

HAGS Environmental Information

HAGS is one of the leading manufacturers of products for the outdoor environment. HAGS develops and manufactures play equipment and street furniture and has one of the largest product ranges in Europe. Development and most of our production is carried out, using the latest methods, at our plant in Aneby, Sweden, covering 30000 m² of industrial space.

HAGS has approximately 230 employees in Sweden. Subsidiary companies are situated in Germany, Great Britain Spain, and Denmark. The sound of children playing happily in a successful play area is an indication that we have achieved our objective. That sound is a positive sign that the key factors involved have come together in perfect harmony. Our aim to furnish the environment with function, safety, quality and pleasing design has become a reality. To achieve success the materials used must be in harmony with the surrounding environment, not to mention the environment at large. HAGS products are designed to blend in with the existing environment.

Over the years our work with the outdoor environment has reached yet another dimension: an ecological responsibility. We have therefore set as an objective to manufacture and sell our products in a way that will minimize the impact on the environment.

With the resources available to us we want to contribute to the possibility for our children and our grandchildren to be able to play in a healthy environment. Historically, HAGS has been concerned about the environment from an early stage. For many years we have been using metal free oil impregnation avoiding the use of heavy metals.

HAGS

Inspiring a new generation

ISO 14001 ENVIRONMENT

How does HAGS contribute to a better environment?

HAGS operations have always been focused on the complete environment for children and adults. The significance of green areas cannot be emphasized enough. Nature, reinforced with special play equipment constitutes the best play environment. Nature, water and air are necessary conditions for all forms of life. Caring for the environment goes without saying, but to actually do something to solve environmental problems takes knowledge, a lot of work and is a big task for anyone. At HAGS we take the environmental issues very seriously. But how do we know that our work will really lead to a better environment?

ISO 14001 certified

In 1997 HAGS was certified according to ISO 14001, a structured and methodical way to work for a good environment. This is in addition to our ISO 9001 certification which we received already in 1993. We are convinced that quality, as well as environmental issues must be treated in a clear, structured way with great sincerity if you want to reach your goal. So, step by step we have worked with each section of our operation, evaluated, and created a good environmental program to minimize our impact on the environment.

We endorse a culture of environmental awareness and implement action plans to ensure that our working practices and ethics of operation are considered for their affect on a sustainable environment. An important part of our work for a better environment is to set environmental demands on ourselves and our suppliers and other co-operators in order to avoid environmental negative chemicals, material or processes. Each year ISO 1400 revisions are performed at HAGS confirming that the goals are met, in order for us to keep our certificate.

In our environmental policy you can see how we at HAGS go about in our aim for a better environment.

WOOD PROTECTION

HAGS has during the years developed a well adapted technique for timber protection:

First of all we design all wood components to be well drained or protected in order to avoid high levels of moisture. Secondly, all wood components are placed at a minimum of 70 mm above ground in order to avoid direct contact to soil, and by doing so we can use a soft and mild impregnation.

Finally the wood is vacuum impregnated confirming to the standards EN 351 class NP3.

The impregnation, containing biological degradable active and non-metal solvent, penetrates the surface area of the timber to a depth of 5mm, in the end grain surfaces 50mm.

All wooden components are covered with a water based glaze in a 2 step flow coating process, which not only colours the wood but also provides a long lasting protection against mould. For the furniture range we use an even milder type of water based ground oil as mold protection. Covering topcoats are occasionally used for the play and park products. Certain furniture can be ordered only treated with the ground oil.

Also the glaze is composed of biological degrading components (binder, mould and fungicide preventative). Thus, the remaining products can be burned as any other wooden material and

no special disposal methods are required.

USE OF RESOURCES

Our computerised wood-cutting line optimizes the cutting of timber required and thus the waste is vastly reduced. It is estimated that through installing this line, a large volume of timber equal to about 100 Pine trees is saved each year.

Similar reductions of waste have been made through 'finger jointing' the raw material for UniPlay posts and HAGS furniture. Sometimes it has been difficult to persuade some customers about the strength of the 'finger joint', but in fact this joint is stronger than the timber itself. By using this method it is estimated that 600 trees are saved each year.

We also estimate that the introduction of computerised cutting of board materials saves some 100 birch trees each year.

All timber used in the manufacturing of HAGS products is supplied from FSC certified suppliers.

With regard to Steel constructions, HAGS have made great efforts to decrease the use of resources. Profiled steel in slides give the same strength using 10 - 15% less material. Using thin steel plate with high yield point instead of traditional thick steel with low yield point is another sample where modern technology contribute to reduce the use of resources. At HAGS, steel with high yield point is a standard material in order to reduce steel consumption. Another sample is the Litter bin 'Ellipse'. The shape of this bin, as the name imply, is elliptical to strengthen the construction. In addition the front of the bin has a deep pattern drawn into the material to increase the strength and allow the use of a thinner material.



HEATING

In 2008 HAGS changed its heating system from own boilers to water heating delivered in pipes from a local heating plant. By doing this we have been able to increase the portion of bio mass based fuel from 75% to 90 %. At the same time the emissions of the dust in the chimney gas is significantly reduced when comparing our old boiler with the new district heating boiler with an environmentally friendly cleaning process. HAGS invested in a new heating system to achieve low return temperature in the heating system and reduce heat losses. Of the total heating requirements, 90% is supported by using sustainable bio mass (wood) based fuel. The remaining 10% is provided by "Green" electric supply, from a plant with wind or water power only.

