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## **DUE CARE FOR USING TEXLENE PTY**

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### **INTRODUCTION:**

THE PURPOSE OF THIS NOTE IS TO ENLIGHTEN OUR ESTEEMED CUSTOMERS ABOUT THE "TEXLENE" ALONGWITH SUGGESTIONS FOR ACHIEVING EXCELLENT RESULTS ON THEIR END PRODUCT QUALITY AND PRODUCTIVITY FROM THE PTY MATERIAL - "TEXLENE".

SURVEYS HAVE SHOWN THAT THE SAME PTY WITH WIDER VARIATION IN PROPERTIES ARE BEING USED ON ALL THE TYPES OF THE DOWNSTREAM PROCESSING MACHINES AND ALSO FOR THE DIFFERENT END USE PRODUCTS COMPROMISING ON QUALITY AND PRODUCTIVITY.

THIS STATUS WOULD LEAD THEIR DOMESTIC AND OVERSEAS MARKET TO INCOMPETITIVE AND UNVIABLE BUSINESS. HENCE, IT IS HIGH TIME TO REALISE THAT THE YARN WITH DIFFERENT SPECIFIC PROPERTIES ARE TO BE USED BY OUR CUSTOMERS WITH PROPER GUIDELINES AND WITH THE KNOWLEDGE ABOUT "TEXLENE" SUITABILITY FOR MAXIMISING THEIR PRODUCTIVITY AND END PRODUCT QUALITY.

THE "TEXLENE" IS AN INDUSTRIAL RAW MATERIAL CATERING THE NEEDS OF KNITTERS, WEAVERS, TWISTERS AND YARN DYERS TO PRODUCE BOTH APPAREL AND NONAPPAREL END USE PRODUCTS.

IN THIS NOTE, DIFFERENT TYPES OF "TEXLENE" DEPENDING UPON THE METHOD, CONDITION AND TYPE OF EQUIPMENT USED IN THE DOWNSTREAM PROCESS FOR CONVERTING INTO FABRIC AND / OR TO A PROCESSED FABRIC ARE SUGGESTED ALONG WITH HANDLING AND USAGE GUIDELINE TO ACHIEVE A DEFECT-FREE, HIGH QUALITY END PRODUCT WITH MAXIMISED PROUCTIVITY AND COMPETITIVE MANUFACTURING COST.

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### **1. RECEIPT OF MATERIAL:**

#### **1.1. BEFORE UNLOADING THE TRUCK :**

- 1.1.1 Check and verify all the documents of the consignment.
- 1.1.2 If proper documents are not made available, do not proceed for unloading of the truck. Please contact our area depot manager immediately who will help you to provide necessary information / documentation.
- 1.1.3 Denier, No. of Filaments, Quality Grade, Type, Batch Number etc. should be verified to confirm that they are in line with the order placed. If differs, please contact our depot manager. Any thing different shall lead to both processing problem and heavy fabric damages.

#### **1.2. WHILE UNLOADING THE TRUCK :**

- 1.2.1 While unloading, ensure that cartons are received without any transit damage.
- 1.2.2 Transit damage of the cartons can lead to poor performance of the material during its intended usage. No non-intact cartons are to be accepted.
- 1.2.3 Make your own judgement for the severity of the damage and immediately contact the nearest depot manager to take advice for the further actions.
- 1.2.4 In case of major damages to the consignment, ask the relevant truck driver to indicate the reasons on the reverse side of Lorry Receipt and immediately contact concerned depot manager. Do not unload the truck till you get instructions from the depot manager.

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### **2. HANDLING, STORING & ISSUING :**

#### **2.1. GENERAL :**

2.1.1 Many users of "Texlene" do not have adequate facilities for handling of material right from the unloading stage to actual usage on their machines.

#### **2.2. HANDLING :**

2.2.1 Ideally, we strongly recommend our customers to unload the cartons as suggested, and keep them properly stacked on wooden pallets.

