I-184

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

To Distribution List At Date July 25, 1975.

From R.A. Donovan/L. Medeiros At Burlington Copy to W.C. Champion
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File

Subject Bound Acetate Summary
Burlington/Flemington Plants

The attached tables summarize the charged and bound acetate percentages for copolymer resins produced at Burlington and Flemington during the past four months (April through July). In Table II weighted averages were used to condense data from Table I. The overall percent of charged acetate incorporated in the bound acetate at Flemington is 86.0% versus 89.5% at Burlington, but data from Table I indicates considerable variation in the percentage of charged acetate incorporated in the bound acetate. This variation is both within each product type and between product types. If the overall weighted average differences can be taken as true, the Flemington charge formulations should incorporate from 0.6% to 0.7% higher charged acetate than Burlington to yield near identical bound acetates for each type.

The standard deviations indicate that process control between the two plants is comparable. The data summarized is also affected by the test significance at each plant, the number of tests and lot size (which varies significantly between plants).

R.A. Donovan/L. Medeiros

Attachments (2)

RAD-LM/jst

TABLE I

CHARGED ACETATE VERSUS BOUND ACETATE

	Type	% Acetate in Charge	% Bound Acetate	Standard Deviation	Range	Total Points	% of Charged Acetate Incorporated
Burlington Plant:							
	391	19.5	17.1	0.63	15.3 - 17.8	20	87.5
	390	10.0	9.54	0.58	8.8 - 10.5	8	95.4
		11.0	9.70	-	-	1	88.2
	315	15.2	13.6	0.67	12.7 - 14.6	65	89.3
	314	18.0	17.0	0.35	16.7 - 17.2	2	94.4
Flemington Plant:							
	391	18.3	14.9	-	-	1	81.4
		19.6	16.7	0.46	16.2 - 17.6	11	85.2
		20.1	17.1	0.59	16.1 - 18.5	28	80.1
	389	15.0	12.4	0.35	12.1 - 12.6	2	82.7
	315	14.8	12.3	0.17	12.2 - 12.5	3	83.1
		15.1	13.3	0.85	12.7 - 13.9	2	88.1
		15.2	13.1	0.32	12.6 - 13.6	7	86.2
		15.4	14.8	-	-	1	96.1
		15.5	13.1	0.22	12.8 - 13.5	9	84.5
		16.2	13.7	0.25	13.4 - 14.1	14	84.6
		16.4	14.7	0.58	13.3 - 15.5	89	89.6
		16.8	14.7	0.44	13.6 - 15.4	55	87.5
	314	16.8	14.0	0.31	13.5 - 14.4	6	83.3
		17.1	14.4	0.66	13.2 - 16.5	63	84.2
		17.5	14.6	0.32	14.0 - 14.9	20	83.4

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TABLE II

SUMMARY OF

WEIGHTED AVERAGES OF PERCENT CHARGED ACETATE

INCORPORATED IN COPOLYMER PRODUCTS

	391		390		389		315		314		Overall	
	%	Pts	%	Pts	%	Pts	%	Pts	%	Pts	%	Pts
Burlington Plant	87.5	20	94.6	9	-	-	89.3	65	94.4	2	89.5	96
Flemington Plant	81.5	40	-	-	82.7	2	88.1	180	84.0	89	86.0	311

R.A. Donovan/L. Medeiros
7/25/75

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ORGANICS & POLYMERS DIVISION

TENNECO CHEMICALS, INC.

SPECIAL PRODUCT ADJUSTMENT

Date: July 21, 1975

SPA No.: 1061

Approved by:

Plant: Flemington

Manufacturing:

Product Identification: T-391

Process Engineering:

Formulation No.: C-623-14

Marketing: C.B. Johnson (verbal)

Series No.: 78——

Requested by: Marketing

Issued by: L. Medeiros

Objective

Produce a modified T-391 targeting on 15.0 to 16.5 bound acetate for evaluation at RCA. This SPA authorizes the charging of one batch.

Marketing Justification

RCA has requested a lower bound acetate T-391 for evaluation in resolving current AMP 391 handling and quality problems.

Resin Disposition

Disposition of resin produced is to be administered by Marketing (C.B. Johnson) in conjunction with R&D (R.R. Merkel).

Discussion

RCA has current problems in handling and quality when processing with our T/391 resin. They have had incidents of record warping. It is believed a lower bound acetate would help relieve both problems.

The last nine lots of Flemington-processed T-391 resulted in bound acetate ranging from 16.2 - 17.2% (averaged 16.6%) charged via C-360-13 with 19.6% MVAc charge. This SPA will reduce the acetate charge to 18.3% to target in the low end of a bound acetate range of 15.0 - 16.5%. The lower end of the range is being targeted on to obtain the most significant differences in handling and processing. No adjustment in temperature or gelatin is needed (based upon recent T/391 processing) to maintain the target specifications for particle size or relative viscosity (Marketing prefers finer particle size T/391).

Special Instructions

1. Charge one batch via C-623-14.
2. Dump to clean blend tank and process as a single batch lot.
3. Bag lot out.

SPECIAL PRODUCT ADJUSTMENT

FORMULATION

SPA No.: 1061 Formulation No.: C-623-14

Issued by: L. Medeiros Product Identification: T/391

Date: July 21, 1975 Series No.: 78----

WEIGHT	phm	RAW MATERIAL
11,680	81.7	MVC
2,620	18.3	MVAc
195	1.36	TCE
20,600	144	Demineralized Water
16	0.11	L.P.
30	0.21	Gelatin - "A"
30	0.21	Gelatin - "B"

CONDITIONS

Agitation: 88 rpm

Reaction Temp.: 156°F

Charge Temp.: 125°F - 130°F

Fixed Weight Vent: None

Recovery Press.: 35 psig

Antifoam: Colloids 581B

Antistat: Ninol

Stripping: 190°F

Special Instructions:

1. Charge a single batch lot.
2. Bag lot out for sampling to RCA.

SPECIAL PRODUCT ADJUSTMENT

PRODUCT QUALITY TESTS

TITLE Low Bound Acetate T/391

Product Identification: T/391 SPA No.: 1061

Formulation No.: C-623-14 Plant: Flemington

Series No.: 78---- Issued by: L. Medeiros

Limitation: 1 batch Date: July 21, 1975

Q. C. LABORATORY TESTS

TESTS	TARGET PROPERTY	TESTS		TARGET PROPERTY
Relative Viscosity	1.48 - 1.53	Contamination		25 max
Specific Viscosity	-	Magnetic Count		6, max
Bound Acetate	15.0 - 16.5	Tinius-Olsen		-
Dry Blend Time	-	Brabender Consistency		-
Bulk Density	38 - 45	Clarity		-
Volume Resistivity	-	Particle Size	+60	0 - 10
Heat Stability, Static	90% min		+80	10 - 50
Volatiles	1.5% max		-200	0 - 15

SPECIAL TESTS

1. Run CBS hard particle contamination test.