

INTER-OFFICE MEMO **TENNECO CHEMICALS, INC.**

TO H.B. Carr
FROM F.W. Kanzler
SUBJECT Residual VCM in Compound

AT Piscataway
AT Burlington

DATE October 23, 1974
COPY TO ~~W.C. Champion~~
File

At your request, the following is a summary of the analysis performed on compounds and Compound Plant air samples:

1. Residual VCM in Compounds (Table I)

The flexible compounds listed in this table show an almost complete removal of VCM, including the 200-2 type Hooker resin. It appears that the majority of the monomer is removed in the ribbon blender, while only little reduction of the residual VCM is noted in the CM and mill operations. The 250-12S resin used in the manufacture of the 2022 Gray 148 was produced in Flemington and the residual monomer level is typical for a non-steam stripped resin of this type.

The record compounds (3805D) listed show residual monomer levels different from the flexible compounds. This is primarily due to the difference in the blending - no heat on the ribbon blender. It may be of interest to note that the resins used in the compounds sampled from 3/26/74 and 9/27/74 were stripped at 190°F, while the resin used on 8/1/74 and 8/2/74 were stripped at 220°F.

2. VCM in Air (Table II)

Air samples taken in the blender headspace and in the blender area during flexible runs confirms the high VCM loss during the dry blend step in those compounds. No blender air sample data are available for record compounds, however, samples taken at the pig conveyor and in the mill area show relatively high levels of VCM in air.

3. Residual VCM Loss During Dry Blending (Table III)

A blender time-study reveals a steady decrease of residual VCM in the resin, associated with a sharp increase of VCM in the blender headspace.

Fred W. Kanzler
F.W. Kanzler

Attachments (3).

FWK/jst

TABLE I

RESIDUAL VCM IN COMPOUND

<u>Compound Formulation</u>	<u>Resin</u>		<u>Compound - VCM, ppm</u>					
	<u>Type</u>	<u>VCM, ppm</u>	<u>In Ribbon Blender</u>		<u>CM</u>		<u>Mill Slab</u>	<u>Pellets</u>
			<u>After Preheat</u>	<u>Before Drop</u>	<u>Feed</u>	<u>Pig</u>		
3160 Green 107 (3/20/74)	200-2*	2500	2370	195	10	5	5	4
2022 Gray 148 (3/21/74)	250-12S	250	265	<1	<1	<1	<1	<1
2900 Natural (4/5/74)	225**	610	540	2	<1	<1	<1	<1
3805D Black (3/26/74)	315	150	-	220	220	105	120	105
3805D Black (8/1/74)	315	18	-	-	-	-	-	15
3805D Black (8/2/74)	315	76	-	-	-	-	-	11
3805D Black (9/27/74)	315	-	-	270	-	-	-	180

*Equivalent 200-2 Resin from Hooker

**Firestone 9300

COLORITE 013381

F.W. Kanzler
10/23/74

TABLE **

VCM IN AIR - COMPOUND PLANT

<u>Compound Formulation</u>	<u>In Ribbon Blender</u>	<u>VCM, ppm</u>		<u>Pig Conveyor</u>	<u>Mill Area</u>
		<u>Blender Area</u>			
3160 Green 107	1230	43	-	-	<1
2022 Gray 148	82	<1	-	-	<1
2900 Natural	1.1	-	-	-	-
2700 White	1420	-	<1	-	<1
3098 Clear 6	64	2	<1	-	<1
3805D Black	-	-	5	-	<1
3805D Black	-	-	12	-	3

COLORITE 013382

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TABLE VI

VCM LOSS IN RESIN DURING DRY BLENDING

<u>Compound Formulation</u>	<u>Resin Type</u>	<u>Time in Blender, Min</u>	<u>VCM, ppm</u>	
			<u>Resin</u>	<u>Blender Headspace</u>
2022 Gray	250-12S	2	475	280
		7	345	1150
		12	325	1190 •
		17	235	2455
		27	155	2885

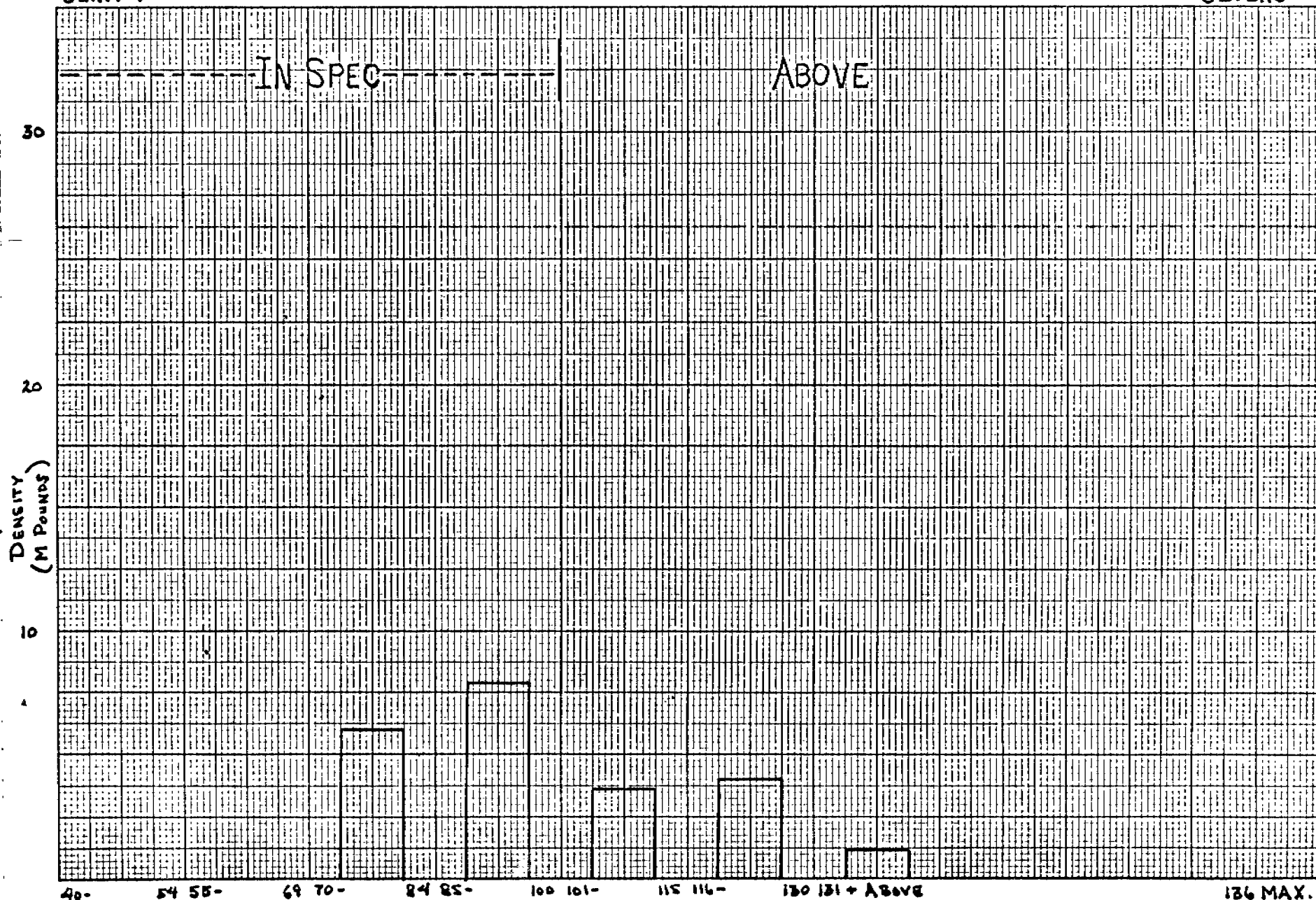
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10/23/74

