

CONFIDENTIAL

INTER-OFFICE MEMO

TENNECO CHEMICALS, INC. OCT 5 1971

TO M. W. Williams
FROM H. B. Carr
SUBJECT QUALITY ASSURANCE AND TESTING SERVICES
MONTHLY REPORT - SEPTEMBER, 1971

AT Piscataway
AT Flemington

DATE Sept. 30, 1971

COPY TO W. E. Beckman
W. C. Champion
J. C. Fisher
P. Gawason
H. R. Herton
E. J. Hourihan
C. W. Johnston
E. L. Kanyok
F. W. Kanzler
M. C. Spalding
W. D. Wesely
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RESIN PLANTSRaw MaterialsRaw Material Controla. TAIC

A shipment of Allied's TAIC was received and contained excessive polymer content and was low in viscosity. Considering the potential deleterious effect on 1742 relative viscosity control, the material was returned to the vendor and replaced with acceptable material.

b. Dow Methocel

A comprehensive report was received from Dow summarizing their investigation of metallic contamination in the Columbia 150 complaint resin. The report will be reviewed and an additional meeting will be arranged with Dow to discuss future action.

c. Soda Ash

As part of an overall investigation of contributing sources of metal contamination in suspension resin, Diamond's soda ash has been found to contain extremely high levels of metallic contamination (> 100/lb.). Diamond has been contacted, samples have been provided and an early reply has been requested. In the meantime, soda ash will be eliminated from the 315 copolymer recipe for Columbia.

COLORITE 011399

d. Lupersol 223M

Assays of Lupersol 223M lots continue to vary beyond specification limits. During September, two lots were received exceeding the upper limit. The plant was advised of this off-spec material and Purchasing has been requested to contact the vendor and insist that they improve their control. Purchasing has also been requested to reactivate the pursuit of alternate sources.

Finished Resin1. 1742 Clarity/Gloss

On 9/14/71, Bill Ling of Congo visited Flemington and in a meeting with CSL and Product Development, the current status and future direction of 1742 requirements were reviewed. Better definition of clarity (standard established) and of gloss based on a Congo market survey resulted. A CER will be initiated to purchase a Gardner Haze/Gloss Meter to quantify these properties - Congo requires a >70 reading at 60° on the Gardner.

2. Ferro Magnetic Contamination

Work continued to define ferro magnetic contamination and corrective measures required in suspension resins. The PTS Group succeeded in developing a test magnet to be utilized in the process stream to monitor metallic contamination. An optical comparator has been ordered to facilitate counting and size characterization. Tentative specs based on trial samples and disposition procedures have been coordinated and established with Manufacturing and CSL. Specifications will be established on the test magnet results when this in-process testing tool is lined out.

3. Flemington Plant Particle Size Control

To assist the Process Engineering effort in defining optimum agitator rpm, baffle design and suspending agent level necessary to improve particle size control in Flemington, samples of dried slurry were tested on a continuing basis. During September, 51 samples were run and will establish a data base for plant and P.E. assessment.

GeneralPrimex Support

J. C. Hahn forwarded samples representing acceptable and unacceptable rigid extrusions at one of Primex' customers. Resin and film samples were analyzed for relative viscosity and bound acetate. The unacceptable extrusion, in which waviness and flow lines appeared in the sheet, evidently is related to a dual effect of high relative viscosity and low bound acetate. J. C. Hahn was advised of these findings and will revise the target specs of their 388 type copolymer to meet the customer's needs.

COMPOUND PLANT1. Endicott-Johnson

Difficulty encountered in obtaining an acceptable color match on CD-01123 White 240 indicated a need to review our color matching procedures. As a result of the recent reorganization in which the colorist now is part of Product Development, a more defined program is needed and will be reviewed with Product Development and CSL. As part of the procedure, the Compound Plant will accept color matches only when the aim and light and dark limits have been properly defined.

2. Nuodex DOP

A shipment of Nuodex DOP was received with an odor similar to a long chain fatty alcohol. Since gas chromatography and other Q.C. tests were normal and this shipment was to be used in a noncritical application, the DOP was accepted under protest. A Corrective Action Request was submitted through Purchasing to Nuodex stating that future orders of this type will be returned.

A&E1. Polyfyde Testing

Based on a request by Dr. Sheeran, tensile testing of original and U.V. aged Polyfyde specimens were performed. Raw data in the form of Instron charts and a few sample calculations were provided to Dr. Rudner for assessment.

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2. Rolar

Since Rolar was in dire straits to meet shipping commitments to Colgate, samples of sheet prepared utilizing our 17F as well as a Goodyear control were tested for elongation, tear strength and tensile strength at break. Rolar's sheets were as good as the Goodyear control and Rolar met their shipping commitments.

