

Material Safety Sheet in accordance with 91/155 EEC
and the rules of the Danish working environment legislation

Company:	ROCKWOOL A/S
Trade name:	Stone wool products from ROCKWOOL A/S based on the Roxul® 1000 fibres. Material Safety Sheet for Firebatts, Wired Mats, Pipe Sections, Industrial Wool and Universal Rolls.
Revised on:	2009-02-12. Replaces version of 2003-01-01.
Authorised by:	Health & Safety Manager Ben Verhoeff

2

1. Identification of the material and the supplier

1.1	Product: Generic name: Insulation consisting of stone wool based on the Roxul® 1000 fibre (HT stone wool)
1.2	Company address: Rockwool A/S Hovedgaden 501 2640 Hedehusene Denmark
1.3	If further information is required, please contact us Tel.: +45 4656 1616 Fax: + 45 4656 3011 E-mail: info@rockwool.dk Home page: www.rockwool.dk

2. Composition/information on ingredients

Mineral wool fibres to which binder has been added, which will in the hardening process turn into a thermally stable man-made material (Bakelite). Oil is added to make the products water repellent and to reduce the dust release.
Possible decomposition products: None under normal use.

Mineral wool: Man-made vitreous silicate fibres	CAS No.	Contents	Classification	R-phrases
	287922-11-6	90-99%	x _i	Irritating to skin

3. Hazard identification

3.1 Bio-soluble stone wool (Roxul® 1000 stone wool): EU has classified this mineral wool type as locally irritating (irritates the skin). High dust levels may irritate nose, mouth, throat and eyes. As to risk of cancer, this fibre is exempt from classification by EU, because it is bio-soluble.

4. First aid measures

Skin: If irritation occurs, do not rub or scratch. Rinse the skin under running water.
Eyes: If irritation occurs, do not rub the eyes. Rinse the eyes with water. Consult a physician if irritation persists.

5. Fire-fighting

Stone wool products from Rockwool A/S are non-combustible and therefore do not present a hazard in the event of fire.

5.1. Suitable fire extinguishing media	Water, foam, carbon dioxide or dry powder
5.2. Extinguishing media which must not be used for safety reasons	None
5.3. Combustion products	Carbon dioxide, carbon monoxide, water and tracer gases
5.4. Special personal protective equipment to be worn in connection with fire fighting	None in particular (only what is normally used in connection with fire extinguishing)
6. Accidental release measures	None

7. Handling and storage			
7.1	Handling:	Unpack stone wool on a firm and clean base at the place of use immediately before use. When cutting is required, use a sharp tool. High-speed cutting tools must always be provided with mechanical exhaust. Keep the work area clean. Ensure good ventilation. Dispose of scrap material and debris directly into disposal bags. Clean with the least possible dust release, e.g. by sweeping with water spraying or vacuum cleaning.	
7.2	Storage:	The products must be stored so that they are protected against damage, including the weather.	
8. Exposure control/personal protection			
When first heated, the organic binder starts a decomposition process in the temperature range of 175°-250°C. For instance at start-up of a boiler, 50-75% of the binder will burn off within the first 96 hours of operation, depending on the temperature of the boiler. During this period workers in the area should use a respiratory protection, which is effective to formaldehyde gases and other irritating matters such as ammonia and similar amine decomposition products as well as tracers. A strong degassing of binder (normally at temperatures exceeding 250°C) in a poorly ventilated room can result in smarting of the eyes and throat. In this case the use of a full mask respiratory protection is required.			
8.1.	Protection of the respiratory system	Use respiratory protection in connection with particularly dusty work. Use at least class P2 respiratory protection.	
8.2.	Protection of the hands	Use suitable protective gloves.	
8.3.	Protection of the eyes	Use eye protectors in connection with particularly dusty work.	
8.4.	Protection of the skin	Use special, dust-repellent work clothes in connection with particularly dusty work. (Loose-fitting work clothes possibly as a one-piece suit)	
9. Physical and chemical properties			
Material state:	Solid	Colour:	Grey-green
		Odour:	None
		Fibre density:	approx. 2.8 g/cm ³
pH of concentrate:	9-10 (CEN method, pH of water)		pH of solution for use: ÷
Melting point:	>1000°	Boiling point:	÷
		Flash point:	Non-flammable
		Steam pressure:	÷
Spontaneous ignition:	÷	Explosive properties:	÷
		Oxidising properties:	÷
Solubility in water:	÷	Solubility in grease:	÷
Distributing coefficient water:			
Other data:			
10. Stability and reactivity			
Situations to be avoided:	When mineral wool is first heated, formaldehyde and ammonia are given off from the binder. The decomposition starts slowly in the temperature range of 175°-250°C. The gases are observed as a pungent smell and a smarting of the eyes. In the event of a fire the decomposition products will be as expected of organic, carbonaceous materials, i.e. mainly carbon dioxide, carbon monoxide, water and tracer gases. It is important that there is at least a natural ventilation in closed rooms where the process temperature can reach 175°C or more.		
Materials to be avoided:	None		
11. Toxicological information (properties hazardous to health)			
11.1. Coarse fibres	Coarse fibres can cause itching and skin eruption. Mineral wool dust can cause mucous membrane trouble in the nose, mouth, throat and eyes. The trouble is due to a mechanical reaction to dust and coarse fibres and usually disappears a short while after the exposure to fibres and dust has come to an end.		

<p>11.2. Respirable fibres (Roxul® 1000 fibres) Generic name: (HT) stone wool High aluminium – low silicon</p>	<p>The mineral wool fibre Roxul® 1000 meets EU's requirement for a high bio-solubility according to EU Directive 97/69/EC note Q and therefore the fibre is exempt from the classification " Possibly carcinogenic to man". The Roxul® 1000 fibre has been examined in accordance with EU protocol ECB/TM 26 rev. 7. In October 2001 WHO's International Agency for Research on Cancer removed stone wool from a classification as " Possibly carcinogenic to man". The National Labour Inspection subsequently removed the stone wool produced in Denmark from the Danish cancer list.</p>
<p>12. Environmental information</p>	
<p>Stable product without any known negative environmental effects. The product can be recycled.</p>	
<p>13. Disposal</p>	
<p>Mineral wool refuse is to be considered hazardous refuse due to the classification as "locally irritating". However, the Danish Environmental Protection Agency recommends disposal as hitherto, i.e. deposition. Return arrangement available for mineral wool residue from building sites.</p>	
<p>14. Transport information</p>	
<p>Pallet transport only in unbroken packaging.</p>	
<p>15. Regulatory information</p>	
<p>Marking:</p>	<p>In accordance with 91/155 EEC/DK's regulations (Has not yet been accepted in DK)</p>
<p>Contents:</p>	<p>Mineral wool (man-made, vitreous silicate fibres)</p>
<p>EU classification:</p>	<p>x_i locally irritating</p>
<p>Danger symbols:</p>	
<p>R-phrase:</p>	<p>(R-38) irritates skin</p>
<p>S-phrase:</p>	<p><i>Use special work clothes and suitable protective gloves.</i> In connection with direct sale to user, the following should be stated: <i>To be stored out of the reach of children. S(2-) 36/37.</i></p> <p>This stone wool is exempt from classification as possibly carcinogenic (Carc. Cat 3 according to the Commission's Directive 97/69-EF of 5th Dec. 1997).</p> <p>Threshold limit values: Stone wool fibres: 1 fibre/cm³ (acc. to Danish legislation) Mineral dust, inert, respirable: 5 mg/m³</p>
<p>16. Further information: EURIMA information note concerning health information, www.eurima.org</p> <p>The Commission's Directive 97/69/EF</p>	