

Bielefeld FB branch: Automotive engineering/traffic accident analysis/cargo securing systems  
 Otto-Brenner-Str. 168 D-33604 Bielefeld Tel.: 00 49 / 521 / 2 99 05 – 20 Fax: -70  
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DEKRA Automobil GmbH Otto-Brenner-Str. 168 D-33604 Bielefeld

RÖHR & STOLBERG GmbH Bruchfeld 52  D-47809 Krefeld	Tel.: 00 49 / 21 51 / 58 92 – 86 Fax: 00 49 / 21 51 / 50 02 70 Internet: www.roehr-stolberg.com
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By: Karsten Wulhorst 00 49 / 174 / 9 82 55 31	To: RÖHR & STOLBERG GmbH	Bielefeld, 29 January 2008
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**DEKRA - certificate 313/16294 YF 1805837549 for the conformity of the loading and cargo securing variants used by RÖHR&STOLBERG for sheet lead according to the list with the applicable guidelines for cargo securing according to §§ 22 and 23 German traffic regulations (StVO), §§ 30 and 31 German road traffic licensing regulations (StVZO), DIN-EN 12195-1 and VDI guidelines 2700:**

Driving test series:	BI07/11/12-9 to -14 on the 12 <sup>th</sup> November 2007 in D-47809 Krefeld
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1. Loading unit:	Rolls of sheet lead Ø/L 80 to 450/ 100 to 1,100 [mm], up to 100 items positively locking placed behind each other and side by side and up to 4 layers high with the upper layers always in the saddle position in parallel to the longitudinal direction of the pallets loaded on euro-pallet with hardboard between loaded cargo and pallet, additional protection of the loaded cargo on the pallet in longitudinal direction by a wooden strip 24x48x600 [mm] nailed in a positively locking position in front of and behind the loaded cargo with a minimum of 5 staples 45 [mm] and on the right and left side of the loaded cargo with a triangular wooden strip nailed on with a minimum of 8 staples. 28x28x1,100 [mm] triangular wooden strip and 28 [mm] staples for roll diameter up to 100 [mm] and 60x60x1,100 [mm] and 45 [mm] staples for diameter from 100 [mm], from the lower edge of the pallet, in addition automatically shrink-wrapped with 120 µ shrink-film hood. Nailing always vertical; L/W/H: 1200/800/ up to 644 [mm], pallet weight: up to 1,000 [kg]
2. Loading unit:	Rolls of sheet lead Ø/L 100 to 400/20 to 400 [mm], up to 100 items positively locking placed behind each other and side by side and up to 10 layers high with hardboard between loaded cargo and pallet and between the individual layers, loaded cargo including the pallet bound with two steel bands each with cardboard edge protectors (width 12.5 mm) bound in longitudinal and transverse direction with the steel bands in the longitudinal direction always having to run over the outermost left-hand and right-hand row, above the lower edge of the pallet, in addition automatically shrink-wrapped with 120 µ . In the case of loading unit where the dimensions of the loaded cargo are smaller than the pallet dimension the loaded cargo must be nailed in on all four sides with positively locking wooden strips 24x48 [mm] to match the corresponding length of the loaded material using a minimum of 5 staples 45 [mm] per strip. Nailing always vertical; L/W/H: 1200/800/ up to 544 [mm], pallet weight: up to 1,000 [kg]
3. Loading unit:	Rolls of sheet lead Ø/L 200 to 400/145 to 240 [mm], up to 6 items in single layer standing and loaded positively locking onto euro-pallet with push-mounted frame. Any slipping of the rolls inside the push-mounted frame in transverse or longitudinal direction must be prevented. Above the lower edge of the pallet in addition automatically shrink-wrapped with 120 µ shrink-film hood. L/W/H: 1220/800/ up to 544 [mm], pallet weight: up to 1,000 [kg]

