



Government of Pakistan
Ministry of Textile Industry
1st Floor, Evacuee Trust Complex,
Agha Khan Road, F-5/1,
Islamabad

No. 8(13)TID/11-P-II

Islamabad: Friday, October 21, 2011

Subject: **SFDAC FACILITIES FOR INNOVATION AND PROMOTION OF VALUE ADDED PRODUCTS.**

Dear Sir,

Synthetic Fibre Development & Application Centre (SFDAC) was established in March 1994 by the Federal Government in collaboration with UNDP/UNIDO at Korangi Industrial Area, Karachi to help the industry, especially in the promotion of manmade fibers and export of value added textiles.

2. The Centre provides services related to manmade fiber and filament to industry in areas such as:-

- Product development
- Human resource development,
- Quality control/ testing of materials,
- Testing facilities for textile chemicals and auxiliaries
- Evaluation and certification of textile products meant for export.

3. SFDAC facilities can meet the industry demands of innovation and development of textile raw materials, intermediates and textile products such as Chips, Filament Yarn, Woven/knitted Fabrics Fibres, Spun Yarn, and Garments.(Detailed profile is attached herewith)

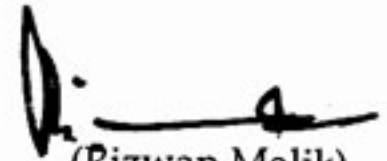
4. Synthetic Fibre Development and Application Center SFDAC presents its facilities (which are one of its kinds under one roof) for use of industrial sector for above mentioned activities. Opportunities for collaboration exist in the following, among other, areas:

- to carry out research, improve technical capabilities and increase productivity.
- For developing value added products
- For increased awareness and dissemination of information to maximize manmade fiber and filament in downstream value added industry.

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5. A meeting to be chaired by the Secretary, MINTEX will shortly be convened to discuss the possible avenues of collaboration between SFDAC and the private sector. In the meantime, your kind cooperation and favourable response is solicited.

Yours sincerely,



(Rizwan Malik)
Joint Secretary (Policy)
Ph. 051-9215657

List Enclosed

Copy to the Chief Executive Officer, SFDAC, Karachi.

Government of Pakistan
Ministry of Textile Industry

List of Addresses

Sl. No.	Address
1.	The Chairman, Filament Yarn Manufacturers Association, 104-106, Hotel Imperial Bldg., 1st Floor, M.T. Khan Road <u>Karachi</u> Phone: 021-35685443 Fax: 021-35687939
2.	Mr. Wiqar Malik, Chief Executive Officer, ICI Pakistan Limited, ICI House, 5 West Wharf PO Box 4731, <u>Karachi-74000.</u> Ph. 021-2313717-22 Fax 021-2311739
3.	Mr. Nooruddin Feerasta Chief Executive Rupali Polyester Limited, 241-242 Upper Mall Scheme, Anand Road, <u>Lahore-54000</u> Ph. 042-5713101-4 Fax 042-5713095-6
4.	Mr. Mohammad Naeem Mukhtar, Chief Executive Officer, Ibrahim Fibres Limited, Ibrahim Centre, 1-A, Ahmed Block, New Garden Town, <u>Lahore.</u> Ph. 042-5869151 Fax 042-5864915
5.	The Chief Executive Officer, Dewan Salman Fibre Limited, 2nd Floor, Block A, Finance & Trade Center Shahrah-e-Faisal, <u>Karachi,</u> UAN#:(92-21) 111-DMG-111 Fax#:(92-21) 35630863
6.	The Chief Executive Officer, Pakistan Synthetics Ltd, 3rd Floor, Karachi Dock Labour Board Building, 58-West Wharf Road, Karachi-74000 Ph. 021 231 4450, Fax 021 231 0625
7.	The Chief Executive Officer, Gatron (Industries) Limited, 8 th Floor, Textile Plaza, M.A. Jinnah/Dunolly road, P.O. Box No.5801, <u>Karachi-74000</u> Ph.021-2417171, UAN 111-71-71-71 Fax 021-2416532

8.	<p>The Chief Executive Officer, NOVATEX Limited, 4th Floor, Textile Plaza, M.A. Jinnah/Dunolly road, P.O. Box No.5801, <u>Karachi-74000</u> Ph.021-2417171, UAN 111-71-71-71 Fax 021-2416532</p>
9.	<p>The Chief Executive Officer, Lotte Pakistan PTA Ltd EZ/1/P-4, Eastern Industrial Zone, Port Qasim, <u>Karachi.</u> Telephone +92(0)21-34726005 / 34726010 UAN: 111-782-111 Fax +92(0)21-34726004</p>
10.	<p>The Central Chairman, Pakistan Hosiery Manufacturers Association, PHMA House, 37-H, Block-6, P.E.C.H.S., <u>Karachi.</u> TEL # +92-214544789, 4522685, 4522769 Fax # 4543774</p>
11.	<p>Mr. Adil Butt, Zonal Chairman, Pakistan Hosiery Manufacturers Association, 33-D, New Muslim Town, <u>Lahore</u> Tel # +92-42-5833868, 5830694 Fax # +92-42-5832213</p>
12.	<p>Mr. Ijaz A. Khokhar, Chief Coordinator, PRGMEA House, 343-A, Bhabrra Market, Main Ferozpur Road, <u>Lahore.</u></p>

Profile Of SFDAC

Introduction

Synthetic Fibre Development & Application Centre (SFDAC) was established in March 1994 by the Federal Government in collaboration with UNDP/UNIDO at Korangi Industrial Area, Karachi to help the industry especially in the promotion of export of value added textiles.