JUN. 74

32
SEVERS

COLORITE 013343

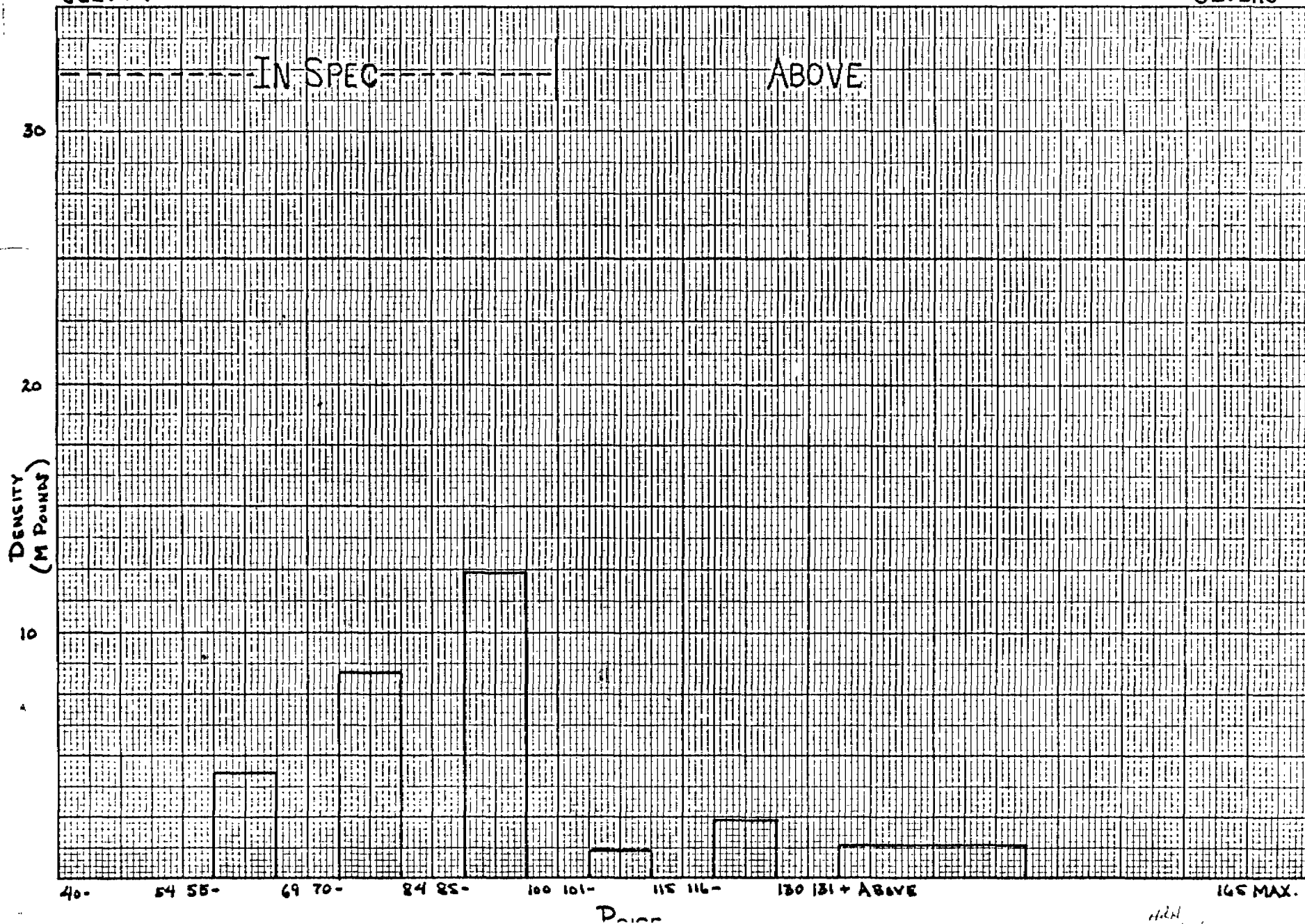


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MEM

JUL. 74

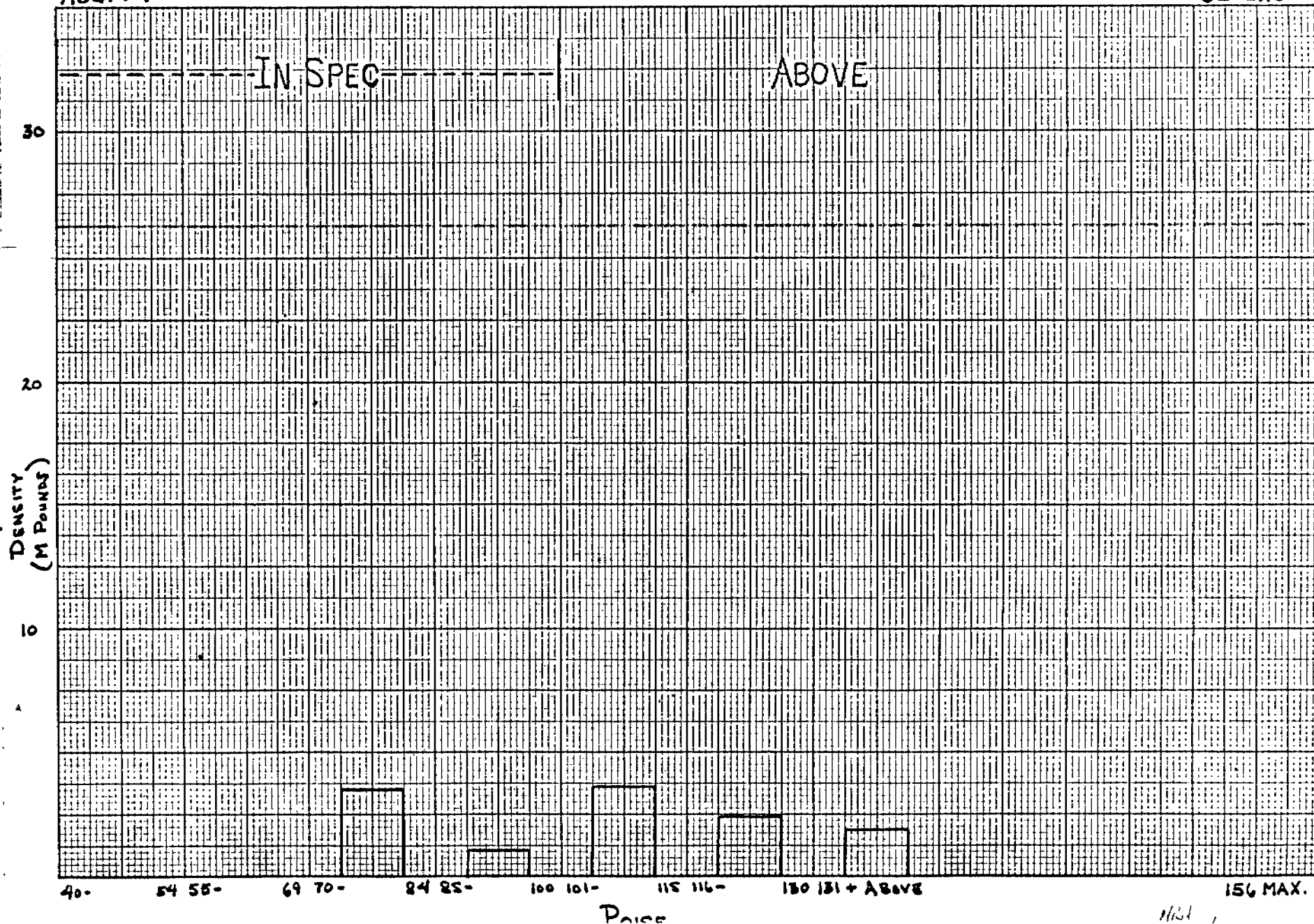
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SEVERS



COLORITE 013344

132
SEVERS

AUG. 74



COLORITE 013345

K&E 20 X 20 TO THE INCH 46 1240
7 X 10 INCHES MADE IN U.S.A.
KEUFFEL & ESSER CO.

SEPT. 74

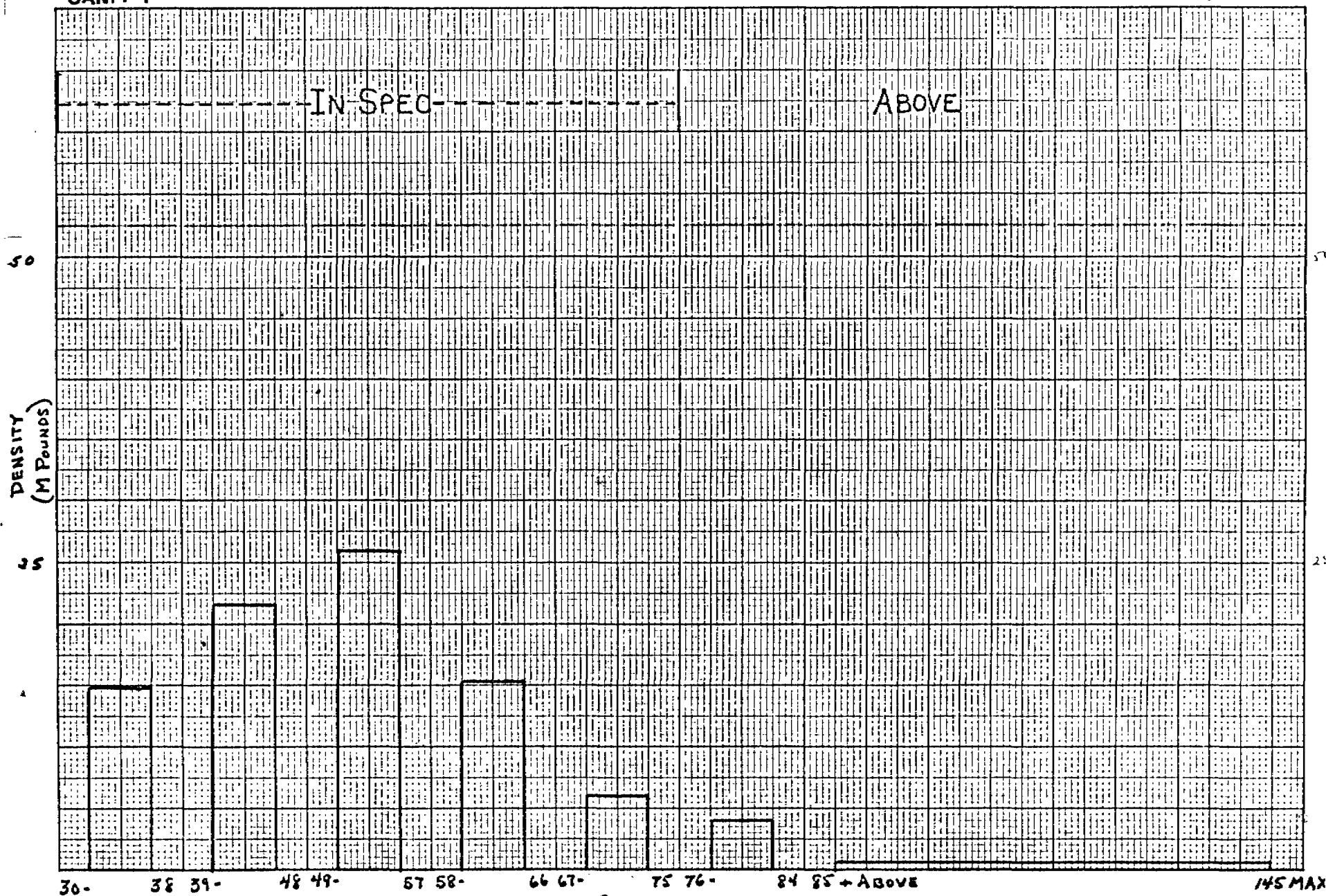
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COLORITE 013346