2.2.2 Two persons should lift the cartons holding them lengthwise, and not to be thrown but to be placed gently.

2.2.3 If the cartons need to be transported to storage area and their transportation is not possible on pallets, ensure each carton is carried by two persons and stacked in the storage area without dumping the carton.

2.2.4 For manual operations, we recommend the storage area should be as close as possible to the truck unloading platform.

#### **2.3. STORAGE :**

2.3.1 While storing of "Texlene" material ensure that different Batch Numbers and material from other supplies are kept separately for easy identification of all the varieties and to avoid mix-up.

2.3.2 Storage area should be clean, dust-free, properly covered, airy and with enough lighting.

2.3.3 Polyester textured yarn should never be exposed to direct sunlight and rains as well.

#### **2.4. MATERIAL ISSUES :**

2.4.1 The system should be full proof to ensure correct material is issued to the shop floor.

2.4.2 Keep proper record of every issue (PTY batch wise), to have traceability upto the final product.

2.4.3 If you are continuously using "Texlene" product of one Batch Number, ensure the "First – In – First – Out" system is followed.

2.4.4 Attempt to use the material within 6 months from date of manufacturing; if any unforeseen consequences occur while using

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the material older than 6 months, please contact our depot manager.

2.4.5 While issuing the material, verify the net weight of the material and the challan net weight. The discrepancy in the net weight almost equals to the discrepancy in the gross weight. In such case please present almost all the boxes intact condition to our depot manager.

2.4.6 If different batch material is to be used in the production, please collect left out bobbins to the store before issuing the new material to avoid mix-ups.

### **2.5. CARTONS / PAPERTUBE HANDLING :**

2.5.1 Cartons of "Texlene" carry an indication of "THIS SIDE UP" printed on the cartons. Follow it strictly to avoid any damages to the papertubes due to bad handling of the cartons.

2.5.2 Handling of the "Texlene" paper tubes (after opening the cartons) should be careful so that they are not damaged on the edges. These damages cause unwinding breaks.

2.5.3 Use of unwinding caps is recommended for slightly damaged papertubes on unwinding end.

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### 3. NEED FOR SEPARATION:

The importance of keeping Polyester Textured Yarn material separate and distinguishable, qualitywise and its Batch Number wise is already well known to our customers. Improper practices can lead to serious defects in the fabric and hence, the value loss. Some of the reasons for practising proper material separation are given below

- 3.1.1 Like all other Polyester Textured Yarns, dyeing characteristics of "Texlene" are entirely different than other filament yarns like Nylon, Polypropylene, Acetate etc.
- 3.1.2 Different Brands of Polyester Textured Yarns of same denier will dye differently under the same conditions.
- 3.1.3 In the same brand of same denier, dyeability varies with "Merge" or "Batch Number".
- 3.1.4 Even the same denier and same "Batch Number" material can result in different dye shades if they are used after imparting different twist levels. So if you are using "Texlene" material after imparting different twist levels for different sorts of fabric, take care that material is kept separate as per "Twist Level", even though they are twisted from the material of the same Batch Number.
- 3.1.5 "Texlene" material always carries a unique "Batch Number" which is generally identified by its "Paper Tube Colour". So do not mix up material wound on different coloured paper tubes even if they are of same denier. However, in certain exceptional situations, you may receive material of same denier & Batch Number on different coloured Paper Tubes with a note regarding it (In case of non-receipt of such note, please contact our concerned depot manager).
- 3.1.6 "Texlene" material made with Cationically Dyeable Polyester (shortly referred as CDP) will be with colour tinting to facilitate easy separation of this material (CDP material) from "normal" Polyester. Here, it is of extreme importance to keep the CDP as any mix up of these two will get exposed only after dyeing of the fabric and it will be disastrous. Except CD material, no other Polyester under brand name "Texlene" is with any tinting colours.

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### 4. HOW TO ACHIEVE SEPARATION?

#### 4.1. DEMARKING AREAS:

4.1.1 For storing different deniers, allocate specific floor areas as per quantity requirements. Take care that proper material is kept in the allotted areas.

