



## **Maximum quality with maximum responsibility – AMANN Environmental Management**

### **Only the best**

High standards are expected of today's high efficiency sewing and embroidery threads, especially with regard to their tensile strength, elasticity and colour fastness – quality standards stimulated by global market demand in addition to our own research projects as one of the leading manufacturers world-wide setting benchmarks with innovative products.

Applications for our sewing threads are extremely wide, varying from clothes to airbags, from cabriolet tops to clean-room technology, from technical textiles to cable sheathing, from food to aircraft construction. Just as wide-spread is the range of custom-made products – and the corresponding production processes and raw materials used.

### **Raw materials for high-performance products**

Natural, renewable raw materials are limited in their fields of application – although cotton is still used in some products. Synthetic fibres, namely polyester and polyamide, form the indispensable raw material basis whilst demonstrating acceptable features with regard to ecological balance.

In a direct comparison, the eco-balances of synthetic fibres and their production processes are much more favourable than those of cotton products, which are anything but positive in view of the demands on water consumption and land use, pesticides, cleaning and finishing.

### **AMANN LIFECYCLE THREADS**

Consequently AMANN takes advantage of all opportunities for the ongoing optimisation of the eco-balances in its sewing thread products. The new brand AMANN LIFECYCLE THREADS, which has been launched recently, covers products made of organic cotton and recycled polyester.

### **Continuous optimisation of production processes**

For years, we have made the highest demands on the ecological profile of our production – being a leader here too. Through continual research and development activities, we are optimising the eco-balance of our production processes. One of our main investment focuses is our dyeing technology.





## Less is more – resource utilisation and production processes

### Total energy balance

Total consumption of primary energy has been reduced by approx. 20% at our most important production sites over the past 6 years. Use of gas has significantly increased the efficiency of our boilers from 65% to 90% and has reduced emissions substantially.

At its biggest production site in Augsburg, AMANN has made a clear statement towards ecology: 27% of its power requirement is sourced from its own hydropower plant – this saves the corresponding quantity of fossil fuel.

### Dyeing technology

With regard to the dyeing technology, which is an important aspect of thread production in view of ecology, the continual improvement of processes, raw materials and machinery over the past 10 years has produced the following significant results:

Savings in fresh water -	more than 40%;
Reduction of waste water -	more than 30 %;
Reduction of dyestuff consumption -	about 20%;
Reduction of dyeing additives -	about 30 %;
Reduction of primary energy consumption -	about 40 %;
Dyeing tube recycling -	100 %;
Elimination of solvents.	

The AMANN GROUP has achieved these results by concentrating on physiologically harmless dyestuffs that are in accordance with Öko-Tex Standard 100 and the strict German regulations regarding consumer goods (Bedarfsgegenständeverordnung).

### Thermal energy management

From 2005 to 2008 projects for a further optimisation of the thermal energy management in the dye house were carried out at the Augsburg site. The successful results are currently being implemented at other sites as well.





## **REACH**

To protect health and the environment the European Union enacted an ordinance called REACH on June 1st 2007 which regulates the registration, evaluation, authorisation and restriction of chemical substances. Therefore each used chemical is checked for and documented regarding its toxicologic and eco-toxicologic characteristics.

AMANN supports REACH and advances the protection of customers and the environment by this way.

We are aware of our responsibility in close cooperation with our suppliers and assure that all necessary safety measures are taken as well as critical chemicals are not used in the production process. Hence all AMANN threads including finishing consist of nonhazardous substances and won't produce any risks for men and the environment by use.

## **Certification**

AMANN GROUP has been certified under DIN ISO 14001 since 2000 which is the international environmental management standard that establishes and independently audits a continuous improvement process with regard to environmental parameters.





## **The squared result of quality and ecology – the product range**

### **Raw materials**

The most important raw materials for AMANN products are cotton, polyamide and polyester. The synthetic fibres are sourced from leading producers who also fulfil the highest demands with respect to the environment.

Cotton is used as a simple fibre yarn and also as a cover for high-strength polyester cores where it provides an extremely soft surface.

### **AMANN LIFECYCLE THREADS made of recycled polyester**

In a growing market for recycled polyester the availability of the high-tenacity qualities required for sewing thread remains relatively limited. In close cooperation with producers and international textile laboratories, the quantities of suitable material have been carefully examined to see if they meet our high demands, before being introduced for new developments.

With a textured sewing thread, a multifilament product and an embroidery thread, three products made of 100% recycled polyester have just been rolled out to the market.

### **AMANN LIFECYCLE THREADS made of organic cotton**

A sewing thread made of organic cotton will soon be presented to the market under the LIFECYCLE brand too.

In addition, in a series of comprehensive tests we are examining other natural renewable raw materials and biopolymers to see if they meet our high quality requirements.

### **Öko-Tex Standard 100**

All AMANN products are tested in accordance with Öko-Tex Standard 100. This important and internationally recognised testing and certification system ensures that the textile products bearing this label do not represent a health hazard with respect to toxic substances.





## Re-cycling instead of Re-using – types of make-up and packaging

### King-spools and Cones

The available technologies and resources for the production of king-spools and cones and for labels and packaging material allow us to optimise our products under completely ecological criteria.

For king-spools and cones AMANN therefore relies on the principle of Re-cycling instead of Re-using. The following criteria have been decisive:

Weight, and thus consumption of the raw material, can be minimised. Re-usable products would require much more material to guarantee stability and damage, which would exclude a second winding process, could still not be avoided. In addition, the transport and handling costs for return after use would be extremely high.

Therefore, AMANN uses easily recyclable raw materials, mainly polypropylene – for which well established recycling systems exist in practically all production countries. King-spools and cones are marked with the relevant raw material code and can therefore be sorted correctly.

### Labelling

Because of the ecological advantages, the re-cycling principle is also applied in the use of paper-based components.

Utilisation of labels is further minimised through optimised make-ups – plastic thread carriers are either printed directly, without label, or materials that present no problem in the re-cycling process are used.

### Packaging

Outer packaging and transport packaging are based exclusively on recyclable cardboard and corrugated cardboard – materials that are part of an established and controlled chain for the disposal of raw materials.

The volume of packaging materials is further reduced by the use of recyclable polyethylene cling-foil which can be incinerated later leaving no residues. The foil helps to bind together larger numbers of shipping cartons which can then be despatched and handled as a single unit.