JAN. 74

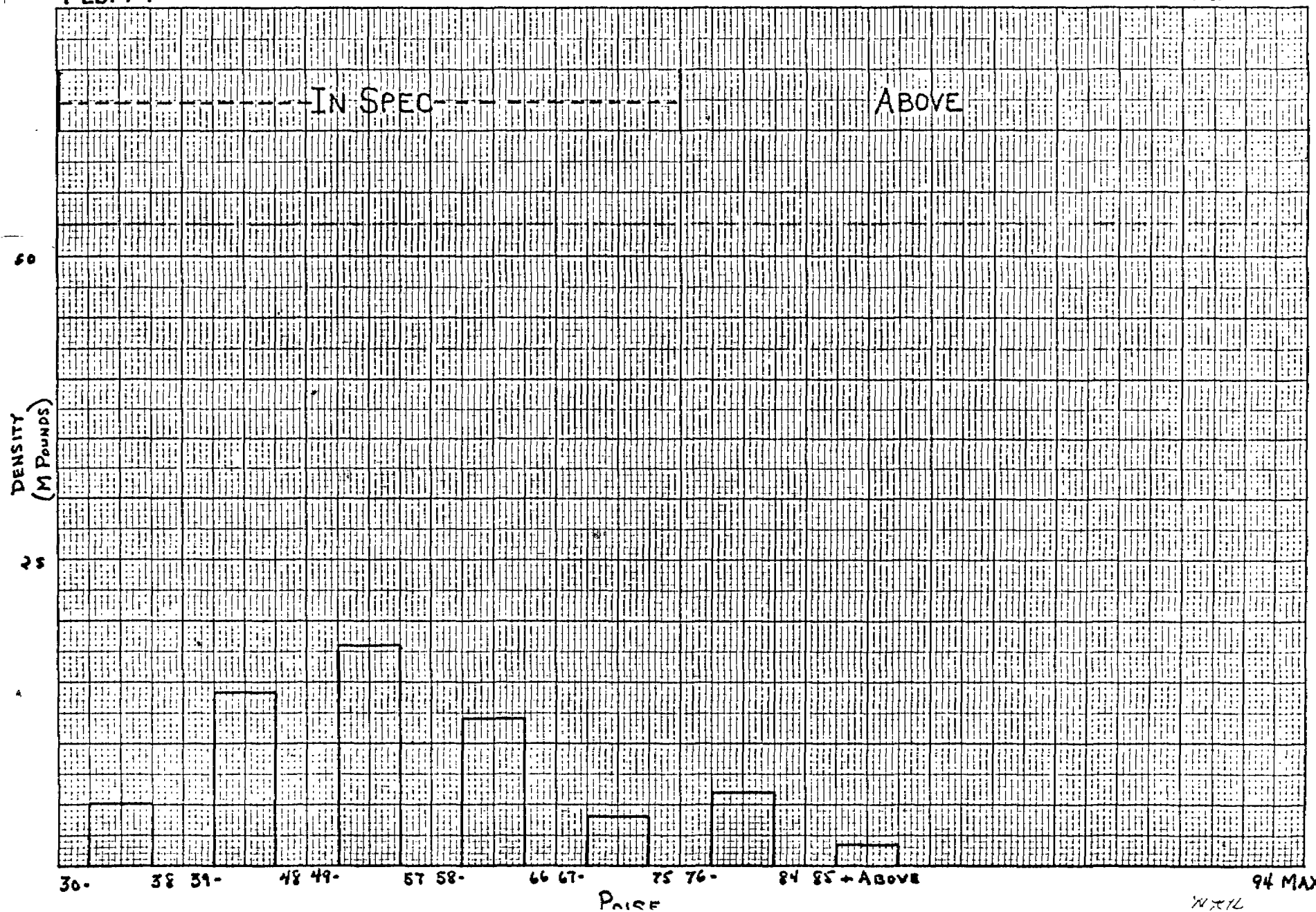
+2
BROOKFIELD



COLORITE 013347

FEB. 74

BROOKFIELD

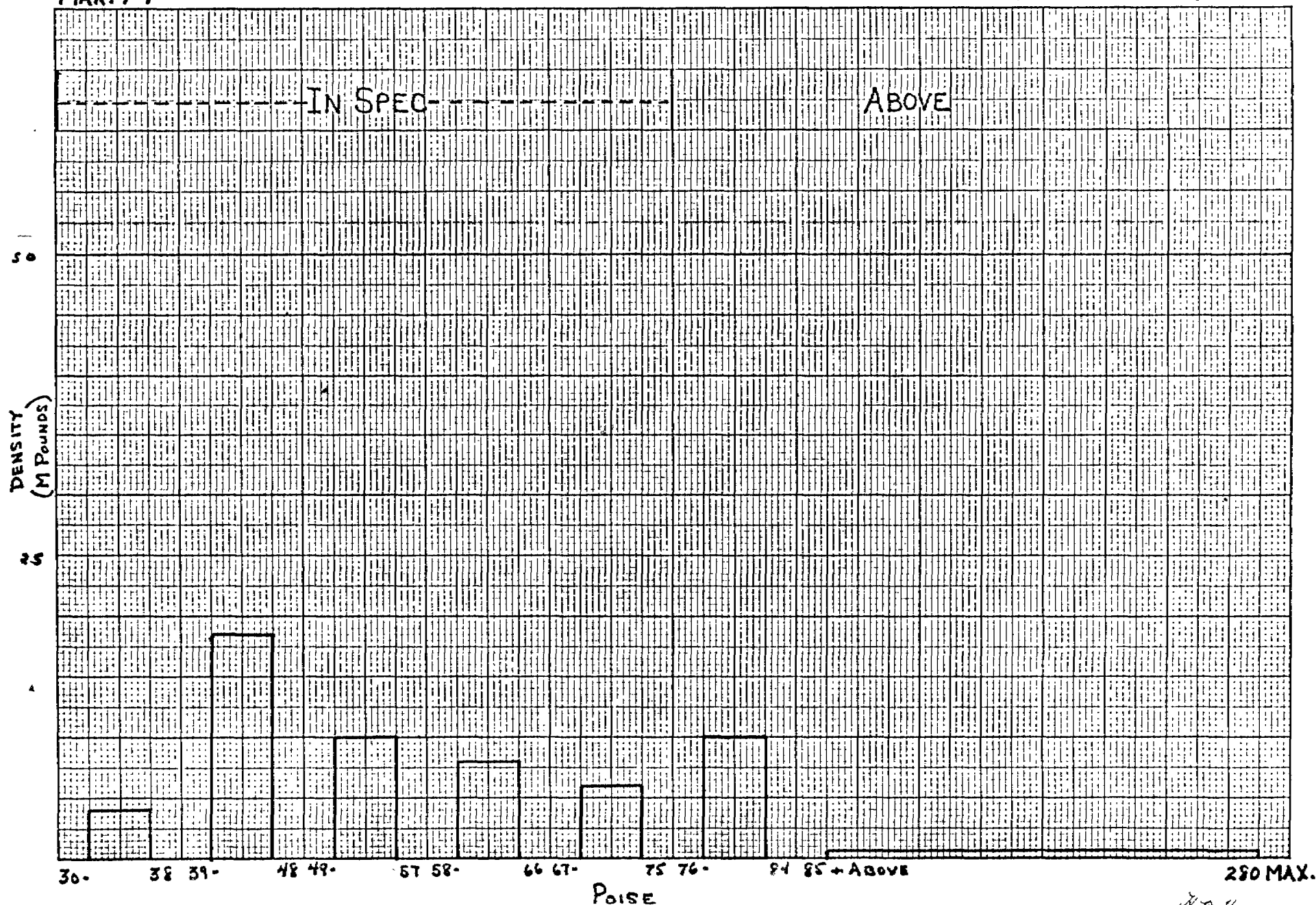


COLORITE 013348

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7 X 10 INCHES MADE IN U.S.A.
KEUFFEL & ESSER CO.

MAR. 74

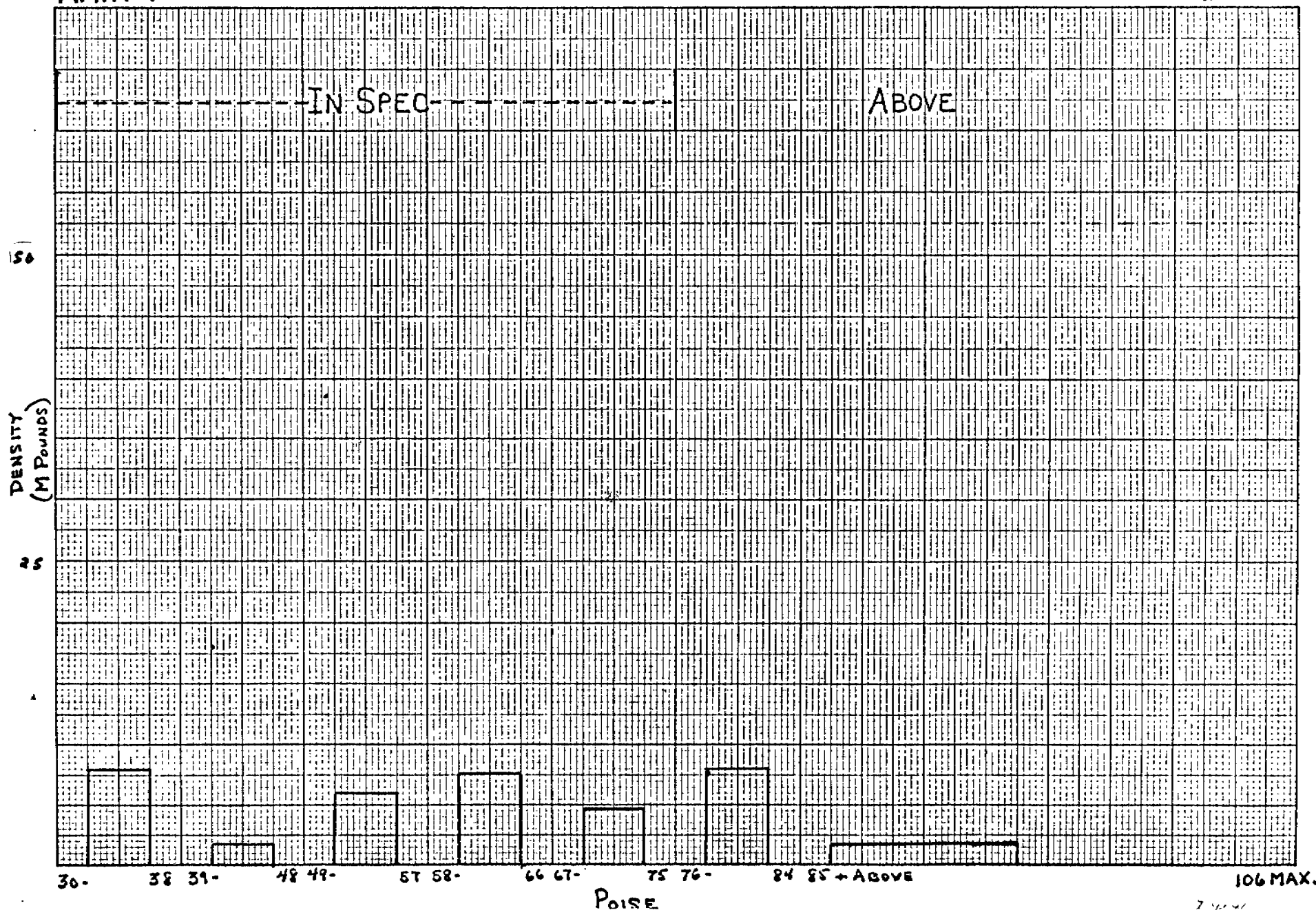
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COLORITE 013349