#### 4.2. USE OF TINT :

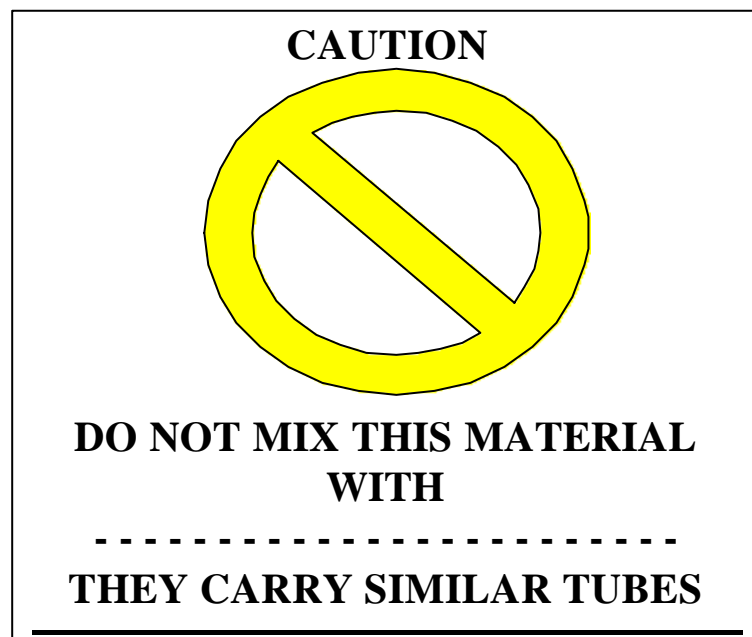
4.2.1 Use good quality, washable Tinting colours to identify different yarn material during usage on the production machines. This can be easily achieved by colouring upper tapered surface with the help of a soft brush.

4.2.2 An ideal tinting colour should have the following characteristics

- It should be soluble in cold water.
- It should have good tintorial value with minimum quantity of colour used.
- If the material is used in grey state in further "heat" applications, then the tint should not get fixed on the fibre.

#### 4.2.3 Use of Caution Signs:

If some material from different sources is received on identical or very near coloured paper tubes, then there is a great danger for mix-up of such material while using on production machines. To avoid such happenings, use of distinctly visible "Caution Sign" will be of great help. For better understanding, we give an illustration below.



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### 5. INTERMEDIATE & END PROCESSES:

#### 5.1. TWISTING:

##### 5.1.1 COP WINDING FOR TFO and BOBBIN WINDING FOR UP-TWISTERS

- 5.1.1.1. Take care that one type of yarn is used at any given time to avoid mix-up.
- 5.1.1.2. Collect the leftover / bottom cops / bobbins.
- 5.1.1.3. Check that correct (0.25 to 0.3 gpd) and uniform winding tension is maintained on all spindles.
- 5.1.1.4. **If at all oil is to be added for technical reasons, use proper oil and application percentage.**
- 5.1.1.5. Segregate abnormal hardness cops / bobbins and send them either for rewinding for correction or for isolated processing.

##### 5.1.2 TFO :

- 5.1.2.1. Check all guides for wear and any damages before processing "Texlene". Also check the bowl & yarn tensioners more frequently & clean them if required.
- 5.1.2.2. Check the yarn tension on all the spindles and adjust to 0.2 to 0.25 gpd at the start of product.
- 5.1.2.3. Check twisted packages (full) for hardness or diameter to take corrective action of tension adjustment on faulty spindles if the variation is more than  $\pm$  5% shore hardness.

##### 5.1.3 UP TWISTERS:

- 5.1.3.1. Check the bobbin flanges for any cut or damages before processing "Texlene".
- 5.1.3.2. Check the spindle speed of all spindles within  $\pm$  1% variation at the start of product or change of product.
- 5.1.3.3. Check the tension (0.2 to 0.25 gpd) and alternately, package hardness (50<sup>0</sup> to 60<sup>0</sup> shore hardness) for every bobbin.

#### NOTE:

Term "Correct Tension" means the tension that doesn't remove the crimp in the yarn.