The Centre provides services to industry in areas such as product & human resource development, quality control/ testing of materials, evaluation and certification of textile products meant for export.

Services offered

SFDAC offers comprehensive testing facilities for :

Textile raw materials, intermediates and textile products such as:

Chips, Filament Yarn, Woven/knitted Fabrics Fibres, Spun Yarn and Garments

Leather products

- **testing facilities for textile chemicals and auxiliaries.**

MAJOR DEPARTMENT OF SFDAC

SFDAC has following major departments to run its operation:

Synthetic Fibre Department

- 1. ECO-Textile Laboratories**
- 2. Textile Department**

1-Synthetic Fibre Department

The Polyester Fibre is the largest and the most promising item among the man-made Fibres as it is widely accepted among the Textile Fibres which is offers a remarkable combination of favourable physical and chemical properties which are not found with any other Textile Fibre.

By realizing the importance of Synthetic Fibre to Textile Industry, Polyester Department of SFDAC can help the Industry in the production of value added Textile products by using standardized conditions of production.).

Facilities at Synthetic Fibre Department SFDAC

1)Primary Melt Spinning Plant

Polyester Fibre Spinning Plant for (POY) consist of Melt Spinning equipment, which includes as:

Crystallizer

- **Dryer**
- **Extruder**
- **Pyrolysis Oven**
- **Spin Pack & Spinnerets**
- **Quenching Chamber**
- **Take-up Machine**
- **The Center has a Polyester Staple Fibre Pilot (Proto-type) Plant facilities for Primary Spinning and**

2) After Treatment(Stretching) Plant of Rieter-Automatic GMBH (Germany)

Fibre After Treatment / Stretching Plant consist of Yarn (POY) Stretching for Staple Fibre. The processing equipment includes ;

Creel

- **Stretching Rollers**
- **Streching Bath**
- **Hot Air Oven**
- **Heat Set Rollers**
- **Streamer**
- **Crimper**

- **Continuous Drying Section**
- **Cutter**
- **Balling Press**

The Plant is Semi-Auto configuration and can be used for different types of Polyester Fibres manufacturing.

Services Offered

SFDAC focuses on “Technological Innovation” in Polyester Staple Fibre. For this tests can be performed to achieve Desired end results, such as of;

Tenacity,

- **Elongation,**
- **Denier,**
- **Drawing (Stretching),**
- **Oil Pick-up,**
- **Heating & Cooling Speeds,**
- **No. of Crimps,**
- **Color or Dope of dyeing,**
- **Fibre Length,**
- **Pack Modifications,**
- **Spin Finishes Modifications**
- **Moisture Content,**
- **Fused Fibre, Over Length Fibre etc.**
- **Production of Super Tenacity Staple Fibre**
- **Recycling of the Degraded Polymer into the Chips**

Benefit of Processes at SFDAC

The main objective of the institute are to provide a quality education and services directly required for the industrial up gradation. other benefits include;

- **Super Tenacity Staple Fibre** is a very high Tenacity yarns are used for the production of fabric for the Industry such as Belts, Twines, Heavy Industrial Cloths, Special Parachutes can be produced by utilizing services of SFDAC. For this purpose Intrinsic Viscosity(I.V) of Polyester Chips will be used to produce Super Tenacity Staple Fibre.
- The Degraded Polymer can be converted into the Chips by recycling and it can be further processed for their applications at SFDAC to achieve the results. At present these chips are being put into low value products but at SFDAC these degraded chips can be processed for R & D and Technology Development Work. Which can be used for the carpet Industry.
- By this existing facility of SFDAC, Polyester Fibre Industries can utilize the Polyester Fibre Spinning and After Treatment Plant and other hardware of SFDAC to convert their waste to value added products.
- The Spin Finish is often the controlling factor which greatly effects in final Yarn Quality, Weaving & Knitting Characteristics, Cloth Quality and even Dyeing.
- The SFDAC is ideally covers all future aspects of man-made Fibre Industry particularly Polyester Staple Fibre including production of Polymer, Staple Fibre, Filament Yarn, Textured Filament, Twisted Filament, FOY, D-Tex, POY, DTY, Dope Dyed Colored Fibre, Micro Fibres, Bicomponent or Conjugated Fibres, Color or Dope Dyed Fibres, and different shaped Fibres e.g. Trilobe, Hollow, Round, Triangular, U-Shaped, C-Shaped etc.