APR. 74

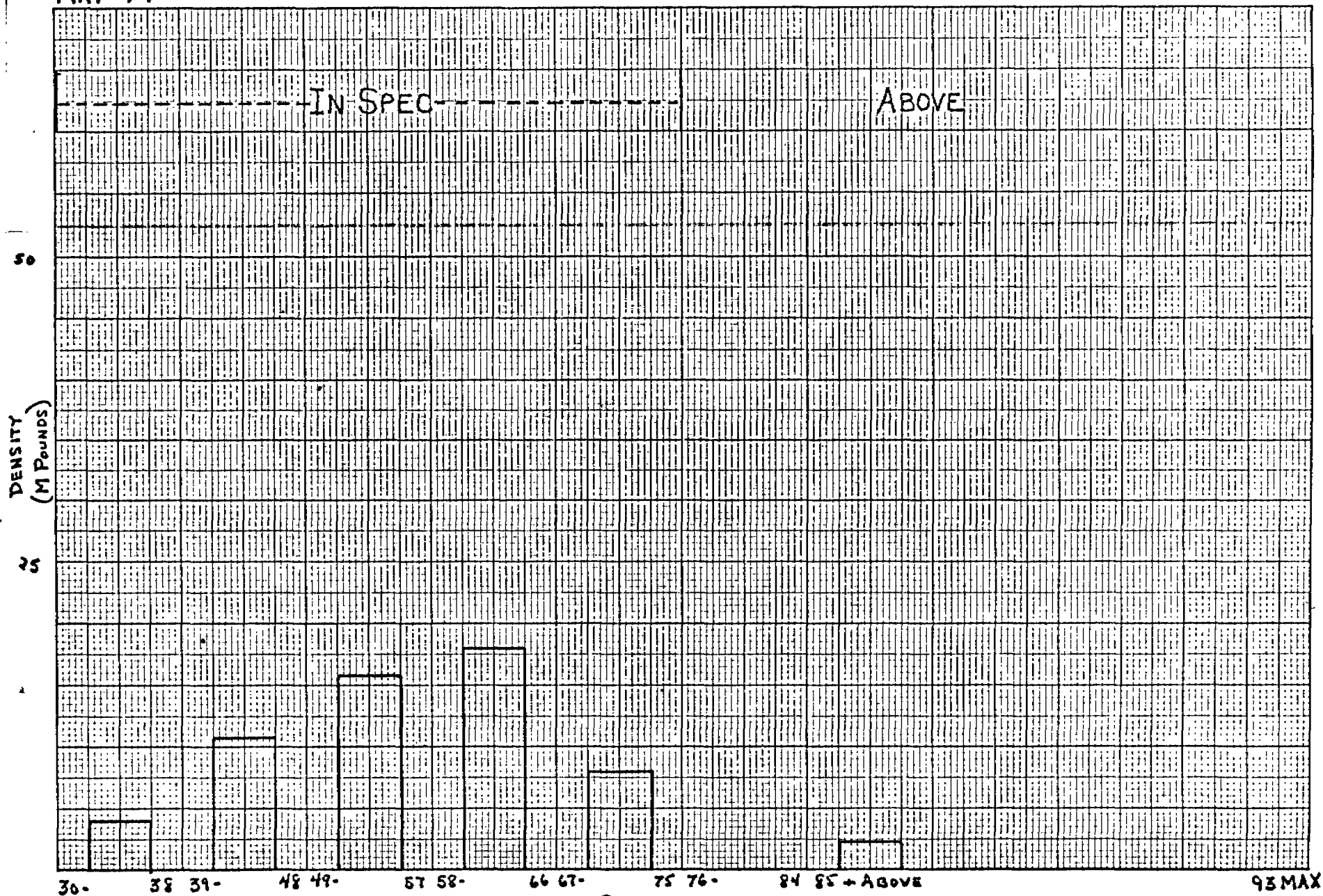
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BROOKFIELD



COLORITE 013350

MAY 74

BROOKFIELD



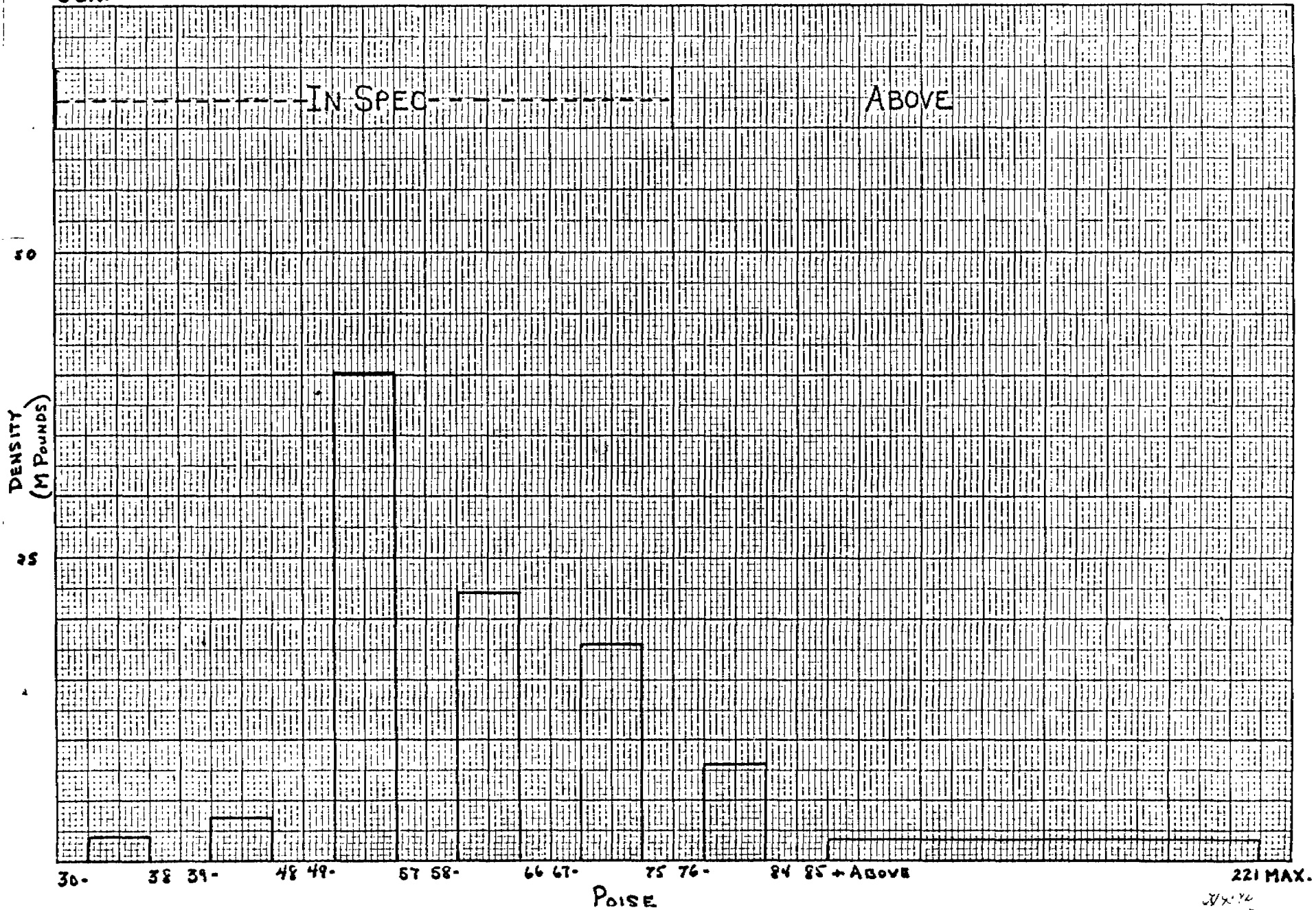
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D. ---

7/12/74

JUN. 74

12
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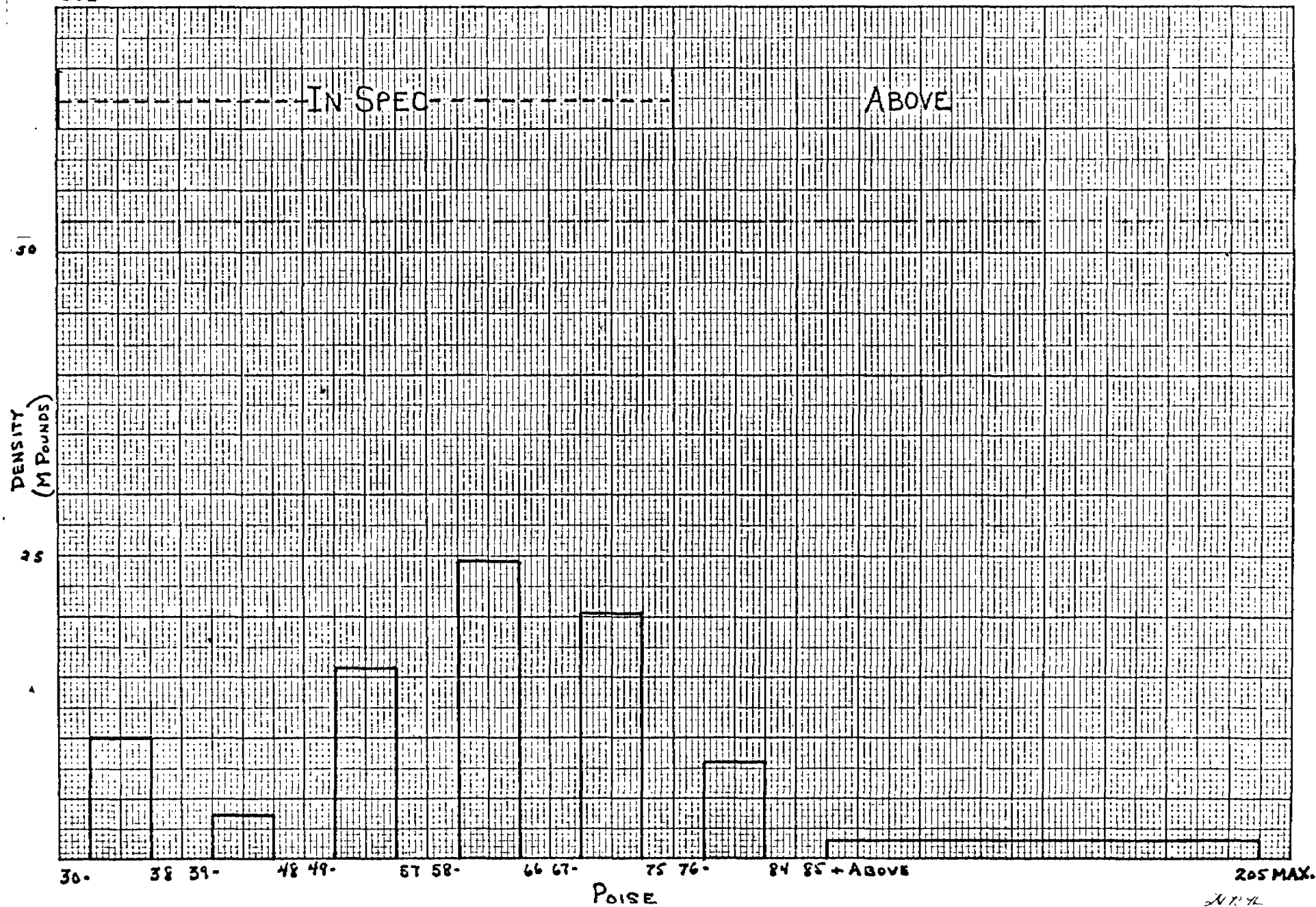


COLORITE 013352

K&E 20 X 20 TO THE INCH 46 1240
7 X 10 INCHES
MADE IN U.S.A.
KEUFFEL & ESSER CO.

