

~~FOR DU PONT USE ONLY~~

DATE December 30, 1975

TEST AUTHORIZATION NO. TA-C- 75-1192 AND CONCLUSION

OFFICIAL PRODUCT NAME "Lithosol" Red 4B Acid

PRODUCT CODE NO. 459 200

POUNDS PRODUCT PROPOSED ---

AREA Intermediates West

BUILDING NAME DMA

TITLE AMEND THE CHAMBERS WORKS PROCESS TO REDUCE THE TIME TO
ADD SULFURIC ACID IN THE PRECIPITATION TUB

PREPARED BY: R. D. Alaburda

RESPONSIBLE FOR TEST
AND TEST CONCLUSION: R. D. Alaburda *RDA*

PURPOSE OF TEST:

To amend the Chambers Works Process to reduce the time to add Sulfuric Acid to the precipitation tub from one and one-half to two and one-half hours to three-quarters to one and one-half hours.

DURATION OF TEST: ----

STANDARD INVOLVED:

Chambers Works Process by R. D. Gano dated August 6, 1974.

ANALYTICAL CONTROL OR SPECIFICATIONS: ☒ No change ☐ Change described under Test Details

PROCESS HAZARDS REVIEW: ☐ Required before test ☒ Not required

MATERIAL SAFETY DATA SHEET: ☐ Revision required ☒ No change

PACKAGING AND SHIPPING CLASSIFICATIONS: ☐ Revision required ☒ No change

TECHNICAL BASIS FOR CHANGE:

See Attached

TEST DETAILS:

(Include Safety and Waste Disposal)

SAFETY:

No change

WASTE DISPOSAL:

No change

DISTRIBUTION: Jackson Lab. Files
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APPROVED BY:

SR. SUPVR., MANUFACTURING J. J. Meyer 1/7/76 DATE

CHIEF SUPVR., MANUFACTURING J. J. Meyer 1/9/76 DATE

AUTHORIZED BY:

SUPT., MANUFACTURING J. J. Meyer 1/10/76 DATE

SUPT./CH. SUPVR., TECH. PLT. ASSIST. DATE

NOT REQUIRED

QUALITY CONTROL OR ANALYTICAL DATE

NOT REQUIRED

GEN. SUPT., MANUFACTURING DATE

NOT REQUIRED

MANUFACTURING MANAGER* DATE

NOT REQUIRED

TECHNICAL DIVISION* DATE

NOT REQUIRED

PLANT MANAGER* DATE

*MARK "NOT REQUIRED" WHERE APPLICABLE

Page Two
December 30, 1975
Test Authorization and Conclusion TA-C-75-1192
"Lithosol" Red 4B Acid
R. D. Alaburda

TECHNICAL BASIS FOR CHANGE

The Process states in Step 13 that:

13. Discontinue heating the solution and slowly add sulfuric acid to the solution until the pH is in the range of 1.5 to 2.5. The product precipitates as off-white colored crystals.

This pH is blue color on Congo Red paper.

The sulfuric acid must not be added too rapidly as the heat evolved during the addition could cause the charge to boil out or splatter due to steam from the heat of dilution of sulfuric acid. The temperature should not be allowed to deviate from $95 \pm 2^\circ\text{C}$. The exact isoelectric point has not been established, but experience has shown the pH range of 1.5 to 2.5 to be optimum. The time for adding the required 655-675 pounds of acid is 1 1/2 to 2 1/2 hours. The effect of more rapid acid addition with simultaneous cooling of the charge has not been determined.

Operating experience has shown that the acid can be added in forty-five minutes to one hour. The temperature limits of $95 \pm 2^\circ\text{C}$. and a safe non-splattering condition are maintained during this shorter addition.

RECOMMENDATIONS

It is recommended that this change in the Process be adopted. This will allow us to manufacture the product more efficiently and shorten the cycle time.

RDA:glm