

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

|         |                                           |    |            |         |                        |
|---------|-------------------------------------------|----|------------|---------|------------------------|
| TO      | H.B. Carr                                 | AT | Burlington | DATE    | December 27, 1972      |
| FROM    | F.W. Kanzler                              | AT | Burlington | COPY TO | R.J. Eckman            |
| SUBJECT | MONTHLY PROGRESS REPORT<br>December, 1972 |    |            |         | P. Gawason             |
|         |                                           |    |            |         | <del>H.R. Horton</del> |
|         |                                           |    |            |         | <del>File</del>        |

I. ROUTINE ANALYSISA. Raw Material Evaluation

|                                             |    |
|---------------------------------------------|----|
| IR SCAN                                     | 12 |
| 223M - Assay, A(0)                          | 19 |
| Avirol POL-1-N                              |    |
| Cloud Point                                 | 2  |
| % FAS                                       | 2  |
| Bottle Polymerization                       |    |
| (2 runs @ 10 bottles each)                  | 7  |
| (5 runs @ 4 bottles each)                   |    |
| RVCN Storage                                |    |
| Phenol in Copolymer Storage                 | 3  |
| VCM Tank Cars                               |    |
| Light End Impurities                        | 6  |
| Styrene                                     |    |
| Polymer Content                             | 4  |
| I <sub>2</sub> O <sub>2</sub> - Assay, A(0) | 6  |

B. In-Process Analyses

|                               |    |
|-------------------------------|----|
| Trace Oxygen, Compressor 1    | 11 |
| "      "      ,      "      2 | 11 |
| "      "      ,      "      3 | 13 |
| "      "      ,      "      4 | 11 |
| "      "      ,      "      5 | 14 |
| "      "      ,      "      6 | 11 |
| COD AI                        | 18 |
| COD ICE                       | 18 |
| Haze & Gloss                  | 29 |

C. Finished Product

|                                |    |
|--------------------------------|----|
| Bound Acetate                  | 33 |
| Cel Count - Brabender Extruder | 27 |
| Residual Vinyl Acetate Monomer | 7  |
| Total from Section II          | 76 |

TOTAL 340

II. SPECIAL TESTINGA. Resin Plant1. Raw Materiala. Defoamer Evaluation

Two defoamer samples (Colloids 987 and Balab Bubble Breaker 750) were evaluated via the standard defoamer test as compared to TBP. While the Balab 750 showed very poor antifoam and foam breaking characteristics, the Colloids 987 showed antifoam and foam breaking capabilities equivalent to TBP (final foam layer for TBP: 5"; final foam layer for Colloids 987: 4").

b. DIW-80 Evaluation

The designed experiment bottle polymerizer evaluation of DIW-80 samples prepared by C.W. Johnston were completed. A meeting was held with Chris on 12/20/72 in Burlington. A report of the statistic evaluation of the data will be issued by Chris after his relocation in Flemington.

2. In-Processa. VCM in Slurry Blend Tanks

In support of the effort to determine VCM levels in the slurry blend tanks, a gas chromatographic method to determine residual monomer was refined. A program has been set up to analyze the VCM levels in the slurries of all resin types. A distinct difference of the VCM levels was noted between slurries of plain recovered batches and steam stripped batches (see table below).

| <u>Resin Type</u> | <u>% VCM in Liquid</u> | <u>% VCM in Slurry</u> | <u>Remarks</u>                    |
|-------------------|------------------------|------------------------|-----------------------------------|
| 225/16%           | 0.15                   | 1.56                   | Recovery @ 20"                    |
| 175               | 0.033                  | 0.392                  | All 175 steam stripped            |
| 175               | 0.022                  | 0.645                  | Vacuum erratic during recovery    |
| 175               | 0.026                  | 0.316                  |                                   |
| 175               | 0.008                  | 0.030                  | Batch in stripper for 410 minutes |
| 175               | 0.027                  | 0.276                  | Held in reactor for 315 minutes.  |

The analyses will be continued pending the manufacture of slurry sample containers by Maintenance.

In addition, the headspace of one blend tank (blend tank #5) was analyzed for its VCM and oxygen content. This was done to check the performance of the J&W Oxygen Meter and LEL Indicator which is used routinely to monitor the effectiveness of the nitrogen purge of blend tanks. A VCM level of 1.6% and oxygen level of 12.6% were determined.

b. Tridecanol Add System

Samples were taken from each bag of a pallet of a 1742 lot. This was done to monitor the fluctuation of the tridecanol addition. This is the second phase of the add system evaluation to be followed by a tridecanol analysis of resin taken across one bag.

B. COMPOUND PLANT

1. Raw Materials

a. Plasticizer Shipments

Eleven plasticizer shipment samples were analyzed for cross contamination.

b. Stabilizers

Production samples of V-1571 were analyzed via infrared to possibly identify the source of turbidity noted in the samples. Comparison with a retained sample showed no difference in the IR spectrum.

A preshipment sample of V-1562 was analyzed and accepted.

c. Miscellaneous

One sample each of Santicizer 409 and G-54 were analyzed for possible cross contamination. Gas chromatographic and IR analyses showed no great differences of the contaminants when compared with retain samples.

C. FLEMINGTON

1. PPG 2-EHP

A sample of PPG 2-EHP was analyzed for assay and active oxygen. The results showed an assay of 39.75% which is slightly below the minimum specification of 40.0%.

2. VCM in Blend Tank Headspace

A headspace sample from a Flemington blend tank was analyzed for VCM. An oxygen analysis was attempted, however, it had to be aborted because of insufficient sample flow. The VCM level was found to be 2.0%.

D. PREMEX

1. Residual Monomer

A total of six Copolymer samples were analyzed for residual vinyl acetate monomer (VAcM) and TCE levels.

E. MISCELLANEOUS

1. Running Account of Analyses

| <u>June</u> | <u>July</u> | <u>August</u> | <u>September</u> | <u>October</u> | <u>November</u> |
|-------------|-------------|---------------|------------------|----------------|-----------------|
| 330         | 424         | 333           | 301              | 365            | 264             |

The total count of analyses performed in the Burlington Analytical Laboratory for 1972 is 3866.

*Fred W. Kanzler*  
F.W. Kanzler

FWK/jt