12
BROOKFIELD

JUL. 74

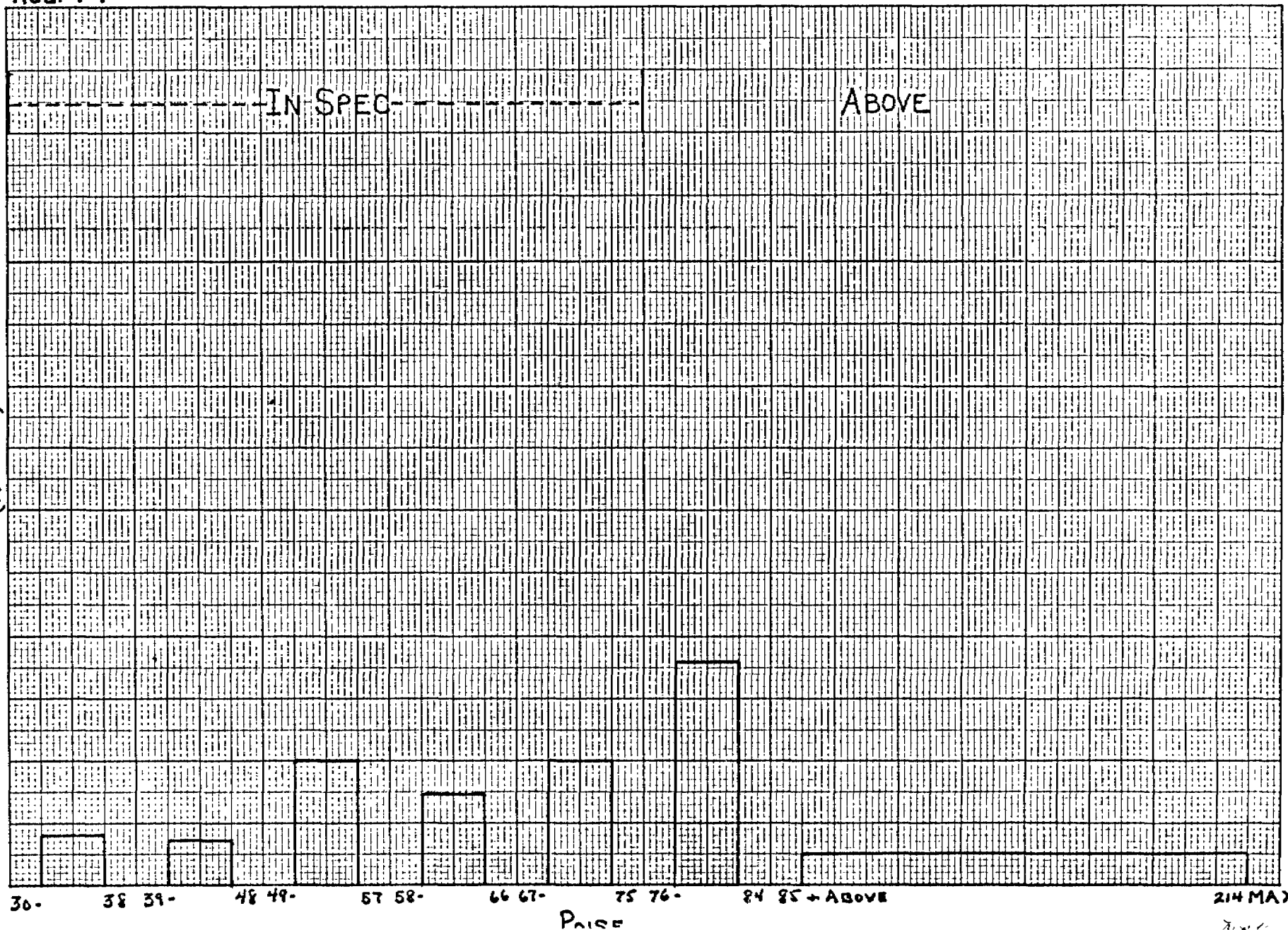


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AUG. 74

DENSITY
(M POUNDS)

COLORITE 013354

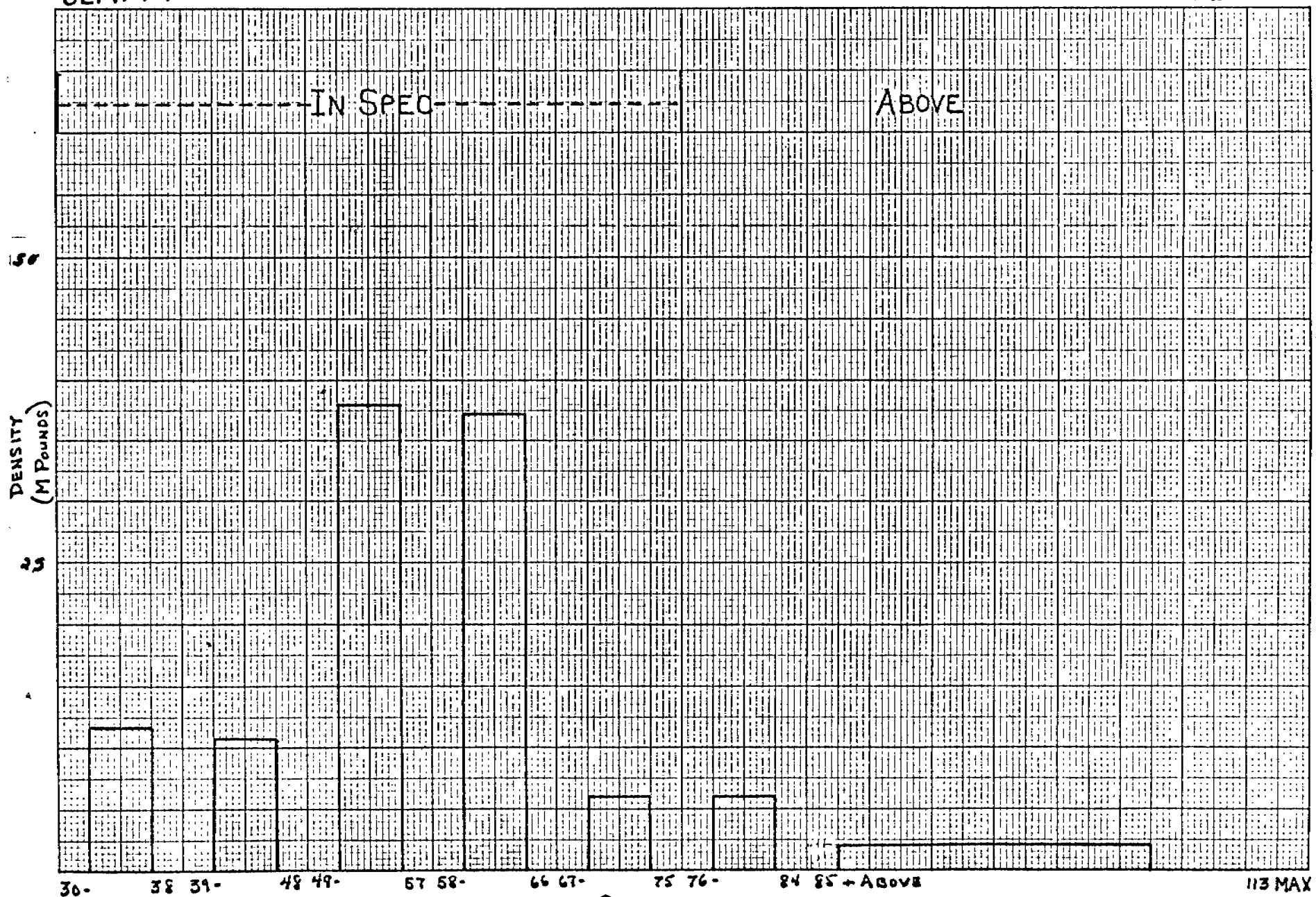


214 MAX

Price

SEPT. 74

BROOKFIELD

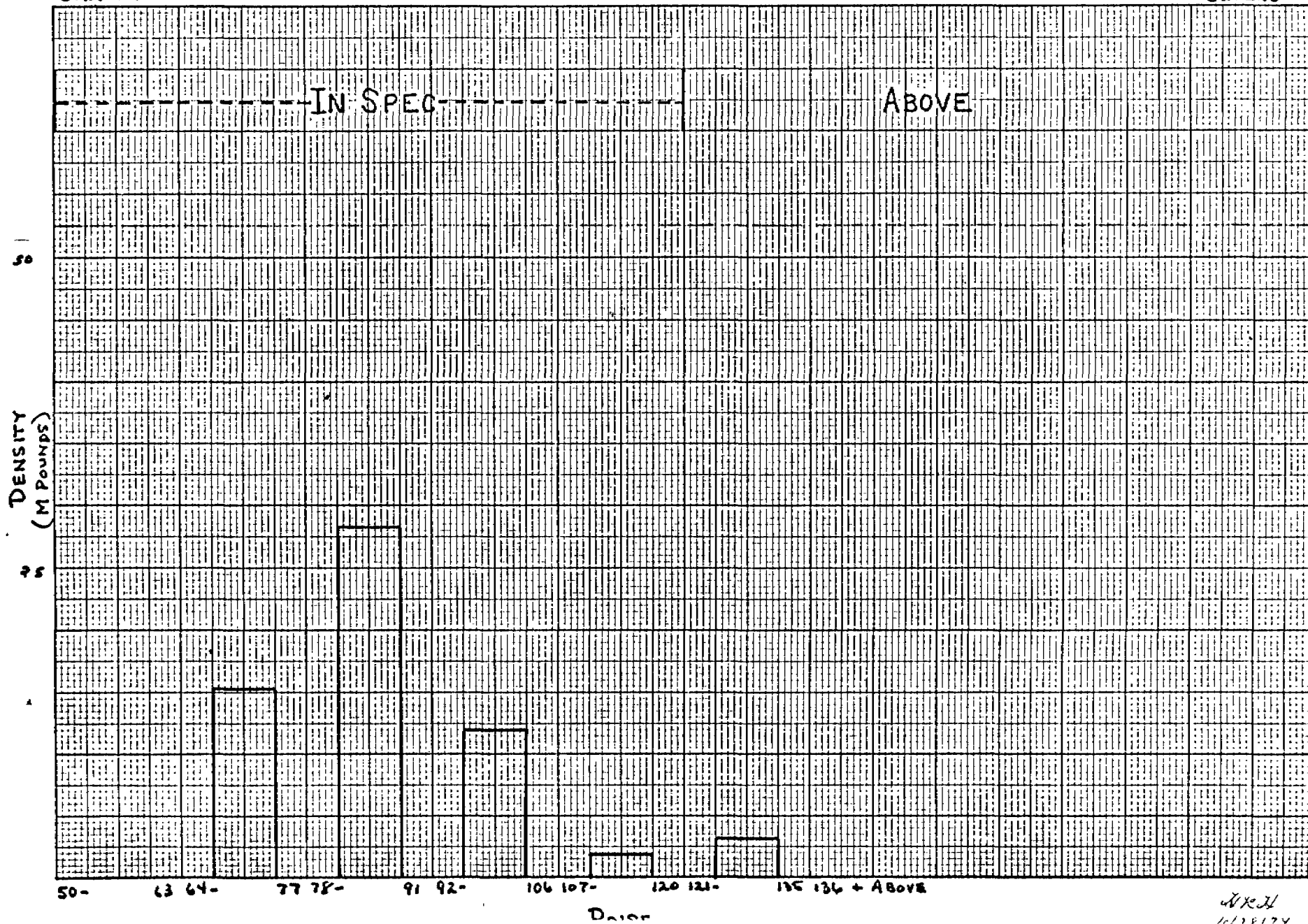


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113 MAX.

