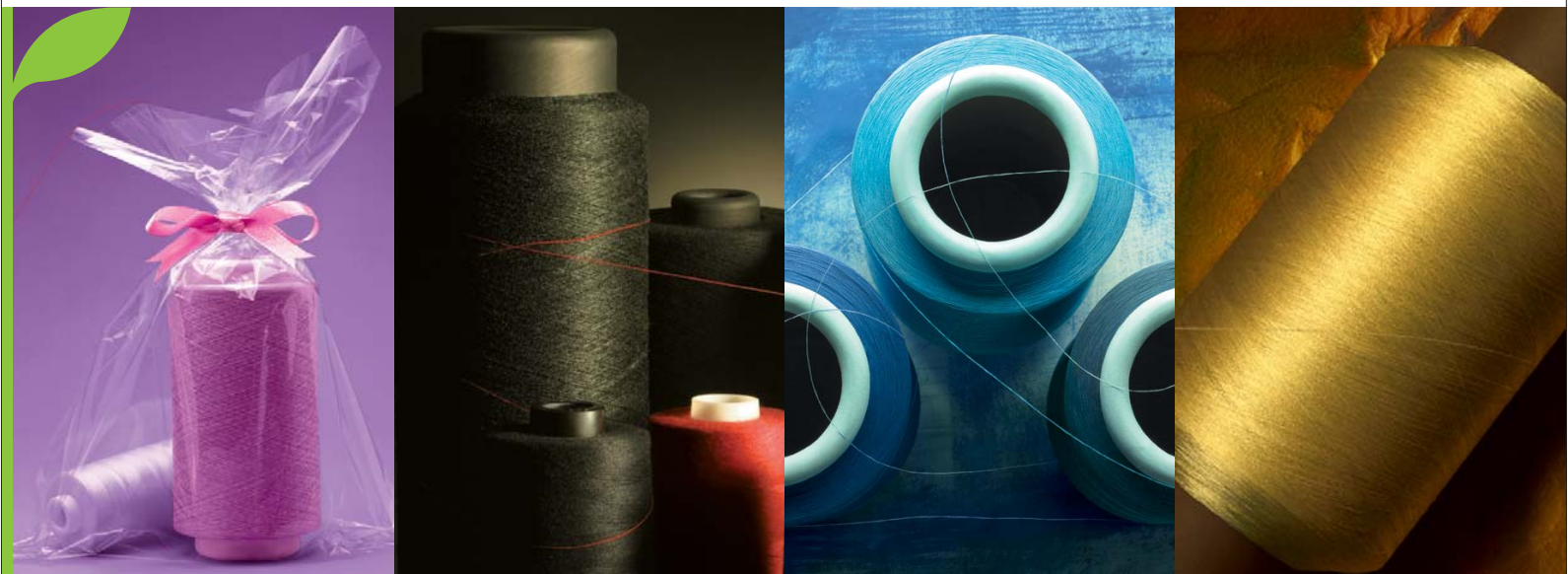
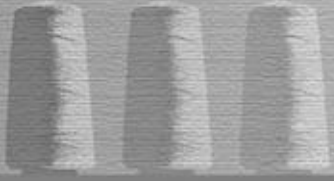


# Due care for using Recron POY



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Where INNOVATION is a CONTINUOUS process



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## INTRODUCTION

The purpose of this note is to give detailed technical suggestions to users of "Recron" POY, highlighting "best practices" currently used in the Texturing industry. Surveys have shown that there is a large variance in standards of practices employed. This variance can lead to large differences in quality and productivity when texturing "Recron", unless due care is taken during the entire process.

## 1. RECEIPT OF MATERIAL

Considerable care & attention must be paid right from the beginning, when receiving, storing and issuing "Recron" POY for Texturing.

- Denier, Number of filaments, lustre and merge should be verified to confirm that they are in line with what was ordered. Mix-up of denier/merge/No. of filaments can lead to processing problems and dye-variation complaints
- All relevant documents received with the consignment should be checked and verified that they are in order. In case of any discrepancy, Reliance should be informed immediately

## 2. HANDLING, STORAGE AND ISSUE OF RECRON POY

Considerable care should be taken when handling, storing and Issuing "Recron" POY. Some of the key precautions are as follows.

- Containers should be directly unloaded at work premises, as far as possible
- Pallets (Export Unit) should be properly and carefully unloaded from the Containers/trucks and transferred to covered warehouses using fork-lifts and trolleys
- Pallets should not be stacked upside down
- Pallets should NEVER be exposed to sunlight

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- Only 2 tier stacking of pallets is recommended
- Damage to pallets or material due to improper handling during unloading and stacking, such as use of hooks can seriously affect subsequent processes
- Pallets should be stored with sufficient care to prevent mix-ups
- Material from one container should be consumed together, as far as possible
- Records of material issued for production should be maintained systematically

### 3. LOADING OF POY

- POY should be loaded on the assigned machine either manually or with Mechanical handler after the confirmation of Denier and Merge Number
- The POY packages should be preferably loaded along with the polythene bags. The loading should be such that the unwinding end is facing the creel guides. The polythene bags can be removed after loading
- End caps should be preferably used on all POY tubes
- Paper tube colour should be checked. If a different colour paper tube is noticed in a lot, the same should be brought to the notice of Reliance
- The conditioning time for POY packages should be 24 hours

### 4. SPLICING

We recommend that splicing should be used while texturing Recron POY. However, following precautions should be taken while splicing:

- The condition of splicing gun and jet should be checked to ensure proper splicing
- Do not touch POY packages body or taper by hand or instrument. It may cause disturbance in unwinding layers. Rotate the package by holding paper tubes
- Take the tail end of the running package out by using blade, release sufficient length of it by unwinding slowly



