
550
600