

**SCHOELLER SWITZERLAND**  
**Innovation and Ecology Unite to Produce Beautiful & Functional Textiles**  
**Without Harming the Environment**

**Schoeller Textil AG – A company whose tradition is based on innovation**

The story of Schoeller Textil AG reflects to a large extent the history of the Swiss textile industry. Expansion and contraction have characterized its history. Rudolph Schoeller founded Schoeller® in 1868. By 1954 the company had expanded to include factories in five different locations. It specialized in the new form of stretch fabric, which was regarded as the epitome of a dynamic, modern lifestyle at that time. The economic crisis of the 1970's followed and the company was restructured to address the climate. As a result, all of the company's activities were concentrated in the main plant in Sevelen. A cutting edge company known for its sophisticated, functional fabrics was developed and refined.

**Environment**

For many years Schoeller has been aware of its responsibility to man and his environment. According to Hans-Jürgen Hübner, Managing Director of Schoeller Switzerland, the company has been using tested, first class raw materials, chemicals, and dye-stuffs for production for many years. "The consumer has been confused with a multitude of expressions used to define ecology. Terms such as natural fibers, natural dyestuffs, dyestuffs, toxicologically harmless chemicals, etc have been used for some time now. However, with the Oeko-Tex Standard we are now in a position to present the harmlessness of our fabrics in an objective manner. This is why we insisted on having the entire range tested in order to speak reliably about fabrics that meet environmental requirements and that are physiologically harmless. Our fabrics are ultimately made into sports and leisure wear products and therefore, a pleasant feeling against the skin is very important" he said.

**Textile Ecology**

Textile ecology can be divided into three categories:

- **Ecology of Production**  
This includes the production and manufacturing processes of fibers, textiles, and clothing. Reasonable conditions must be observed as to clean air and water standards, waste disposal and acoustic insulation.
- **Human Ecology**  
This deals with the chemical effects which textiles may have on a person's body. Substances that might have a negative impact on a person's health are thoroughly tested.
- **Ecology of Disposal**  
This refers to the disposal of textile products (recycling, further use, nonpolluting decomposition, or thermic disposal). The disposal method may not endanger the air.

*More.....*

## SCHOELLER SWITZERLAND ECOLOGY CONT.

### **Oeko-Tex Standard 100**

The Oeko-Tex Standard is primarily aimed at the requirements of human ecology. This certification assures the consumer that the product is ecologically harmless to man and does not contain any substances that might have a negative impact on health. Schoeller Switzerland is the world's leading supplier of fabrics for sports, leisure, and protective work clothing. It is the first Swiss company in the textile business to have had its entire range of products tested and to have consistently adjusted its supply and production to the requirements of the Oeko-Tex standard, which is accepted throughout Europe.

Based on the initiative taken by the Textile Research Institutes in Hohenstein and Vienna, a standardized European test process has been developed, which makes it possible to objectively evaluate qualities. The standard includes analyses of certain substances that are harmful to a person's body and in each case, establishes compulsory limiting values. If a textile product conforms to the conditions fixed by the standard it may be given the Oeko Mark "Confidence in Textiles, passed for harmful substances according to Oeko-Tex Standard 100". An independent textile institute makes the tests for each and every country. The Oeko-Tex Association is now represented in the following fourteen European countries: Austria, Italy, Germany, Switzerland, France, Belgium, Holland, Luxembourg, Denmark, Sweden, Norway, Portugal, England, and Spain. Approximately six hundred lines of products have thus far been awarded certification.

### **Ecology**

Switzerland takes a leading role on a global basis due to tough environmental laws and standards. Because of this fact it is necessary to make a considerable financial investment to begin a program of textile development and production in this country. Some examples are as follows:

#### Regulation regarding the prevention of air pollution:

- This law which was enacted in 1992 dictates specific ambient standards for emissions and pollution from the release of all types of exhaust gases into the atmosphere. These gases include nitric oxide (NOx), carbon monoxide (CO), Volatile Organic Components (VOCs), soot, etc. It also applies to the energy requirements or the efficiency of the plant.

The ambient standard is particularly low in Switzerland in order to ensure that the air is kept as clean as possible. On a global basis Switzerland and the Netherlands are the most stringent in this area. For an oil heating system for example, the limits are as follows:

\*Nitric oxide – Nox=120mg/m<sup>3</sup>

\*Carbon monoxide – CO=80mg/m<sup>3</sup>

Once a year, the exhaust gas values of the installation (i.e. Low Nox burners) must pass inspection and are checked by heating system inspectors.

*More.....*

## SCHOELLER SWITZERLAND ECOLOGY CONT.

### Law for the prevention of water pollution:

- This provision controls the comprehensive protection of bodies of water (lakes, rivers) and the drinking water supply of the population. Again, strict limits have been set (pH, conductance, CSB, etc) for the discharge of polluted water. The costs for purification are calculated according to the "polluter pays" principle; the greater the degree of pollution, the higher the charges.

### Heat Recovery

- Although not required by law, this is a good method to use in production due to economical influences. With the use of heat exchangers, up to 1.6 megawatts of energy are recovered from the cooling water as a result of the dyeing works and the exhaust air from the fabric stretching frame and the hot water boiler. This directly heats water to 60 degrees Centigrade.

### Water Recycling

During the dyeing process, a variety of heavily polluted effluents are created which is disposed of and are either reused or recycled.

- Heavily polluted water is taken to the new oxidation reactor for pre-purification
- Medium to slightly polluted water is passed to the local sewage treatment works
- "Clean" water is directly re-used in the dyeing works (recycling) This one usage alone saves the dyeing works up to 30% of the water

### **Economy through ecology**

Schoeller is blazing an innovative path in terms of environmental concerns. Raw materials, which are harmful to the environment or may cause allergies were replaced by environmentally compatible materials many years ago. The company found that it was possible to halve the amount of dirt in wastewater through the installation of an oxidation reactor in January 1997(a global innovation). In addition, the reactor minimizes operating costs as the reactor runs without further energy consumption, eliminates sludge production, and the oxidation process eliminates 80-90% of the non-biodegradable dyestuff. Also, the company is now using a new dyeing machine, which will reduce water usage by 10% for comparable dyeing processes. As a result electricity is reduced because less water has to be heated and less colorants are used.

As we go forward into the new millennium the demand for innovative and flexible environmental procedures will only increase due to increasingly stringent environmental laws and also economic concerns. Continually diminishing water resources on a worldwide basis are forcing corporations to develop and maximize new efforts, strategies, and solutions to deal with this complex situation.

*\*\*Please include registered trademarks in all text*

--XXX--

### **Further Information Please Contact:**

**Lynn Belmont  
Schoeller Textil USA, Inc.  
2400 Westlake Avenue N.  
Seattle, WA 98109  
206-286-8968  
belmont@schoeller.corpusa.com  
www.schoeller-textiles.com**