- While taking tail end out, enough care should be taken to ensure that only the tail end is cut, and blade does not touch the taper of the packages. Otherwise it may rupture the filaments
- Overlap the tail end on the starting end of the new package & impart slight stretch on the portion to be spliced; subsequently, trigger the jet after holding the said portion slightly loose in the jet but held firmly by fingers as nearer to the jet as possible to get length of spliced portion to least possible extent
- The extra protruding ends should be trimmed finely to ensure they do not cause hindrances in subsequent processing. After splicing the tail ends, the Tail bunch should be removed from the Paper Tube groove/notch

## 5. THREADING AND DOFFING

- The Texturing hall's room temperature should be 24°C and Relative Humidity 65%
- The discs should be cleaned with a moist cloth at least once in a day
- The fume exhaust should be properly working and proper housekeeping should be ensured in the Texturing hall
- The creel should be properly aligned. Care should be taken to ensure that the yarn passes through all the guides and is in contact with the primary heater and cooling plate. The primary heater door should be closed after threading
- Doffed textured yarn packages should be kept positionwise in yarn trolleys. Such yarn trolleys should be kept at identified place

## 6. PROCESS CONTROL

- In case Texturing machine is not equipped with OLT, the T2 tensions of the entire machine should be taken at least once in a day
- The package hardness of the doffed textured packages should be checked. All the packages showing abnormal hardness should be segregated and graded separately
- Records of defective positions to be maintained. This helps in ascertaining positional problems



## 7. KNIT-DYE TEST

- All the textured packages graded as I'st in physical checking and OLT should be subjected to the Knit-dye test. This test helps to detect differences not only in dye absorption of the filament but also in fibre optics that affect apparent shade depth
- A knitting machine which operates at uniform tension (Positive overfeed) such as the Lawson Hemphill FAK is ideally suited for this type of work
- The textured yarn should be knit into tubing with about 3 inches (7.5 cms) of fabric between each junction. The tubing should be knit as tightly as possible to overcome physical variations in the stitch
- A standard package should be used after every 10 swatches
- "Bench Model" jet, paddle or rotary dyeing machines holding 250 to 1500 grams of fabric should be used
- The machines should have microprocessors for controlling the rate of change of temperature
- When test lots of knit tubings smaller than the rated capacity of the machine are to be dyed, the machine should be loaded with undyed textured tubing as filler, or there will be variations in shade depth
- Tubing knit from oiled yarns should be scoured before testing, since some oil ingredients have a high affinity for disperse dyes
- The dyestuff should be preferably Disperse Blue CI-79
- The tubing should be inspected for differences in dye pick up with standard under properly lit viewing box
- Those tubing that show dye pick up variation should be segregated and positions recorded
- Corrective measures should be taken on positions giving defective dyeing

## 8. TESTING

- 12 samples of textured yarn packages randomly selected from each machine should be checked for Denier, Tenacity and Elongation
- The samples should be selected such that the entire machine is covered in 15-20 days



## 9. PREVENTIVE MAINTENANCE

While well-maintained texturing machines are absolutely necessary for producing good quality yarns, the following measures will help in minimising yarn imperfections.

### MONTHLY PREVENTIVE MAINTENANCE

- Clean creel completely
- Clean the cooling plates and set the alignment of guides
- Check and set cradle pressure
- Remove lapping from feed rollers, Jockey pulleys, feed shafts and take up shafts
- Remove lapping from Oiler rollers and clean Oiler tray
- Check the tracking of timing belts and spindle drive belt
- Set stroke length of all positions
- Clean spindle discs
- Clean the guides – input, inter, take-up traverse and check fittings
- Remove and refit nip rollers after buffing. In case of aprons, the guidelines issued by the supplier for replacement should be followed
- Nip roller pressure should be checked
- Friction discs rpm and all feed shafts rpm to be checked



#### SCHEDULE MAINTENANCE EVERY 4 MONTHS

- Grease the drive end bearings
- Grease the feed shaft and take up shafts bearings
- Clean the Primary heater Fume Extraction pipes
- Clean the oil tank
- Remove and clean the end caps. Replace damaged bush bearing and stud
- Check and set paper tube parallel to bowl

#### SCHEDULE MAINTENANCE EVERY 6 MONTHS

- Clean the secondary heater tubes
- Lubricate the positorq support bracket anti twist pins
- Grease the end jockey pulley and edge jockey pulley

#### SCHEDULE MAINTENANCE EVERY 11 MONTHS

- Change oil in traverse box
- Change oil in the axial disturber gear box
- Change oil in the nip roller traverse



## SCHEDULE MAINTENANCE (ELECTRICAL) MONTHLY

- Cleaning
  - Primary heater tracks (with cleaning agent)
  - Primary heater top and bottom guides
  - NCD's
- Connections checking and tightening
  - All the NCD's
  - All the contactors and relays
- Electronics works
  - Controllers cards
  - CPM calibration
  - RPM calibration
  - All the heaters temperature checking from the positions.

## 10. PACKING AND STORAGE

- All the textured yarn packages after inspection and testing should be covered with Polythene bags to preserve the quality of yarn
- The packed cartons of yarn packages should be properly stored in identified location

## 11. DUE CARE AUDIT

Experience has shown that the Due Care procedures recommended above must be regularly and diligently audited. It is recommended that every user of "Recron" should assign this task to a separate group or team.

The observations and reports of such audits must be reviewed by the top management at regular intervals. This will ensure that all the due care systems described here are being fully complied with at all times.