

AR226-1647

FC-143 IN TEFLON®

OBJECTIVES:

- DETERMINE THE FATE OF FC-143 IN THE TEFLON® PROCESS.
- ESTABLISH THE DEGREE OF PERSONNEL EXPOSURE.
- ESTABLISH THE POTENTIAL FOR CUSTOMER EXPOSURE IN USING TEFLON® PRODUCTS.

CONCLUSIONS:

- LABORATORY METHOD DEVELOPED WITH DETECTION LIMIT OF ~50 PPb.
- ONLY ~10% OF FC-143 ADDED BY PP & R REMAINS AS FREE FC-143 IN AS-RECEIVED TEFLON® DISPERSION (~220 PPM).
- ~20% OF THE FREE FC-143 (~50 PPM) IS REMOVED ON THE WASH REEL ON SPUN YARN PRODUCTS.
- FREE FC-143 IS NOT DETECTABLE DOWN STREAM OF SINTERING ON SPUN YARN PRODUCTS.
- FREE FC-143 (EXTRACTABLE) IN DRIED I ONLY PRODUCTS ≤5% OF INCOMING LEVEL (~10 PPM).
- NO FC-143 WAS DETECTABLE IN ANY OPERATOR ^{Air Sampling} ~~BREATHING ZONE~~.
- NO PROBLEMS IDENTIFIED WITH OPERATOR OR CUSTOMER EXPOSURES.

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H. SHEPPARD
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DETAILS:

<u>SAMPLES ANALYZED*</u>	<u>FREE (EXTRACTABLE) FC-143 (PPM)</u>
PP & R SAMPLES: (2200 PPM ADDED TO PROCESS)	
DISPERSION (AS SHIPPED)	180
SUPERNATANT LIQUID	220
SPRUANCE SAMPLES:	
REGENERATION BATH	NOT DETECTABLE
WASH REEL WATER	50
WET YARN AFTER WASH REEL	12
YARN AFTER DRYING	0.3
YARN AFTER SINTERING	NOT DETECTABLE
I ONLY PRODUCTS	8
SPRUANCE AIR SAMPLES (OPERATOR BREATHING ZONES):	
SPINNING MACHINE ROLL NO. 2	NOT DETECTABLE
SPINNING MACHINE ROLL NO. 1	NOT DETECTABLE
SPINNING MACHINE NO. 15	NOT DETECTABLE
SPINNING MACHINE OPERATOR'S DESK	NOT DETECTABLE
INDUCTION DRYER EXIT	NOT DETECTABLE
INDUCTION DRYER EXHAUST	NOT DETECTABLE

* INTERNAL CONTROL USED IN ALL ANALYSES (3000 PPM FC-143 IN WATER).

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H. SHEPPARD
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