The tensioners and the machine components are repeatedly insisted for taking care because "Texlene" is elastomeric in nature and it's bulk is destroyable by abnormal yarn path in down stream processing.

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### 5.1.4 **HEAT SETTING** (Twisted Package):

- 5.1.4.1. Twisted packages produced from one and only one Batch Number and of same twist level, should be taken for heat setting in one "Batch" to avoid mix-up in the further process.
- 5.1.4.2. Regroup almost uniform winding density bobbins (not more than 0.4 gm / cc density) and set them.
- 5.1.4.3. Best way to avoid mix-up in the further usage of twisted material is to make use of colour tinting as explained point 4.2 after heat setting.
- 5.1.4.4. Choose correct process settings to avoid over heating and thermal shock to the Polyester material.
- 5.1.4.5. Use correct heating and annealing cycles to avoid problems in dyeing and finishing of final fabric.

### 5.2. **YARN DYEING:**

- 5.2.1 'Texlene' has excellent dye evenness properties that may get damaged if wrong process parameters or dye and dyeing auxiliaries are used.
- 5.2.2 Many 'Texlene' users do the dyeing after winding of yarn on dye-springs.
  - 5.2.2.1. For winding on 'dye-springs', care has to be taken to avoid tension variations from spindle to spindle.
  - 5.2.2.2. Do not use damaged springs.
  - 5.2.2.3. All guides in the yarn path should be checked for any cuts or damages.
  - 5.2.2.4. Choose correct process settings for dyeing Polyester yarn in the desired shades.
- 5.2.3 **"High – Temperature – High – Pressure"** process is recommended for "TEXLNE" dyeing.
  - 5.2.3.1. Use proper scouring, dyeing cycle, duration, quality and quantity of Dyes and chemicals suitable for respective shades.
  - 5.2.3.2. While taking CD material for dyeing, ensure the appropriate dye (Cationic) selection to have desired dyeing results.
  - 5.2.3.3. Select dyeing temperatures and rate of temperature rise properly.

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- 5.2.3.4. In case of normal HTHP process of dyeing, circulation cycle should have both "Inside Out" and "Outside In" directions to achieve uniform dyeing in the packages.
- 5.2.3.5. Drying by hydro-extraction method is recommended for speedy process prior to moisture removal by hot air.
- 5.2.3.6. While dyeing the twisted packages in any form, the coning oil applied in all the earlier stages has to be removed by thorough scouring to have effective dye transfer.

### 5.3. WARPING:

- 5.3.1 Check correct (Roto or Twisted) material is issued to warping section.
- 5.3.2 Before loading the material on warping creel, ensure all the leftover packages of earlier creel load are completely removed.
- 5.3.3 Check the creel pegs for proper alignment with creel eyelet guide to avoid any breakage.
- 5.3.4 Put proper size unwinding caps on paper tubes to ensure smooth unwinding.
- 5.3.5 Tensioners / tension compensators are to be adjusted for correct tension (0.10 to 0.12 gpd) setting.
- 5.3.6 We recommend "Equal Length Texlene" product (A1W1) for direct use on warping machines. However, if warp is prepared from material after twisting, ensure loading of equal size packages in the creel. This will help to maintain uniform tension on warp beam or individual bands on sectional warping beams and also minimise the waste due to less left over material.
- 5.3.7 Check all guides and tensioners coming in contact with yarn for any damages & cuts to avoid BF.
- 5.3.8 If the individual ends are vertically ordered on the warping beam, then loading should be prepared horizontally, to deliver better uniformity in the dyed fabric.
- 5.3.9 The warping machine to be ensured for good earthing to avoid static charge.

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5.3.10 Use cloth / Polythene covers on the bobbin body while unwinding for smooth running.