- **Synthetic Fibre Development and Application Center is able to enhance the competitiveness of products in global market by ensuring top quality products and productivity gains maximizing the utilization of the SFDAC resources and Developing Innovative new Technologies.**
- **Synthetic Fibre Development and Application Center SFDAC is the only facility of its kind (pilot Prototype Plant). The pilot (Prototype) Plant of Polyester Staple Fibre may run for the various polyester Fibre Plants of Pakistan and abroad as their pre-test run and setting parameters for their commercial production. Trainees from polyester Industries could also take advantages to enhance their professional capabilities on this Proto-type (Pilot) Plant.**

Utilization

Present pilot(Proto-Type) Plant of Polyester Fibre Department could be utilized to produce different types of fibres as:

Colored Fibres

- **Semi-dull Fibres**
- **Dull Fibres**
- **Golden Fibres with degraded PET chips**
- **Varying the length of Fibre to suit the blend requirement of our local cotton**
- **Different Shaped Fibres**

2-ECO TEXTILE LABORATORIES

ECO-textile laboratories were set-up at SFDAC with the help of Export Promotion Bureau and funding from Export Development Fund was provided, thus broadening the scope of the Center.

The establishment of ECO Textile Laboratories are the first of its kind in Pakistan at SFDAC. The equipment to make it compatible with the most prestigious labs of

Europe. No other lab in the Country besides Eco-Textile Laboratories at SFDAC has such a comprehensive range of testing facility under one roof. The labs are available for testing of not only Azo dyes, but also a range of other test

Equipment available at ECO Textile Laboratories

SFDAC covers wide range of tests. Eco Textile Laboratory is equipped with the state-of-the-art equipment such as:

Atomic Absorption Spectrophotometer

- Gas Chromatograph Mass Spectrometer
- Gas Chromatograph
- Fourier Transform Infrared Spectrometer
- High Performance Liquid Chromatograph
- UV/VIS Spectrometer
- Xenon-Arc Light Fastness Tester
- Statimat-M
- Uster 3.
- Nu-Martindale Tester.
- Vibromat-E
- Fafegraph-M
- Perspirometer
- Bursting Strength Tester
- Crock Meter
- Dyeing & Printing equipment
- Moisture Region Oven

Tests Offered at SFDAC

(All the tests are conducted according to international standards such as AATCC, ASTM, ISO, DIN, BS, JS and OEKO-TEX standard 100 (Germany Health Ministry Official Methods) etc., by qualified and skilled chemists and analysts.)

Prominent Tests

Azo dyes/Carcinogenic Aryl Amines.

Chrome VI.

Colour Fastness to Light and all the other Colour Fastness tests.

Dimensional Stability

Formaldehyde content

Heavy Metals

Linear Density

Nickel Release

PCP/TeCP

Pesticides/Insecticides

Pilling/Abrasion Resistance Test.

Tensile and Elongation Tests.

3-TEXTILE DEPARTMENT

Machinery installed in the textile department is industrial sized and state of the art. It is capable of manufacturing of yarn from synthetic fibres, cotton and their blends along with weaving of fabric on latest shuttle less loom. The spinning department consist of two blow rooms one for cotton and the other for synthetic fibre along with following equipment;

Blending Openers

- **WRZ Cleaner**
- **EL Cleaner**
- **Vertical Opener**
- **Sweep Jet Cleaner**
- **Vertical Weighing Chute**
- **Single Beater Blending Roller**
- **Flock Feed.**

Facilities available

- **Manufacturing of yarn from synthetic fibres,**
- **Manufacturing of yarn from cotton**
- **Manufacturing of yarn from blend of cotton and synthetic fibre**
- **Weaving**

- Blending natural and manmade fibre
- Producing Ring yarn cones

TRAINING COURSES

In addition to testing facilities SFDAC being a multidisciplinary textile institution having latest labs and industrial sized machinery under takes academic and training courses for textile industry. Trainees from textile Industries could also take advantages to enhance their professional capabilities on this Proto-type (Pilot) Plant. Besides BS in textile engineering, different short training courses are offered at SFDAC all year long , such as

Basic Textile/ Fibre Technology course

(Registered with Sindh Board of Technical Education, Karachi).

- Short Staple Spinning Technology Course (Registered with Sindh Board of Technical Education, Karachi).
- Course on Textile Wet Processing(Registered with Sindh Board of Technical Education, Karachi).
- Basic Course on Synthetic Fibre Technology
- Basic Course on Fabric Formation
- Basic Course on Physical Testing of Textiles.
- Quality Control of Textiles.Etc

Synthetic Fibre Development and Application Center SFDAC is the only facility of its kind (pilot Prototype Plant). The pilot (Prototype) Plant of Polyester Staple Fibre may run for the various polyester Fibre Plants of Pakistan and abroad as their pre-test run and setting parameters for their commercial production. Its Eco Labs have comprehensive range of testing facilities. And Trainees from textile Industries could also take advantages to enhance their professional capabilities in SFDAC.