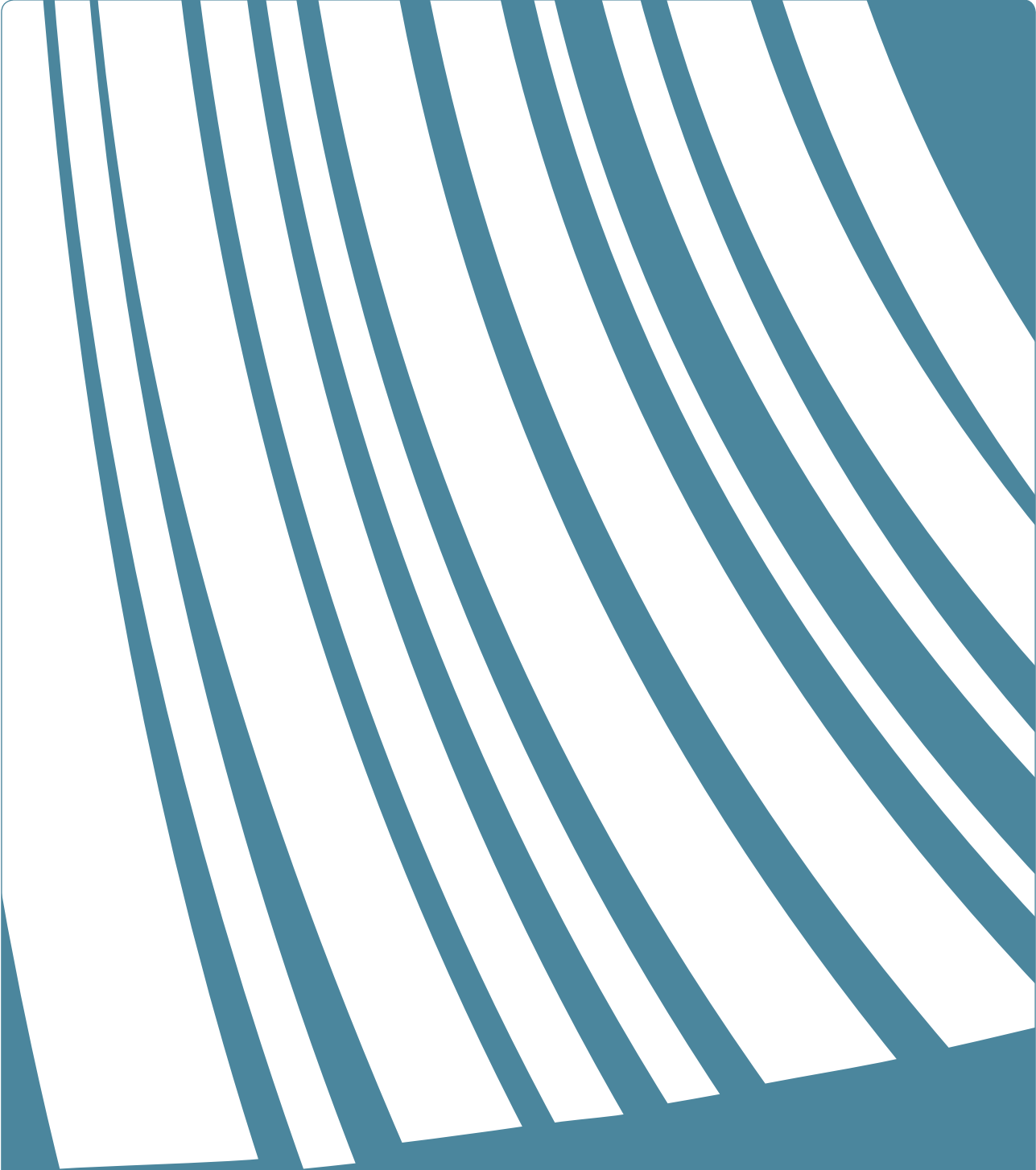




ENVIRONMENTAL DECLARATION

**INVERCOTE!**<sup>®</sup>

2011

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# INVERCOTE!<sup>®</sup>

## 2011

Based on data from the period 2011-01-01 to 2011-12-31

Product: Invercote family 180-400g  
Site: Iggesund Bruk, Sweden  
Company: Iggesund Paperboard AB

All the environmental parameters reported here are based on methods and procedures of measurement approved by the local environmental regulators. The figures include both pulp and paperboard production. The data below should be viewed in the full context of legislation and local circumstances such as the size and condition of the surrounding land and water.

### WOOD SUPPLY

All wood used for the production of Invercote is supplied by Holmen Skog, a business area within the Holmen Group to which Iggesund belongs.

The wood used is boreal pine, spruce and birch. Only Nordic tree species are used.