### 5.4. WEFT APPLICATION IN WEAVING:

#### 5.4.1 PIRN WINDING:

- 5.4.1.1. Check correct material is issued to Pirn Winding machine.
- 5.4.1.2. Ensure dust and fly free atmosphere in the pirn winding room.
- 5.4.1.3. Tip of the pirn should be free from any kind of obstruction to the yarn movement.
- 5.4.1.4. Pirns with more nurlings on the body are preferred to avoid damage the yarn due to stretch.
- 5.4.1.5. Use unwinding caps for trouble free unwinding.
- 5.4.1.6. If two or more types or Batch Numbers are running simultaneously, ensure that adequate measures are taken to avoid mix-up of Pirns (Refer point 4.0).
- 5.4.1.7. If you are feeding Pirns of same Batch Number to more than one loom, then follow the system to tie-up Pirn Winding "Spindle" to a specific loom or group of looms. This will help to restrict any problem arising from a defective package or mix-up of material, to one loom only or selected looms.
- 5.4.1.8. Check that on all the spindles of Pirn Winder, when the same yarn is running, there is no tension variation from spindle to spindle. All the Pirns need to be wound at uniform tension; otherwise in same sort of fabrics, you may find the defect due to tension picks.
- 5.4.1.9. At the time of batch changeover in Pirn Winding section, remove all the pirns of previous run batch and so also with the half left "TEXLENE" packages.

#### 5.4.2 DIRECT WEFT insertion on shuttle-less weaving machines

- 5.4.2.1. "Texlene" products are generally designed for direct weft insertion via weft accumulators on high speed weaving machines.
- 5.4.2.2. On Air Jet machines, check the correct air pressure setting and nozzle cleaning. Also, yarn suction pipe at the fag end of the weft insertion needs to be checked periodically.

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5.4.2.3. "Texlene" packages come with 100% tail end winding to facilitate continuous weft operation on shuttle-less weaving machines. Proper handling & knotting / splicing of the tail to the running end of magazine package will ensure uninterrupted weaving process.

5.4.2.4. However, before placing order for "Direct Weft Use", always consult our marketing department who will suggest you the right product.

### 5.5. KNITTING :

5.5.1 "Texlene KTT" quality is specially designed for knitting end use.

5.5.2 While placing any order, select appropriate material in view of end product and processing machinery in consultation with our Marketing Department.

#### 5.5.3 CIRCULAR KNITTING :

5.5.3.1. Equal size packages are to be placed on the creel to start with.

5.5.3.2. Peg has to be aligned perfectly w. r. t. eyelet guide should be checked before using "TEXLENE".

5.5.3.3. Set proper and constant tension on all the feeders. Also, check for filament wraps on individual tension compensator / feeder.

5.5.3.4. "Texlene" has protective oil film to reduce friction and hence, gives longer life of knitting needles.

5.5.3.5. In case of change of creel to different Batch Number, ensure that all the packages of earlier creel are removed completely, even if some feeders are not in use. This will avoid any possibility of yarn mix-up eventually can take place.

#### 5.5.4 WARP KNITTING :

5.5.4.1. Preparation of clean and faultless beams will ensure good results on warp knitting machines.

5.5.4.2. During warping of the beams, you may apply additional oil if required depending upon your hall and machine conditions. However, "Texlene" is already supplied with special oil film to ensure minimum needle breakages.

5.5.4.3. Knitting room has to be air-conditioned. If conditions are improper, it will lead to high breakage rate on needles.

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5.5.5 In case any hard wound bobbin is observed, keep it aside and contact depot manager.

5.6. SPECIALITY YARNS :

5.6.1 "Texlene" comes in a wide range of novelty yarns, which can be used to produce high value fabrics.

5.6.2 Extreme care is required to select right product for desired effect in the finished fabric. Always consult our "Product Development Team" for advice. We can offer tailor made products for this purpose.

5.6.3 Some of the very popular products are listed below

- Thick-N-Thin yarns – Textured, Crimped, and Textured Intermingled.
- Continuous Tight Spot yarns,
- High Stretch Yarns,
- Bi-Shrinkage Yarns,
- Combination Yarns with Black & White Components,
- Spun Like yarn,
- Wool Like yarn,
- Slub yarns, etc.

Various other varieties also can be developed on request.

6. **EARLY WARNING AND DETECTION SYSTEM FOR "TEXLENE" PROCESSING:**

Early warning and detection systems for quick detection of mix-ups, identification of deficiencies in the fabric or any other process are a must to avoid high value losses in case large quantities of defective fabric are produced.