JAN. 74

42
SEVERS



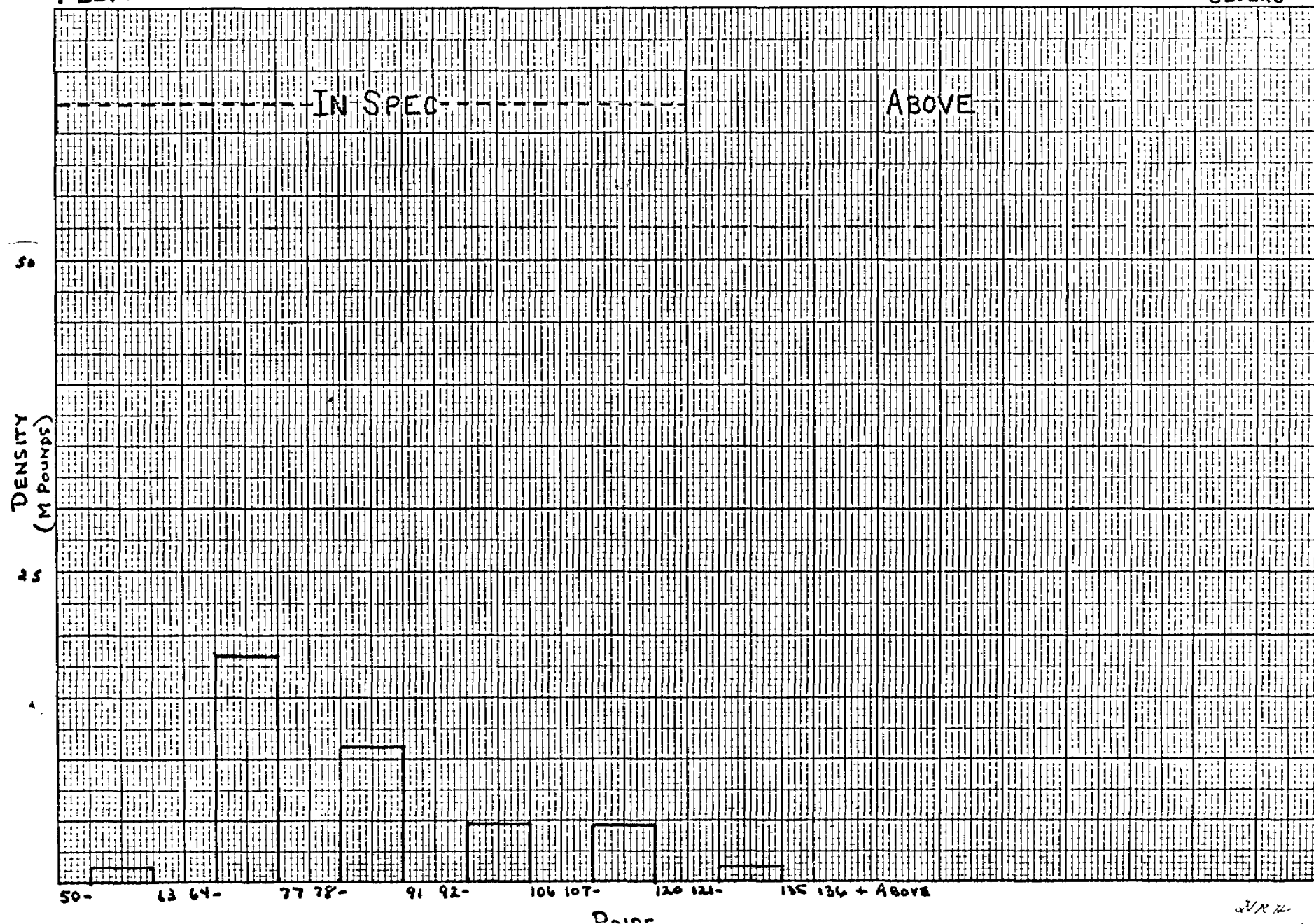
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NRH
1/18/74

K&E 20 X 20 TO THE INCH 48 1240
7 X 10 INCHES MADE IN U.S.A.
KEUFFEL & ESSER CO.

FEB. 74

+2
SEVERS

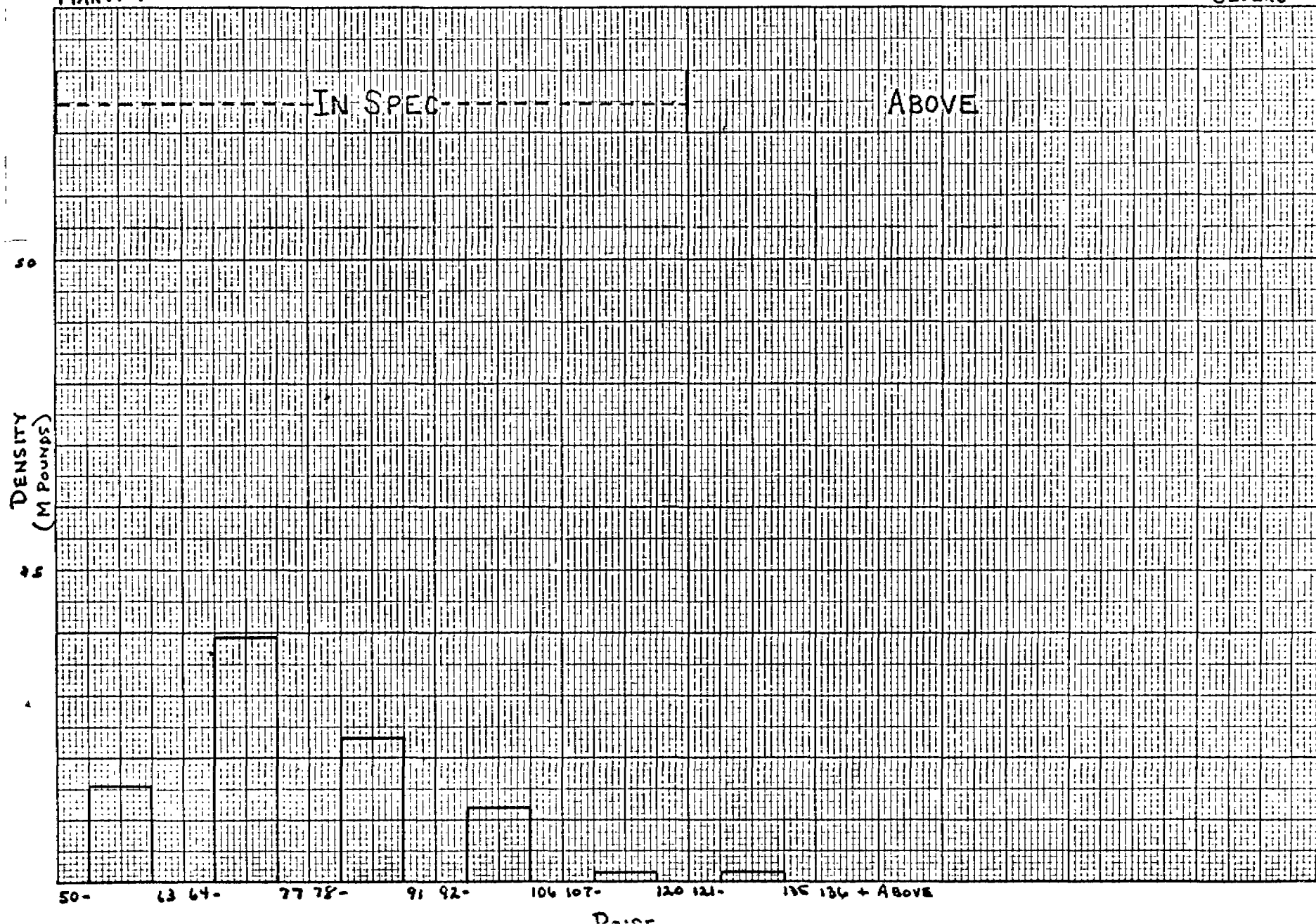


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3/12/74

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SEVERS

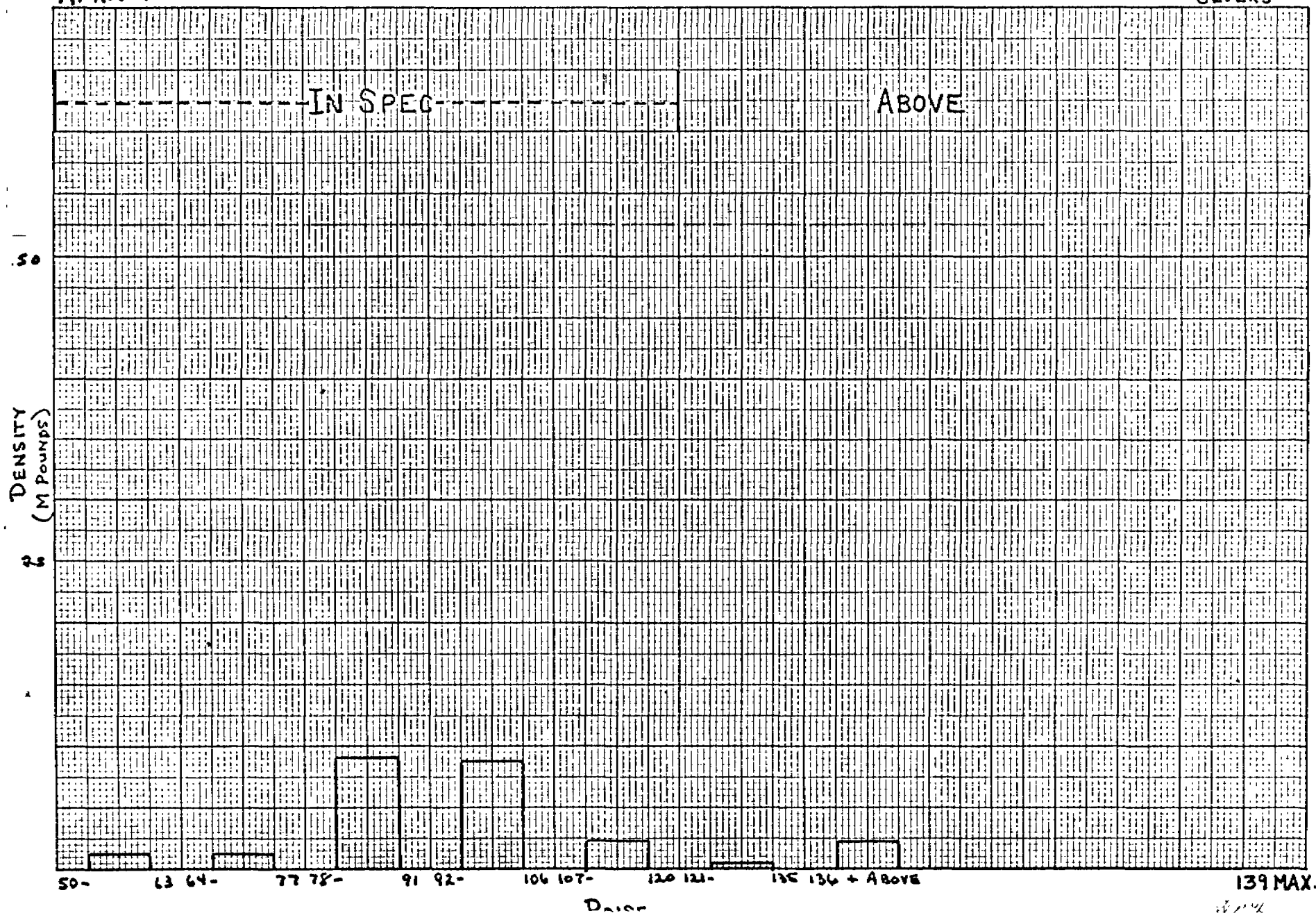
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COLORITE 013358

