

# Test Report 2 No. 6049B/07

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

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**Client** MetPro Ltd.  
Ballinorig Business Park,  
Tralee, Co. Kerry  
IRELAND

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### Content of the order

Samples of VCI film were supplied to the BFSV by the client on January 09, 2007.  
Designation: **“VCI Film 285 NMB”**

The samples were tested in accordance with:

**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 fulfil at least the corrosion protection effect of  
grade 2 (middle corrosion protection effect).

### Summarising result

**Grade 2 - 3 = middle - good** corrosion protection effect.

The tested „**VCI Film 285 NMB**” fulfil the requirements of TL 8135-0043 (Appendix A) for  
the corrosion protection effect.

The pictures in Appendix 1 compare the test results with the requirements of  
TL 8135-0043 (Appendix A).

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**Pages** : 2  
**Appendix** : 1  
**Official in Charge** : Dipl.-Ing. W. Reimers

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### **Test method (corrosion protection for steel)**

#### **Standard-test according to the German TL 8135-0043 (Appendix A):**

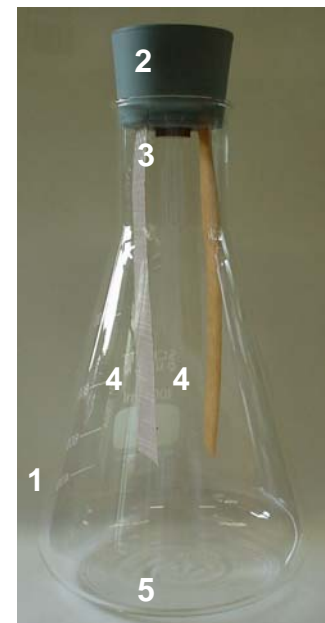
This method standardised by the German armed forces is used to determine the corrosion protection effect of VCI papers and films on a defined test object of constructional steel.

A glass container (1) is sealed with a rubber bung (2) in which a test object made of constructional steel (3) with a machined surface and two strips of VCI paper/film (4) are fixed. The glass container contains a mixture of water and glycerine (5).

After a period of 22 h, which serves as the build-up phase for the VCI active substance, the glass container is heated from room temperature to 40 °C in a fan oven (2 h).

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.



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

**Evaluation of the test objects**



Keine korrosionsschützende Wirkung



Geringe korrosionsschützende Wirkung



Mittlere korrosionsschützende Wirkung



Gute korrosionsschützende Wirkung

**Corrosion protection effect**



**None** (Grade 0)

**Slight** (Grade 1)

**Middle** (Grade 2)

**Good** (Grade 3)

**Test results:**

	Test objects	
	Control sample (without VCI)	Protected samples with „VCI Film 285 NMB”
<b>Evaluation</b>		
<b>Corrosion symptoms</b>	Corrosion on the entire surface	Visible very slight corrosion (small brown dots)
<b>Corrosion protection effect</b>		<b>Grade 2-3</b> middle - good corrosion protection effect

Director of the Institute

Official in Charge

Prof. Dr. H. Kontny

Dipl.-Ing. W. Reimers