### PRODUCT COMPOSITION

Dependant on product and grammage the composition will vary.

|               |         |
|---------------|---------|
| Chemical pulp | 75-95 % |
| Coating       | 5-25 %  |

### SOURCING OF ENERGY



|                     |            |
|---------------------|------------|
| Electricity used    | 1185 kWh/t |
| Thermal energy used | 4784 kWh/t |

### EMISSIONS TO WATER

|                         |                      |
|-------------------------|----------------------|
| COD                     | 12 kg/t              |
| AOX                     | 0,14 kg/t            |
| Nitrogen                | 0,18 kg/t            |
| Phosphorus              | 0,01 kg/t            |
| Process water discharge | 81 m <sup>3</sup> /t |

### EMISSIONS TO AIR

|                                       |           |
|---------------------------------------|-----------|
| SO <sub>2</sub>                       | 0,30 kg/t |
| NO <sub>x</sub>                       | 1,70 kg/t |
| CO <sub>2</sub> (from fossil sources) | 198 kg/t  |

|                          |           |
|--------------------------|-----------|
| <b>WASTE TO LANDFILL</b> | 0,78 kg/t |
|--------------------------|-----------|

### ENVIRONMENTAL MANAGEMENT

Certified environmental management system according to SS-EN ISO 14001. In use in the production facility since 2001. Certified energy management system according to SS 62 77 50 since november 2005 . Certified for Chain of Custody (CoC) according to FSC and PEFC since april 2007.

All certifications by SP Technical Research Institute of Sweden

### HANDLING AFTER USE OF THE PRODUCT AND ITS PACKAGING

Product design and composition is such that material recycling (EN 13430:2004) or energy recovery (EN 13431:2004) can be done without limitation. Our baseboards are intrinsically biodegradable. For the quantification regarding composting, tests should be made on the final packaging after the converting process (EN 13432:2000).

### CONTACT INFORMATION

Olle Bergerstål, Iggesund Bruk, Sweden  
Telephone + 46 650 282 11, E-mail: olle.bergerstahl@iggesund.com

## WOOD SUPPLY

All wood used at Iggesund Mill is either certified in accordance with FSC or PEFC or meets FSC requirements for controlled wood. Invercote can be supplied certified in accordance with FSC or PEFC.

## PRODUCT COMPOSITION

Chemical pulp ensures that the product has a good hygienic standard as well as taint and odour neutrality. Chemical pulp is produced in an energy-efficient process that makes use of all parts of the tree. All pulp used in Invercote is made on site at Iggesund. The coating consists of clay, calcium carbonate and a binding agent in various combinations depending on the end product's properties and intended uses.

## SOURCING OF ENERGY

Both thermal and electrical energy are used in paperboard manufacture. More than 95% of the thermal energy – the steam – that powers the mill is produced from biofuel. The electricity purchased by the mill supplies 10% of the mill's total energy requirements. The mill is planning to eliminate all fossil carbon dioxide emissions and to become self sufficient on electricity.

## EMISSIONS TO WATER

Igesund Mill is situated on the shores of the Baltic Sea, which is classified as a highly sensitive marine ecosystem. The mill complies with the emissions levels set for it by the Swedish environmental authorities by continually measuring discharged water at about 20 test points. Iggesund constantly monitors the conditions of the marine ecosystems around the mill to ensure that their balance is not disturbed.

## COD

Chemical oxygen demand is a measurement of the amount of oxygen consumed in the decomposition of organic compounds. The presence of organic by-products such as bark and wood chips gives rise to a COD value. The Swedish environmental authorities set emission levels based on COD to be acceptable to the local conditions and the marine environment adjacent to the mill. As a result of an investment in a new effluent water treatment the level of COD was decreased by 31 percent in 2011 compared to 2009.

## AOX

Adsorbable organic halogen is formed in the pulp making process. High levels of AOX negatively affect marine organisms. Here, too, limits are set to be acceptable to local conditions and the marine environment adjacent to the mill.

## NITROGEN AND PHOSPHORUS

Nitrogen and phosphorus are elements that when present in large amounts contribute to the overfertilisation (eutrophication) of marine environments.

## PROCESS WATER DISCHARGE

The Iggesund mill is geographically located in an area of abundant water supply and there is no shortage of availability. All process water is re-circulated and re-used within the process a number of times. Before final discharge to the receiving water, process water is treated in a three step process which includes mechanical, biological and chemical treatment, a combination of treatment technologies considered as Best Available Technology.

## EMISSIONS TO AIR - SO<sub>2</sub> AND NO<sub>x</sub>

These normally arise from combustion processes used in the production of energy. They contribute to eutrophication, acidification and the creation of ground-level ozone. All emissions are regulated and monitored by the Swedish licensing authorities.

## CO<sub>2</sub> (FROM FOSSIL SOURCES)

Carbon dioxide is an invisible gas that occurs naturally but its increased emissions from fossil fuel use are contributing to global climate change. This figure indicates the emission of fossil CO<sub>2</sub> from the production of Invercote. The figure should not be confused with the far broader concept of carbon footprint, which encompasses much of the product's lifecycle. For information about Invercote's carbon footprint please contact an Iggesund representative in your market or visit [www.iggesund.com](http://www.iggesund.com).

## WASTE TO LANDFILL

Sending waste to landfill creates an unsustainable stress on local landfill facilities and is a growing environmental problem. In the production of Invercote we have systematically reduced our process waste to zero, with the very small balance coming from other mill activities where this waste cannot be reused or recycled. As a result, the Iggesund Mill has been deregistered from waste tax by the Swedish authorities.

