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LIST OF ABBREVIATIONS

AP	Acidification Potential
BOD	Biological Oxygen Demand
CED	Cumulative Energy Demand
CFL	Compact Fluorescent lamps
cfm	Cubic Feet per Minute
COD	Chemical Oxygen Demand
CP	Carcinogens Potential
dB	Decibel Reading
DW	Demineralized Water
EEL	Energy Efficient fluorescent light
EGP	Egyptian Pound
EIA	Environmental Impact Assessment
EMS	Energy Management System
EP	Eutrophication Potential
E.T.P.	Effluent Treatment Plant
ETP	Eco-toxicity Potential
FFD	Fossil Fuels Depletion
GWP	Global Warming Potential
HID	High Pressure Metal Halide
HPMV	High Pressure Mercury Vapor
HPS	High Pressure Sodium lamp
kW/TF produced	Kilowatt per Ton Fiber Produced
kWh/Day	Kilowatt hour per day
LCA	Life Cycle Assessment
LCI	Life Cycle Inventory
LU	Land Use
MD	Minerals Depletion
m^3/month	Cubic meter per month
MT/Day	Metric ton of steam per day
OLD	Ozone Layer Depletion
PAH's	Polycyclic Aromatic Hydrocarbons
PDCA	Plan-Do-Check-Act
psig	pound per square inch
RIFP	Respiratory Inorganic Formation Potential
RO	Reverses Osmosis
ROFP	Respiratory Organic Formation Potential, Radiation
RP	Radiation Potential
rpm	Rotation per minute
SEM	Strategic Energy Management
T/TF produced	Ton Steam per Ton Fiber produced
TF/Day	Ton fiber per day
TiO_2	Titanium dioxide
TQM	Total Quality Management
VOC's	Volatile Organic Compounds
WTP	Water Treatment Plant

GLOSSARY

Acid Dyes	A dye which is a salt of a sulfuric, carboxylic or phenolic organic acid. The salts are often sodium or ammonium salts. Acid dyes are typically soluble in water, usually used for dark shade textiles(Hunge, 2008).
Acidification Potential	An indicator of acid rain phenomenon, is calculated and expressed in SO_2 equivalent(Goedkoop&Spriensma 2000).
Background Data	Data for generic materials, energy, transport and waste management systems. This data can be found in databases and literature (Goedkoop*et al.*,2008).
Basic Dyes	Also known as cationic dyes.This is a class of synthetic dyes, that act as bases and when made soluble in water, they form a colored cationic salt, which can react with the anionic sites on the surface of the substrate. The basic dyes produce bright on textile materials (Hunge, 2008).
Cradle to Gate Analysis	LCA analysis starting from obtaining the raw material till the end of the production process(ISO 14040: 2006).
Cradle to Grave Analysis	LCA analysis starting from obtaining the raw material till final disposal and waste management(ISO 14040: 2006).
Cut-off Criteria	A specific level amount of environmental significance associated with product system to be excluded from the study (ISO 14040: 2006).
Disperse Dyes	Originally developed for dying synthetic fibers, they include metallic compounds or polymeric substance (Hunge, 2008).
Dope	The polymer, either in molten form or dissolved in solvent, that is spun into fiber (US EPA, 1996).
Ecosystem Quality Impact Category	The used methodology in the current study considers the links between ecosystem and emissions causing acidification, eutrofication, ecotoxicity and land use(Goedkoop&Spriensma 2000).
Environmental Impact	Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's activities, products or services (ISO 14001: 2004).
Foreground Data	Refers to very specific data (case study data) needed to

	model the system (Goedkoop*et al.*,2008).
Global Warming Potential	Represented by climate change, is taken into consideration as an indicator of greenhouse effect, and is expressed in CO_2 equivalents(Goedkoop&Spriensma 2000).
Human Health Impact Category	The used methodology considers the links between human health and emissions causing respiratory effects or cancer, the ozone layer effect, and the greenhouse effect(Goedkoop&Spriensma 2000).
Impact Category Indicator	Class representing environmental issues of concern to which LCI results may be assigned (ISO 14040: 2006).
Landfill Site	The location where solid waste is buried underground (ISO 14001: 2004).
Leachate	As rainfall falls onto landfill sites, it dissolves a whole manner of toxins from the deposited waste, which should not be allowed to enter any groundwater or controlled waters such as streams and rivers (ISO 14001: 2004).
Life Cycle Assessment	Consecutive and interlinked stages of a product system, from raw material acquisition or generation of natural resources to final disposal and waste management. (ISO 14040:2006).
Life Cycle Impact Analysis	Phase of life cycle assessment aimed at understanding and evaluating the magnitude and significance of the potential environmental impacts of a product system (ISO 14040: 2006).
Life Cycle Inventory	A list of emissions, resource uses, land use, etc. that are collected, before impact assessment is applied (Goedkoop*et al.*,2008).
Mega Points (mPt)	An expression used to evaluate the impact categories, the impact of a product or process, more points mean worst environmental burdens (Goedkoop*et al.*,2008).
NO_x	Refers to the several oxides of nitrogen where 'x' is a variable number (ISO 14001: 2004).

PDCA cycle	A four step cycle for problem solving and continues improvement, includes: 1) planning (definition of a problem and a hypothesis about possible causes and solutions), 2) doing (implementing), 3) checking (evaluating the results), 4) action (back to plan if the results are unsatisfactory or standardization if the results are satisfactory), (Moen& Norman, 2009).
Single Score Indicator	Presents one score used in LCA that expresses the result of the cumulative inventory list in one indicator (Goedkoop*et al.*,2008).
SO_X	Refers to the several oxides of sulphur where x is a variable (ISO 14001: 2004).
Spinnerette	A spinnerette is used in the production of all man-made fiber whereby liquid is forced through holes. Filaments emerging from the holes are hardened and solidified. The process of extrusion and hardening is called spinning (US EPA, 1996).
Staple Fiber	Lengths of fiber made by cutting man-made fiber tow into short (1- to 6-inch) and usually uniform lengths, which are subsequently twisted into spun yarn (US EPA, 1996).
Tow	A collection of many parallel, continuous filaments, that are grouped together in a rope-like form having a diameter of about one-quarter inch (US EPA, 1996).
Weighting	The process in which the various indicators, resulting from an LCA study, are aggregated in one figure through the use of subjective weighting factors (Goedkoop*et al.*,2008).