

## R+D – project

# Testing of corrosion protection effect of VCI film in accordance with TL 8135-0043

<b>Client:</b>	<b>Sicher VCI</b> <b>Reliable Packaging Solutions</b> Sr. No 80/1, plot No.2, Bhosari Alandi Road, Behind Pragati Hotel, Wadmukhwadi, charoli Dighi, Pune – 412105 INDIA
<b>Dater of order:</b>	08 <sup>th</sup> February 2013
<b>Customer reference:</b>	-
<b>BFSV project number:</b>	<b>UB 8414 / 13</b>
<b>Test sample:</b>	VCI film
<b>Received on:</b>	21 <sup>th</sup> February 2013
<b>Date of testing:</b>	26 <sup>th</sup> February 2013
<b>Test reference:</b>	TL 8135-0043
<b>Attendant persons:</b>	-
<b>Officials in charge:</b>	B. Eng. S. Karg
<b>Total content:</b>	3 pages, thereof 2 text pages, 1 table und 2 figures
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## 1 Content of order

The BFSV Institute was authorized to perform a test according to **TL 8135-0043** „Anticorrosive films“, Edition 3, September 2002, Appendix A „Testing of corrosion protection effect of VCI-packaging accessories“ (see page 2)

Test object: Unalloyed, killed structured steel according to DIN EN 10025  
(Material-No. 1.0038)

Requirement: It is necessary to meet at least the corrosion protection effect of grade 2 (middle corrosion protection effect).

## 2 Testing

A glass container (4) is sealed with a rubber bung (1) in which a test object made of constructional steel (2) with a polished surface and two strips of VCI paper (3) are fixed (6).

After a period of 20 h, which serves as the build-up phase for the VCI active substances, a mixture of water and glycerine is poured in. After another period of 2 h the glass container is heated from room temperature to 40 °C in a fan oven. Moisture condenses on the surface of the test object, resulting in corrosion on the control sample without VCI. The test objects in the containers with VCI should display little or no corrosion.

The corrosion symptoms are documented and the protective effect is assessed by comparison with the control sample.

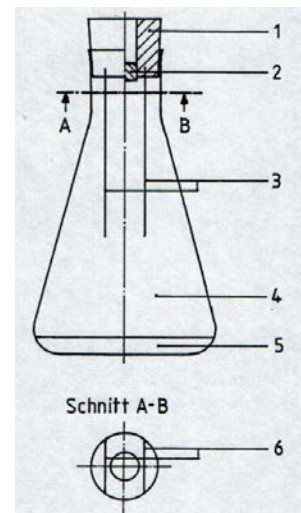


Figure 1: test setup

## 3 Results

The evaluation of the test objects yielded the following results:

**Grade 3** (= good corrosion protection effect)

For this reason the VCI film meet the requirements of TL 8135-0043 for the corrosion protection effect. The figures in [table 1](#) show the results of the test, the requirements can be seen in [figure 2](#).

Director of the Institute


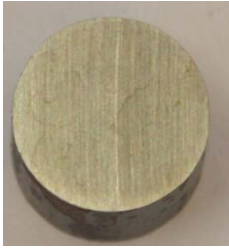

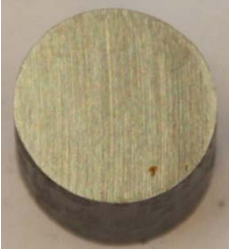


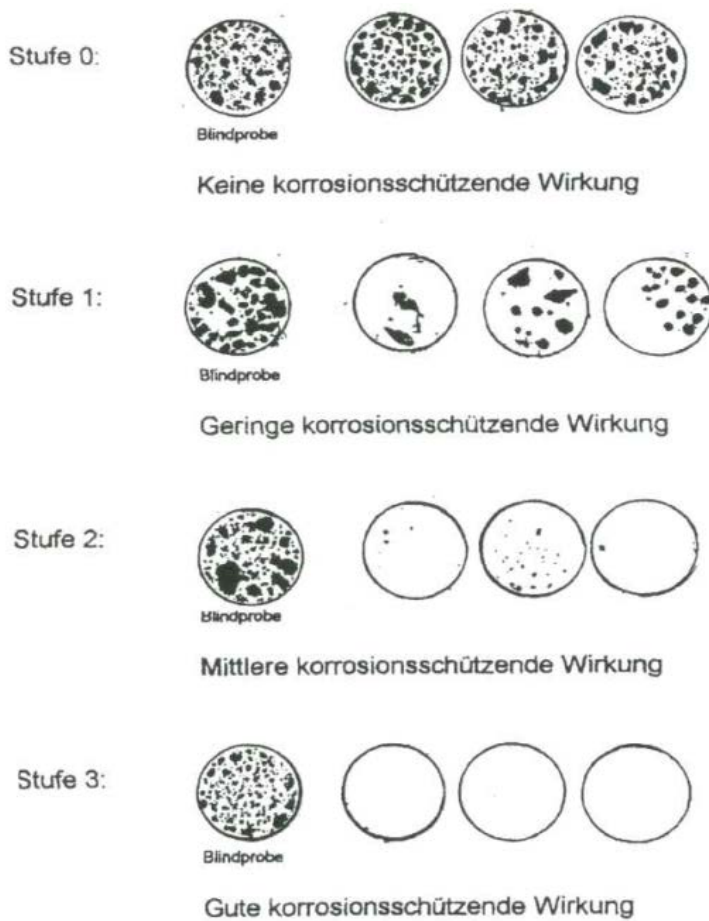
Official in charge

Prof. Dr.-Ing. B. Sadlowsky

B. Eng. S. Karg

**Table 1:** Results of the test

<p><b>Control sample</b> (without VCI)</p>		<p>-</p>	<p>-</p>
<p>With VCI film protected samples</p>			
<p>Corrosion protection effect</p>	<p>Grade 3</p>		



**Figure 2:** Requirements of TL 8135-0043 (Appendix A) for the corrosion protection effect