6.1. Means to achieve this:

6.1.1 TWISTING - Check first doff of twisted packages for BF. Any abnormality is observed, look back in the process for detection of faulty spindle / package. If spindle is problematic, attend to it. If any yarn fault is observed, immediately inform our depot manager.

6.1.2 WARPING - Make sample beam for making fabric on sample making machine and check for dye affinity. If any abnormality is observed, ensure no mix-up of different materials or batches by checking the actual packages and then contact our depot manager.

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- 6.1.3 WEAVING - After insertion of picks upto 20 –25 cm fabric length, dye the fabric piece and check for any abnormality. If the fault is detected in the weft due to yarn fault, then contact our depot manager.
- 6.1.4 KNITTING - Prepare a knitted hose of selected packages. Identify the defective thread after dyeing if any. Confirm there is no abnormality of the process and mix-up of different materials or batches by checking the actual package. Contact our depot manager in case of any yarn fault.
- 6.1.5 DYEING - After dyeing if any abnormal results are obtained in sample dyeing, ensure proper dyeing conditions and then identify the defective package & keep it separate.

### **7. DUE CARE AUDITS:**

Experience have shown that the due care procedures recommended above must be regularly and diligently audited – may be assigned to a separate team / group.

Top Management at regular intervals must receive the observations and reports of such audits to ensure the due care systems are being fully complied with.

### **NOTE:**

Customers are advised to contact our Marketing Personnels to ensure proper material for proper end use.

The information provided in this brochure is in good faith but without any warranty.

# DUE CARE FOR USING TEXLENE PTY

## ANNEXURE I

### PRODUCT LIST

DENIER	CR NIM "S" OR "Z" TWIST	CR IM "S" OR "Z" TWIST	CR LIM "S" OR "Z" TWIST	TX NIM "S" OR "Z" TWIST	TX LIM "S" OR "Z" TWIST	TX IM "S" OR "Z" TWIST	LT HIM "S" OR "Z" TWIST	CM HIM "S" + "Z" TWIST	LT NIM "S" OR "Z" TWIST
1/34/14	✓	--	--	✓	--	✓	--	--	--
1/50/34	--	--	--	✓	--	--	--	--	--
1/60/34	✓	✓	--	--	--	--	--	--	--
1/75/34	✓	✓	✓	✓	✓	✓	✓	--	✓
1/100/34	--	--	--	✓	--	--	--	--	--
1/150/34	✓	✓	--	✓	✓	--	✓	--	--
1/150/47	--	--	--	✓	--	--	✓	--	--
2/150/34	--	--	--	--	--	--	--	✓	--
2/150/34 OLY	--	--	--	--	--	--	--	✓	--
1/75/108	--	--	--	--	✓	✓	--	--	--
1/150/108	--	--	--	--	✓	✓	--	--	--
1/300/68	--	--	--	✓	✓	--	--	--	--

- REMARKS :**
- 1) ALL WEFT YARNS ARE SUITABLE FOR HIGH SPEED LOOM.
  - 2) ALL WEFT YARNS ARE SUITABLE FOR PIECE DYEING.
  - 3) ALL WARP YARN (IM & HIM) WILL BE SUPPLIED IN MEASURED LENGTH i.e. UPTO 1500 MTR VARIATION.
  - 4) ALL SUPPLIES WILL BE PALLETIZED.
  - 5) WE CAN SUPPLY PTY ON DYE PACKS ( PP PERFORATED TUBES, PACKAGES SHRINK-WRAPEED).