APR. 74

1142
SEVERS



COLORITE 013359

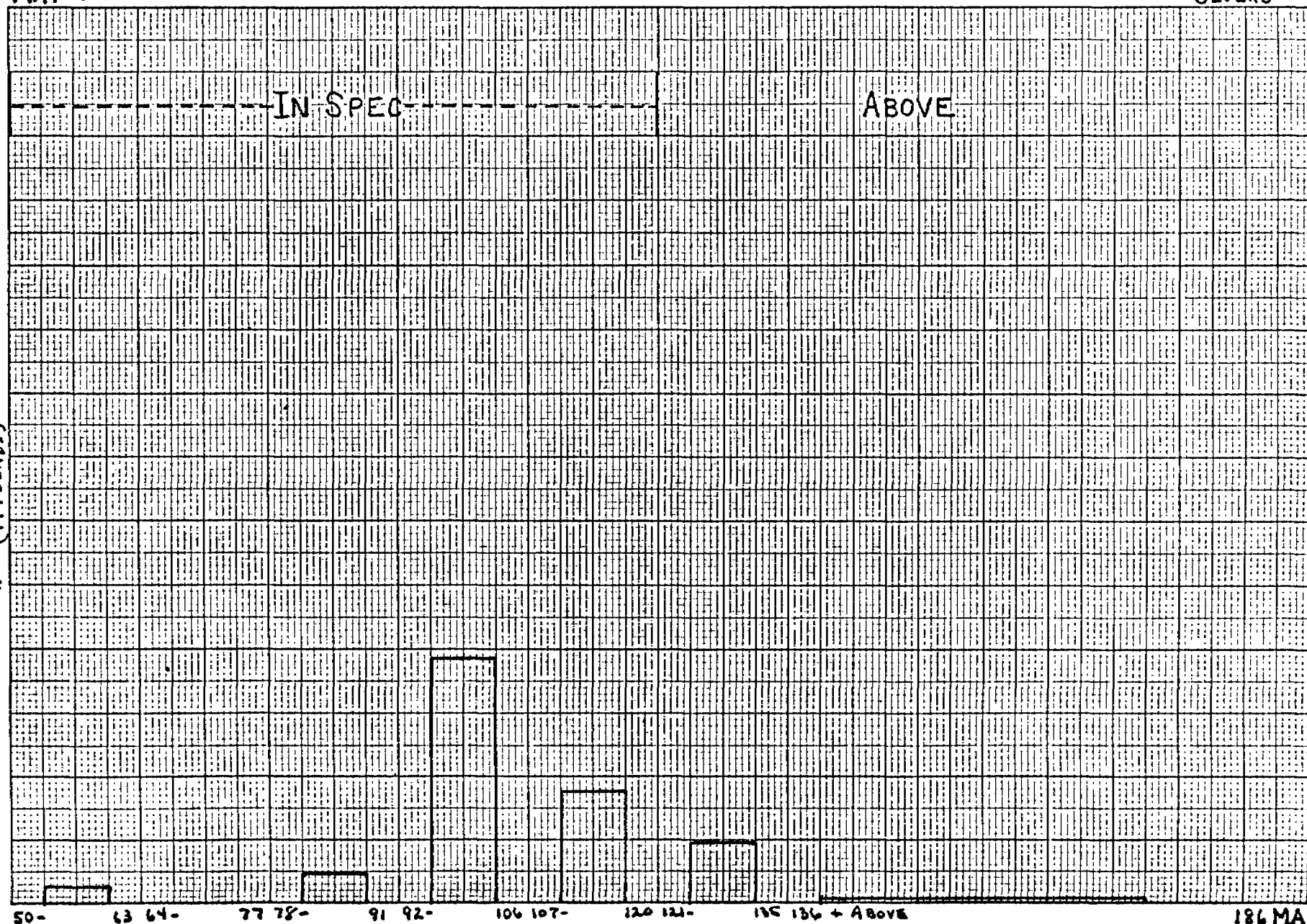
K&E 20 X 20 TO THE INCH 46 1240
7 X 10 INCHES MADE IN U.S.A.
KEUFFEL & ESSER CO.

MAY 74

..42
SEVERS

COLORITE 013360

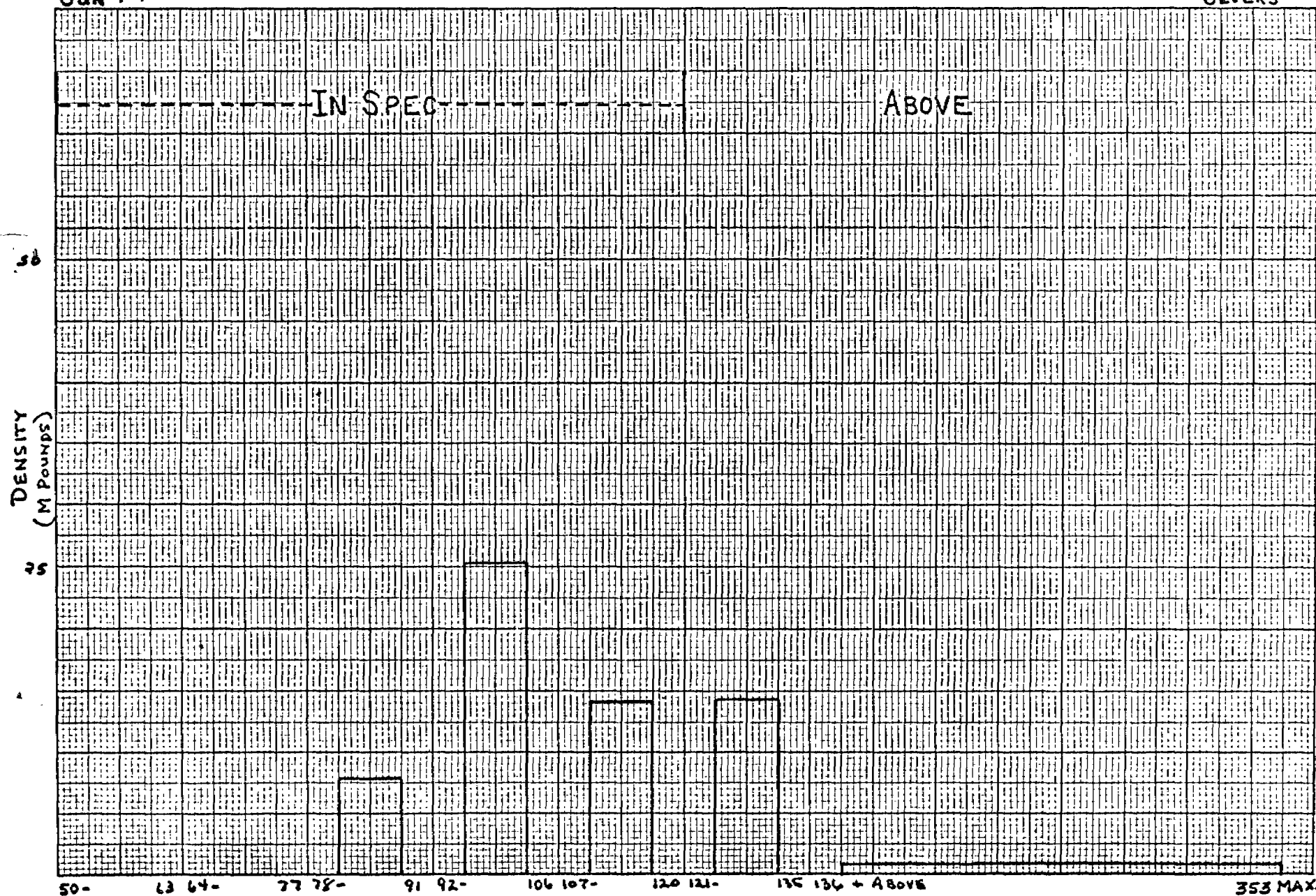
DENSITY
(M POUNDS)