3. Nixon Plant Support

To assist the Nixon effort in defining causes of excessive applesauce in Mirrex sheet, five raw material samples were run on the I.R. to determine whether the high humidity experienced recently caused hydrolysis. The five raw materials (Nuoplaz 849, Ferro 5526, Mark 577A, Mark 152 and K-120N) had normal spectra when compared to A&E's reference library.

4. September Time Allotment

Shown below is A&E's September time allotment versus the July and August levels:

	July, 1971 %	August, 1971 %	Sept., 1971 %
CSL	17.9	24.0	29.6
P.D.	27.6	28.6	28.9
Nixon	38.5	28.5	25.2
Q.C.	7.3	10.8	12.4
P.R.	0.8	2.1	2.2
Safety	4.5	6.0	1.7
General Foam	3.4	--	--
	100.0	100.0	100.0

NIXON1. Bubbles in Mirrex Sheet

Coincident with a period of high humidity and temperature (dew point differentials), the Nixon plant experienced a severe "applesauce" problem primarily consisting of bubbles. A joint Manufacturing, R&D and Q.C. effort was expended to define the problem. Resin (plant conveying) and K-120N are two areas requiring attention. Gas chromatographic work performed in Burlington indicated significant differences in organic (residual monomer) volatiles between Nixon inventory K-120N and the same material plant dried. These findings were reviewed with Rohm & Haas in a meeting at Nixon on 9/27/71. Additional work on K-120N, resin and measurements of dew point differentials will continue. Q.C. will continue to grade

material as produced by applesauce standards and will also attempt to define levels of bubbles as opposed to gels.

2. Specification Reviews

A format and timing has been established for review of specifications on Mirrex and G.P. Vinyl. Companion to this review, Q.C. has proposed an improved CIS form for Marketing's review. Examples of good versus meaningless CIS's were provided to impress on Marketing the need for sound, well defined CIS's. In addition, internal procedures for testing, disposition and release are under review with Manufacturing and Marketing.

3. Raw Material Control

a. Escambia 6180

Five trucks of Escambia 6180 were returned during the period; one for excessive contamination and three for either too soft or too stiff T.O. flows. The remaining lot had been unloaded into the bulk silo before it was learned that the material contained golf-ball size oversize. This material was pumped out and returned to Escambia at their expense. A meeting was held with the embarrassed vendor on 9/23/71 at Nixon and they got the message that their product must be improved. Product Development has been requested to expedite their evaluation of Burlington's 10% copolymer to serve as an alternate for Escambia 6180.

b. BFG B-42 (Off Grade)

At Purchasing's request, samples representing 120M lbs. of BFG B-42 315 type (383) were evaluated. Tentative approval was provided on ca. 80M lbs. of this material for use in VL-1072 under the attention of Manufacturing and Process Development.

4. Oscar Mayer Yellow

During the period, Oscar Mayer Yellow was run with varying degrees of success on line 5. Statistical analysis of impact data indicated that line 5 capability will yield 70% of material meeting 8 ft.-lbs. minimum. Since this is not a good margin of assurance on meeting Oscar's 7-day requirement of 7 ft.-lbs., a trial will be conducted on line 3 by Process Development. Q.C. will run -20°C impacts off line and each day determine impact trends towards predicting the 7-day result.

5. Kraft Complaint - MCFD-1015

Kraft complained that a white powdery residue was found on MCFD-1015 film. Since we had additional inventory of this same lot due to be slit for Morton, Q.C. carefully inspected the material during slitting. Kraft's complaint was confirmed and by infrared analysis the white powder was pentaerythritol. Product Development was informed of this finding since a formulation adjustment apparently is needed.

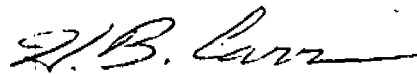
6. Personnel

During September, W. M. Pappas has been transferred from line technician to lab technician replacing H. Hansmann. F. A. Hitchcock resigned effective 10/8/71.

7. September Time Allotment

Shown below is Nixon Q.C.'s September time allotment versus the July and August levels:

	July, 1971 %	August, 1971 %	Sept., 1971 %
Q.C.	60.5	56.9	68.0
Plant Eng.	3.9	0.8	2.1
Prod. Eng.	8.9	6.0	4.2
Proc. Eng.	11.2	7.2	9.0
Prod. Dev.	8.5	9.4	5.7
Tech. Serv. & Marketing	7.0	19.7	11.0
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>



H. B. Carr

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