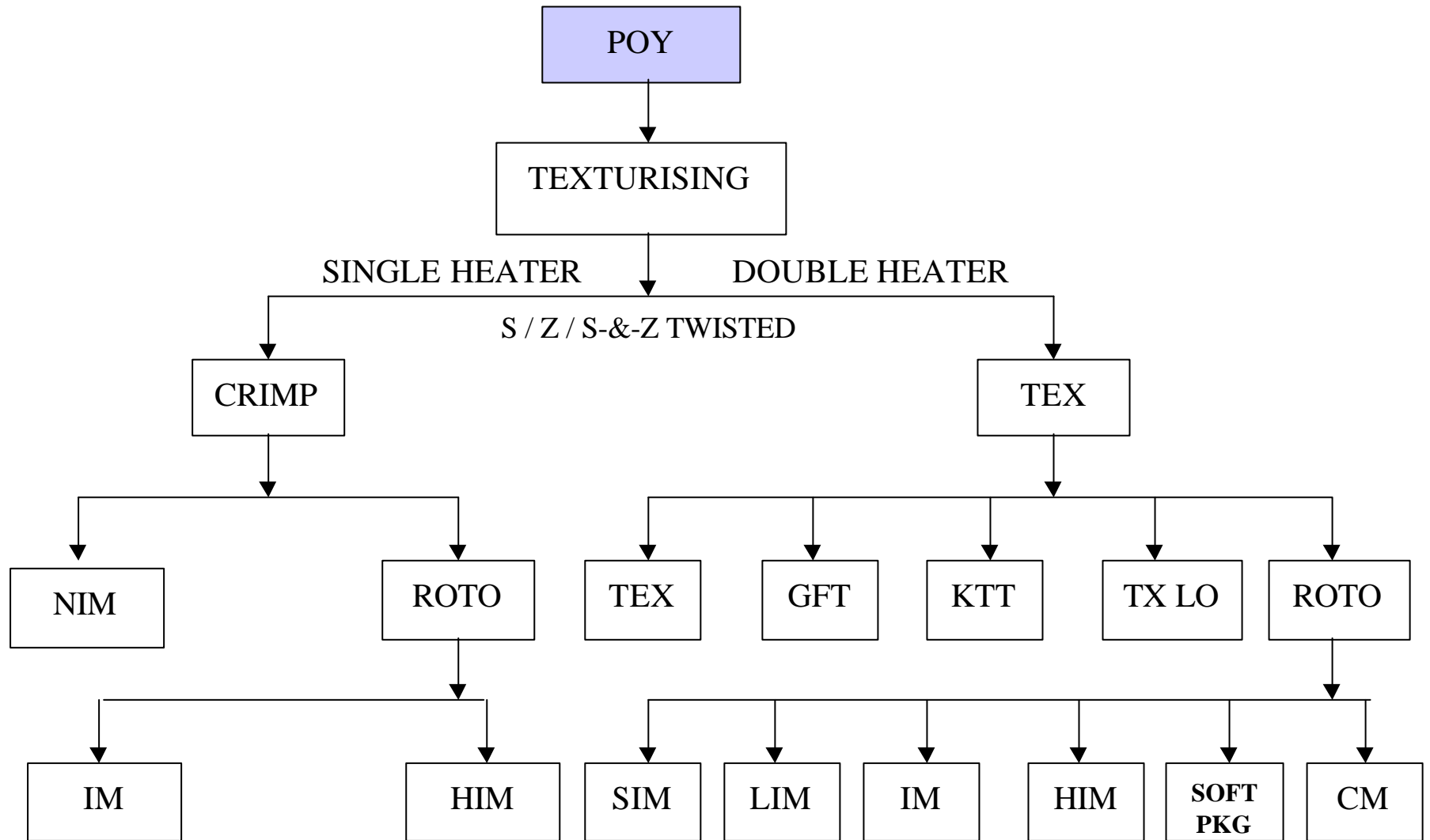
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## ANNEXURE II

### PRODUCT RANGE



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### ANNEXURE III

#### LIST OF TWISTED, DYED AND TWISTED- DYED YARN PRODUCTS

DENIER	LOW TWIST	MEDIUM TWIST	HIGH TWIST	DYED	TWISTED-DYED
34	✓	-	✓	✓	✓
80	✓	✓	✓	✓	✓
155	✓	✓	✓	✓	✓
MICRO	✓	-	✓	✓	-
OTHERS	✓	-	✓	✓	-