186 MAX.

JUN 74

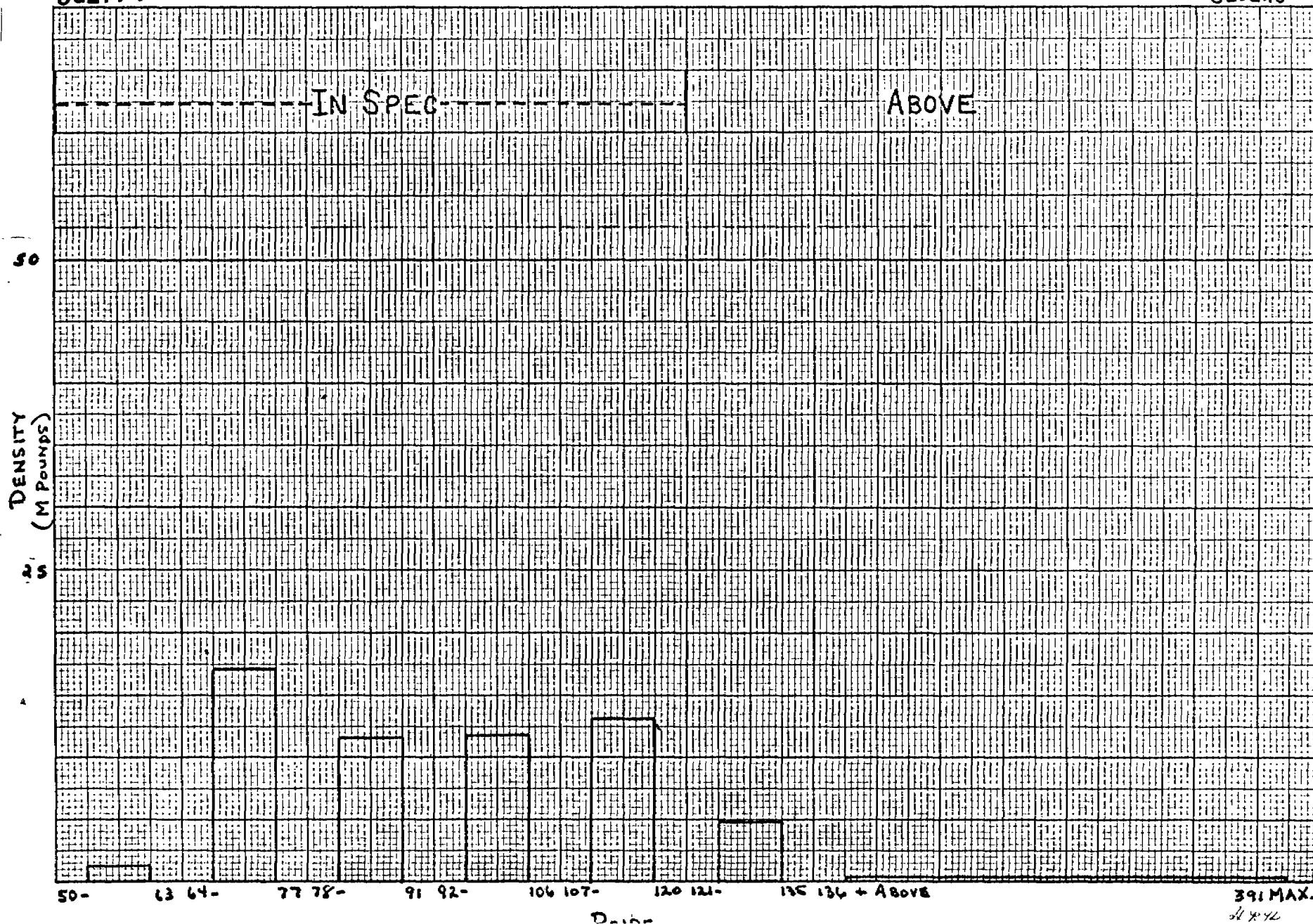
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SEVERS



COLORITE 013361

142
SEVERS

JUL. 74



COLORITE 013362

391 MAX.
11 X 12

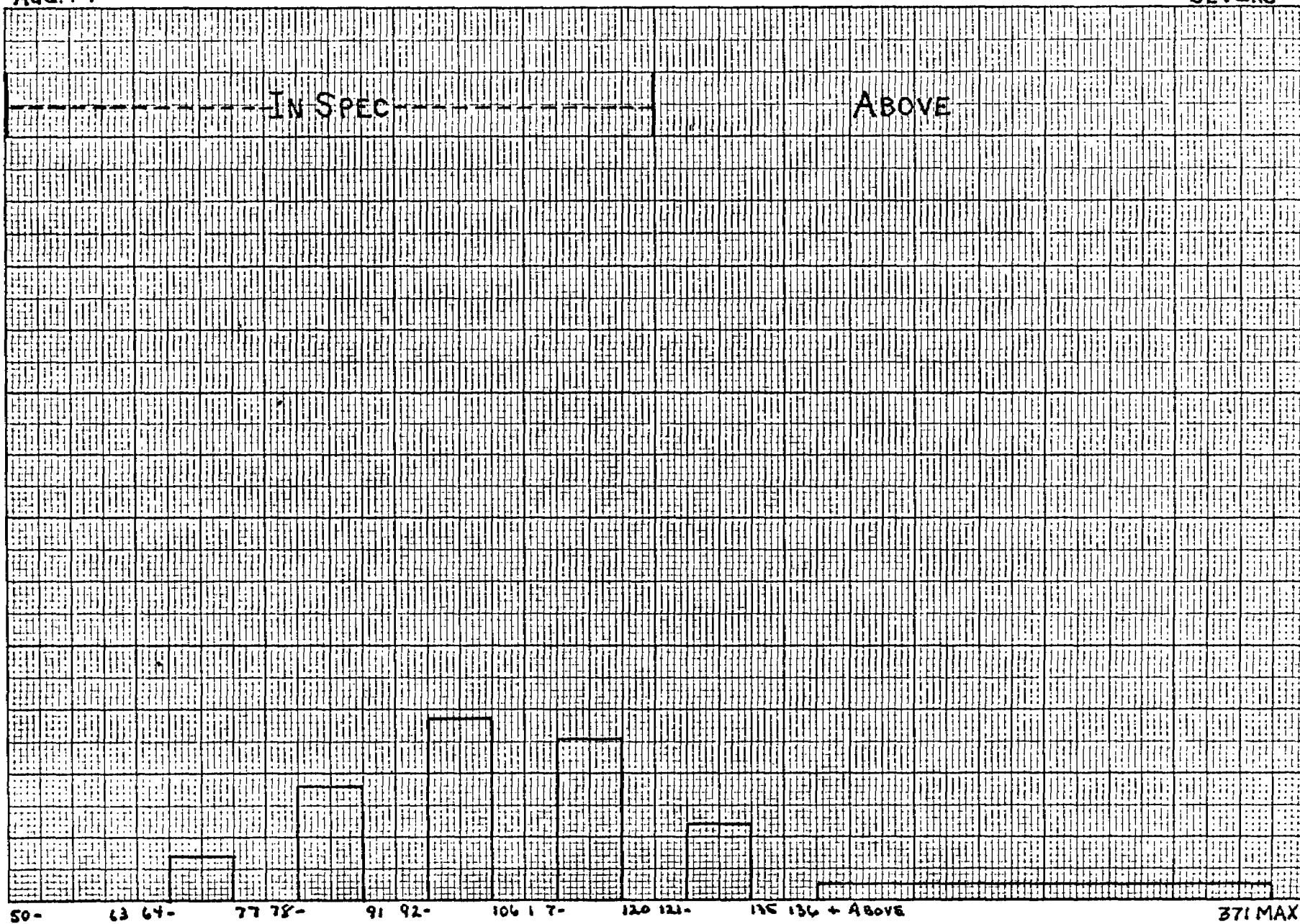
AUG. 74

.742
SEVERS

50

DENSITY

25



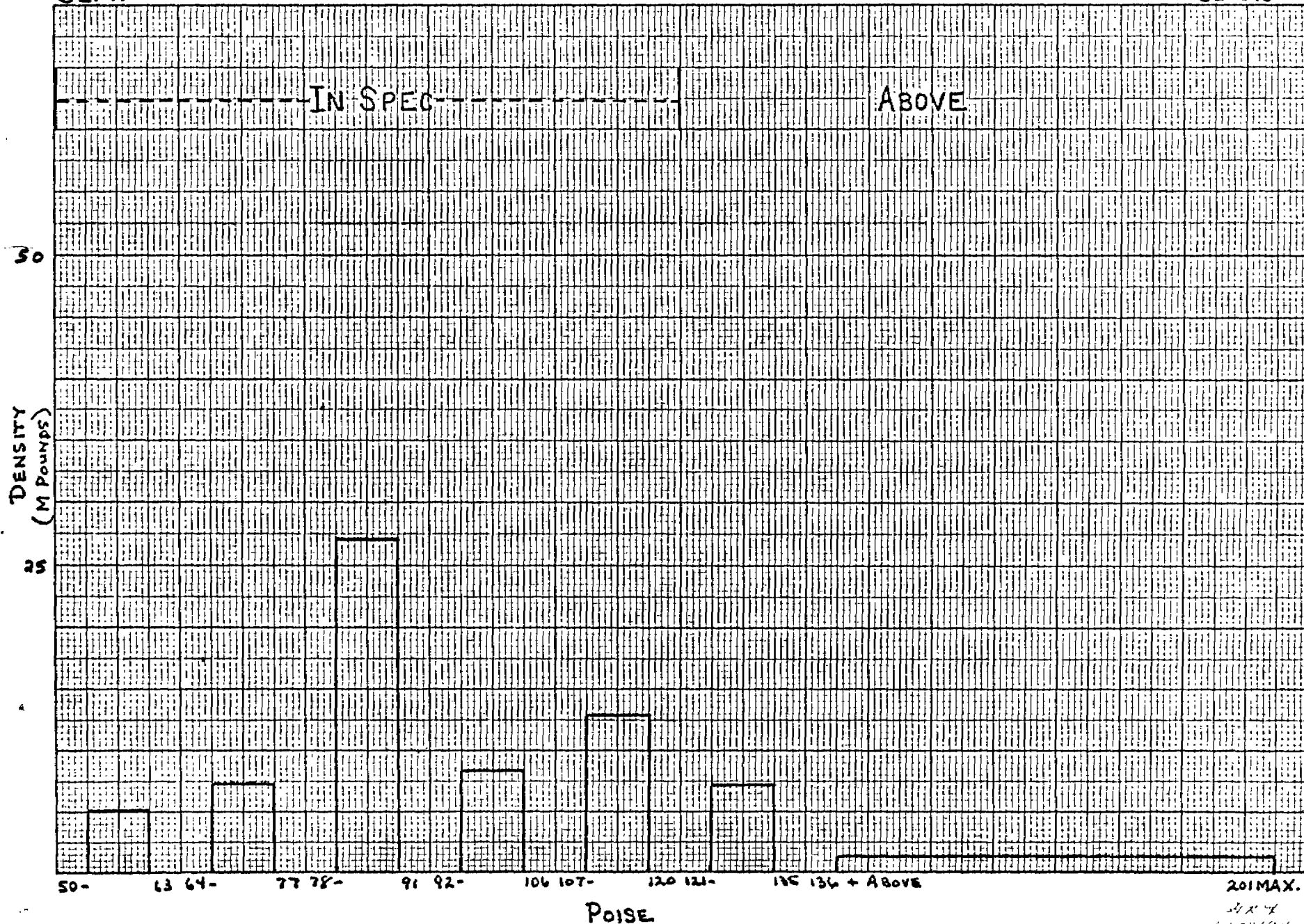
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371 MAX.

8/1/74

SEPT. 74

42
SEVERS



COLORITE 013364

4X4
4/28/74