

ENVIRONMENTAL PRODUCT DECLARATION

Superseal S / ST

The Company

SealEco
P.O. Box 514
SE-331 25 Värnamo

Overview

The division develops manufactures and markets, rubber membranes and system solutions for waterproofing and is the market leader in Europe.
The most common applications are commercial roofing, water reservoirs, dam plants and waste tips. The organisation is certified in accordance with SS EN ISO 9001:2008.

Environmental work

The work is carried out according to the environmental policy, which has been adopted by SealEco with an environmental management system in accordance with ISO 14001:2004. The manufacturing organisation has a duty to report in accordance with the environmental protection act and is annually reported to the county administrative board in Jönköping.

The product

Area of use:

Watertight layer in roof coverings for low-inclined roofs and terraces.

Description

Superseal S/ST has a cross-linked polymer structure, which gives the product unique elasticity and unsurpassed ageing resistance, without problematic additives, in the most varying environmental and climatic conditions. Advanced polymer technology makes it possible to attain these qualities with thin membrane thicknesses. Long life combined with low weight and volume per installed unit gives a product very economical in resources in its whole life cycle.

Included material

EPDM	22%
Carbon black	32%
Filler	21%
Mineral Oil	21%
Resins	2 %

Additives	
Vulcanising agent	1%
ZnO	1%

The product does not contain chemicals from the Limitation or Allergy list issued by the National Chemicals Inspectorate.

Manufacturing

Raw materials are mixed to a compound in the form of slabs. The material is heated and calandered into two separate layers which are laminated together. Thereafter, a polyester fleece is laminated to the back of the sheet. After cooling, the rubber sheeting and a textile interlining are rolled up on a steel drum. The rubber is then cross-linked by vulcanising in autoclave. Thereafter the textile interlining and rubber sheeting are rolled out and separated. The material is reused. The rubber sheeting is inspected and packaged.

Waste disposal

Paper is gathered for recycling.
Other waste, approx. 20 g/m², goes to energy recovery and special land fill.
Environmentally dangerous waste approx. 0.7 g/m² goes to an authorised entrepreneur.

Discharge into water and ground

Nothing discharged into water and ground.
Cold water is circulated in the system.
Wastewater and storm water are connected to the sewer system of the municipality.

Discharge into the air

Vulcanisation fumes approx. 20 mg TVOC/m².

Energy

Electricity consumption approx. 1.1 kWh/m².

Distribution

Transport volume: approx. 200 m²/m³ load volume.

Production location: Värnamo/Sweden.

Method of transport: Lorry, Train, Ship.

Distribution forms

From factory direct to customer as well as via retailers. The deliveries are adapted for best cost-efficiency/use of resources.

Packaging

Every roll is rolled up on a cardboard case and packed in polythene bag. The rolls are then placed on their sides with roll support on a European pool pallet.

Packaging g/roll
Cardboard case: 750 g
Polythene bag: 85 g
Total approx. 25 g per m² installed product.
The company is affiliated to REPAREGISTRET AB.

The building stage

Superseal S/ST is applied to low-inclining roofs by pasting, mechanical fastening or equipped with gravel covering or cultivation culture. Splices are sealed using hot air. Loading pallets are part of the return system. Other packaging is pre-separated at source and recycled.

The usage stage

Use

No resources to maintain the watertight layer's function during use are required over and above the instructions and orders for the personnel treading upon the watertight layer. The rubber sheeting does not emit any measurable emissions.

Maintenance

The rubber sheeting does not require any maintenance over and above regular care and cleaning of the roof surface, roof rainwater outlets and storm overflows. Any damage is repaired with the same product.

Life span

Rubber sheeting has been used in sealing systems since the end of the 40's, often in very extreme environments and climates.

At plants still in use, there is rubber sheeting that after 50 years fulfils its original function.

Demolition

Deliveries of rubber sheeting for recycling from building demolitions must always be agreed upon.

- The sheeting must be clean of pollutants, metal parts and other foreign objects.
- The sheeting must be divided into manageable sizes and rolled up or folded together on a pallet.

Delivered material must be specified in accordance with the following:

- Supplier.
- The name of the project, the quality stamp and year of manufacture of the rubber sheeting.
- Amount in kg or m² per package as well as the total amount.

Residual products

The rubber sheeting's good ageing resistance makes it possible to utilise products in a number of ways after requirements in question.

Reusing

Sheeting applied with gravel covering or cultivation culture, i.e. without penetrating screws, can be used and reused in other buildings.

Recycling

If the sheeting is not too dirty, it can be ground down to powder and used as a raw product for manufacture of new rubber sheeting or as additives in plaster to increase elasticity and impact-strength.
In pyrolysis plants, gaseous fuel and carbon black are obtained from rubber.

Energy recovery

The rubber sheeting's heat value 30MJ/m² can be obtained through combustion in waste heating plants and cement kilns.

Waste products

Leaching and emissions do not occur.

Other information

This declaration gives information for a qualitative assessment of the effect on the environment. Our Quality & Environment Manager SealEco, phone +46 370 510 100, is at your service for further questions.



SUPERSEAL S/ST							
Qualitative record of the utilisation of resources and the effect on the environment							
Item	Part of life cycle	Type of energy	Raw materials		Emissions to		Effect on ground
			Renewable	Non-renewable	Water	Air	
1	Resources						
1.1	Raw materials/Extra materials	Electricity 0.25 Wh/m ²		EPDM 22% Carb. black 32% Filler 21% Resins 2% Mineral oil 21%	No	Dust	No
1.2	Additives < 5% of 1.1			Vulc. agent 1% ZnO 1 %	No	Dust	No
1.3	Recycled material			Rubber powder	No	Dust	No
1.4	Parent state for raw materials/additional materials Sweden/EU/The rest of the world						
1.5	Production	Electricity 0.85 Wh/m ²	Cotton textile	Polymer textile	No	TVOC 20mg/m ²	Disposal waste < 20g/m ²
2.	Distribution of product						
2.1	Place of production/Country, Värnamo/Sweden						
2.2	Method of transport, Lorry, Train, Ship	Oil, Diesel, Petrol, Electricity					
2.3	Distribution form	Oil, Diesel, Petrol, Electricity					
2.4	Packaging		Wood, paper	Polythene			
3	The building stage						
3.1	Building production	Electricity	No	Screws, washers, glue	No	TVOC	No
3.2	Building goods adaptation						No
4	The usage stage						
4.1	Handling	Not applicable	No	No	No	No	
4.2	Maintenance		No	No	No	No	
4.3	Life span						
5	Demolition						
5.1	Disassembly						
6	Residual products						
6.1	Reusing						
6.2	Recycling						
6.3	Energy recovery					SO ₂ , CO ₂	Ash
7	Waste products						
7.1	Landfill				No	No	No