SURFACE TREATMENT OF STEEL

Fastening devices and some steel components are surface treated through electro- or hot dip galvanization in modern plants. In many instances our customers require the steel components to be coloured and this is done exclusively through the use of powder coating. To improve rust protection and quality even more, and at the same time reducing transports and the use of zink, HAGS made great efforts during 2010 to implement a new generation of powder coating. No solvents will stream into the air we breathe. No paint overflow, only airborne powder in an endless circuit. The positive environmental effects of using powder coating are large both



Illustration: Korsnäs AB

internally and externally.

WASTE MANAGEMENT, PLANT IN ANEBY

Despite preventative waste reducing measures, approximately 20 cubic metres of waste are produced each and every month. In Aneby, HAGS was the first company to introduce waste sorting during 1990. At that time the fraction which was not possible to recycle was a major portion of HAGS total waste volume.

Since then a lot of efforts in waste management has taken place in Sweden and at HAGS in order to improve sorting in recyclable fractions and avoid the non-recyclable fraction. Gradually this fraction has decreased significantly and in 2007 it was less than 2% of HAGS waste volume!

Today sorting waste is part of the daily routine for HAGS personnel and in a lot of cases recycled waste is raw material for new products in Sweden.

WASTE MANAGEMENT OF PRODUCTS

The majority of HAGS components are designed to be separated to make further recycling of different material categories possible. Recycling methods to be used for each material can vary due to different national legislations. The table below indicates samples of recycling methods used in Sweden.

Wood	Energy production
Metals	Recycling
Plastic, massive	Recycling or energy production
Plastic, foamed	Energy production
HPL	Energy production

RECYCLING CONTENTS IN RAW MATERIAL

When designing products we try to use renewable raw material or raw material with recycling content. Wood is used in several of HAGS products. It is a renewable material and also contributing to reduce CO₂ gases from a green climate perspective. Wood coming from a sustainable supply chain with well managed forests is a good example of an environmental friendly raw material, see section suppliers above.

The steel we use contains a large extent of old steel scrap. By combining smart design solutions described above and the fact that steel contains recycled material steel is an acceptable raw material from an environmental perspective.

Aluminium is based on a limited recourse and takes a lot of energy to produce. In Sweden about half of the aluminium scrap is collected and new aluminium contains a large amount of old aluminium scrap.

HAGS uses different types of plastic material. EcoGrip is a type of plastic used by HAGS containing 92 % recycled post consumer polyethylene plastic. Other plastic material at HAGS are composed of virgin material that are limited resources. HAGS always strive to find new environmental friendly materials and as a step in that direction HAGS introduces during 2011 a new type of plastic material where use of crude material is vastly reduced. Additional detail including the weight and percentage of all raw materials used in each HAGS component is presented on our web site, www.hags.com.

TRANSPORT

HAGS environmental awareness accesses every company link, transport included. Still we need to use a considerable amount of transportation in order to supply the market and the emissions of green house gases related to transports from such is significant. Due to this fact all processes at HAGS are focused on reducing shipping volumes and putting pressure on transport companies to improve engines and fuels in order to reduce emissions.

In new product development volume compact design is mandatory since this reduces the transport volumes both through manufacturing, stocking and shipment to customers. When planning and confirming orders to different areas in Sweden and abroad, truck capacity and its



Illustration Ulf Swerin

schedules are crucial criteria when setting shipping dates.

SUPPLIERS

Environmental criteria play a major part in our decision when choosing suppliers. In order to improve and secure raw material and component supply from an environmental perspective HAGS has established HAGS Environmental Demands products. By these means we can distribute all necessary requirements and verify the full filling of the environmental demands. Environmental responsibility is not limited to the HAGS plant in Aneby, we must be sure our high standards are implemented in the whole supply chain.

PERMISSION

In Sweden all industrial operations are, by law and through authorities, categorized by its environmental impact. As a sample category B is related to operations with significant use of chemicals and emissions in air, water and land. HAGS has for a long time been categorized class C, which is related to our low use of chemicals and low emissions. Thanks to several initiatives, some of which are mentioned above, in August 2008, HAGS was graded in class U which is the lowest class possible and the best from an environmental perspective. This proves long term environmental work pays off both for us a company and for you as a customer.



Since HAGS markets electronical devices we have signed an agreement with the recycling company Elkretsen, to meet the WEEE- and battery directive.



All play products in the HAGS are TÜV certified. This means that they are designed in accordance with the european safety standard EN 1176.



The wood we use comes from suppliers that are FSC-certified. (Forest Stewardship Council) Products carrying the FSC label are independently certified to assure consumers that they come from forests that are managed to meet the social, economic and ecological needs of present and future generations.



HAGS uses recycable or renewable materials as much as possible.



HAGS are associated with REPA. This means that we fulfil the producer's responsibility both physically – by collecting and recycling, and administratively – by information and reports to costumers and authorities concerning the packing used for our products.



Since 1997 HAGS has been certified in accordance with ISO 14001, a structured and methodical way to work for a good environment. In each section of our operation we have created a good environmental programme to minimize our impact on the environment. We endorse a culture of environmental awareness and implement action plans to ensure that our working practices and ethics of operation are considered for their affect on a sustainable environment.

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