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<i>Loading:</i>	<i>Load in single layer, positively locking onto euro-pallets;</i>
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<i>In direction of movement, front:</i>	<i>Load positively locking only on pallet at right-angles or in parallel to the direction of movement against the robustly built front wall or other RÖHR &amp; STOLBERG loading units. Loading units in the 1<sup>st</sup> loading unit with roll lengths of 1,300 [mm] must be loaded positively locking and in parallel to the direction of movement against the robustly built front wall or other RÖHR &amp; STOLBERG loading units which in turn must also be loaded positively locking at the front. Loading depending on the load distribution with single loading units transverse or two longitudinal on the longitudinal vehicle axis and positively locking against the RÖHR &amp; STOLBERG loading units next to them in transverse or longitudinal direction with respect to the direction of movement. Except in the case of the 1<sup>st</sup> loading unit with a roll length of 1,300 [mm], artificial face walls must be installed. They do not have a negative influence on the securing of the loaded cargo if the open space appearing on the sides is not larger than 600 mm towards the front. Sliding of the RÖHR &amp; STOLBERG loading units on the transportation vehicle must absolutely be prevented;</i>
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<i>Perpendicular to the direction of movement:</i>	<i>Load positively locking against the robustly built side wall and against other RÖHR &amp; STOLBERG loading units. Sliding of the RÖHR &amp; STOLBERG loading units on the transportation vehicle must absolutely be prevented, for example through positively locking loading against robust board wall, pallet stop strips or alternative systems which fulfil the requirements in the standard DIN-EN 12642 code XL;</i>
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<i>At the rear with respect to the direction of movement:</i>	<i>Load positively locking only on pallet at right-angles or in parallel to the direction of movement against the robustly built rear door or against other RÖHR &amp; STOLBERG loading units. Loading depending on the load distribution with single loading units transverse or two longitudinal on the longitudinal vehicle axis and positively locking to the RÖHR &amp; STOLBERG loading units next to them in transverse or longitudinal direction with respect to the direction of movement. Except in the case of the 1<sup>st</sup> loading unit with a roll length of 1,300 [mm], artificial face walls must be installed. They do not have a negative influence on the securing of the loaded cargo provided the free space appearing on the sides is not larger than 600 mm towards the rear. Sliding of the RÖHR &amp; STOLBERG loading units on the transportation vehicle must absolutely be prevented. If there is open space between the loaded cargo and the rear door, load securing equipment must be deployed at the rear. Alternatively, robustly constructed plank systems which prevent sliding of loading units can be deployed or alternatively different securing measures according to DIN-EN 12195-1 or VDI 2700 and subsequent.</i>
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 DIN-EN 12195-1 and VDI guidelines 2700:

<b>RÖHR &amp; STOLBERG loading unit</b>		
<p>1<sup>st</sup> loading unit:</p>  <p>Example:</p>	<p>2<sup>nd</sup> loading unit:</p>  <p>Example:</p>	<p>3<sup>rd</sup> loading unit:</p>  <p>Example:</p>

<p><b>Transportation vehicles:</b> (with dust-free and clean swept floor )</p>	<p>Flatbed trucks in conformity with DIN-EN 12642 code XL and lashing points in conformity with DIN-EN 12640;                  In the case of transportation vehicles which do not conform to the upper body strength according to DIN-EN 12642 code XL, additional walls have be utilised for reducing the load on the face wall and the rear door. Adequate securing in the transverse vehicle direction can be achieved and realised by positively locking loading against pallet stop strip or alternative systems conforming to the standard DIN-EN 12642.</p>
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*This certificate only applies to the RÖHR & STOLBERG cargo securing and loading variants described. It becomes void after new statutory regulations have come into force or changes to important parts of the RÖHR & STOLBERG packaging and securing guidelines have been made. Important changes or new developments to the RÖHR & STOLBERG packaging and securing variants must be re-certified by DEKRA Automobil GmbH. The certified additional cargo securing systems and equipment, e.g. polyester lashing bands must, similar to the VDI 2700 sheet 3.1 guideline, be checked yearly by the manufacturer or a person that has been authorised by them, for example at the time of the official vehicle technical inspection according to § 29 German road traffic licensing regulations (StVZO) by DEKRA Automobil GmbH. Repairs are only allowed by the manufacturer or companies authorised by him. During the loading processes the accident prevention rules in BGV D 29 are to be adhered to.*

<p>DEKRA expert:</p> <div style="display: flex; align-items: center; justify-content: center; margin: 10px 0;"> <div style="text-align: center; margin-right: 20px;"> <p>Signature</p> </div> <div style="border: 1px solid black; border-radius: 50%; width: 60px; height: 60px; display: flex; align-items: center; justify-content: center;"> <p>Stamp</p> </div> </div> <p>Dipl.-Ing. (FH) Karsten WULHORST</p>	<p>Licence number: .....</p> <p>Freight carrier: .....</p> <p>Stamp and signature: .....                  RÖHR &amp; STOLBERG GmbH D-47809 Krefeld</p>
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