

## EasyFix™ Rubber Products

# Easy Fix Slat Rubber

Deformability and elasticity, Permanent tread load, Slip resistance, Abrasion

## DLG Test Report 5924 F



### Registering and manufacturing company

EasyFix™ Rubber Products  
Persse Business Park  
Ballinasloe  
Co. Galway, Ireland  
Telephone: 00353 (0)9093 433-44  
Fax: 00353 (0)9096 433-45  
E-Mail: [info@easyfix.ie](mailto:info@easyfix.ie)  
Internet: [www.easyfix.ie](http://www.easyfix.ie)



DLG e.V.  
Test Center  
Technology and Farm Inputs

## Description

- Black profiled slat rubber mats
- 20 to 24 mm thickness
- with rippled wedges/studs underneath (height approx. 50 mm, length approx. 45 mm, width approx. 35 mm)
- with integrated sloping profile on the surface (height of the middle of the surface is 24 mm and at the gap 20 mm)
- Surface with a diamond-shaped pattern
- Underside with grooves (height approx. 5 mm, width approx. 9 mm)
- Fitted as single mats for single or twin slat beam elements
- Shore A hardness: 68

## Sizes available

Length of slat	1.6 m / 1.9 m / 2.0 m / 2.2 m
Width of slat	Varies from 230 mm to 440 mm
Tread area	Varies from 100 mm to 200 mm

## Test results and detailed evaluations

### Deformability and elasticity

Indentation tests in new condition (in fixed position) using a steel foot (artificial cow's foot) having a diameter of 105 mm (contact area 75 cm<sup>2</sup>, with a 5 mm wide ring at the periphery of the sole, which projects 1 mm over the rest of the surface (bearing wall of the claw)) and an indenting pressure of 2.000 N (corresponding to approximately 200 kg), the indentation depth was 4.8 mm. The calculated indenting pressure is 26.67 N/cm<sup>2</sup>.

Elasticity was measured after a permanent tread load of 250.000 alternating loads exerted by the steel foot and a pressure of 5.000 N. After this extended time test the indentation depth of the steel foot reduced from 4.8 mm to 4.3 mm.

#### Evaluation:

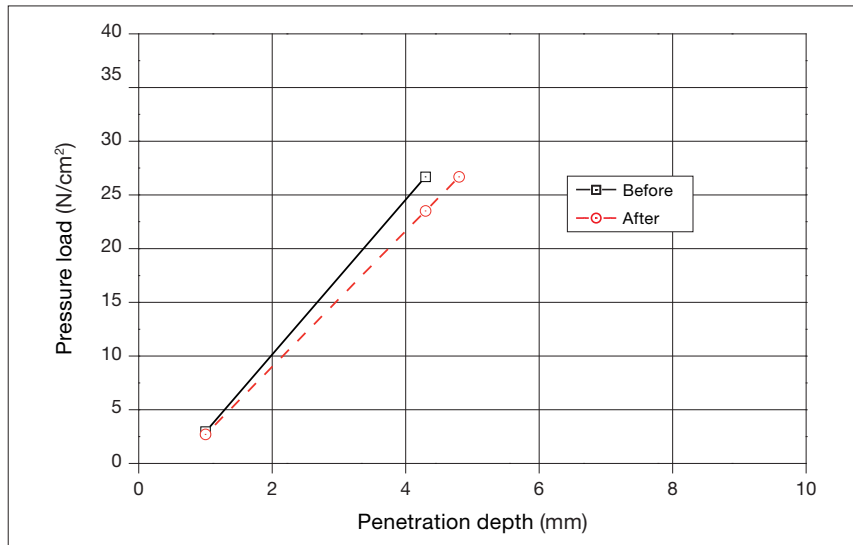
- Deformability in new condition      ++
- Elasticity after the permanent pressure test      ++

### Permanent tread load

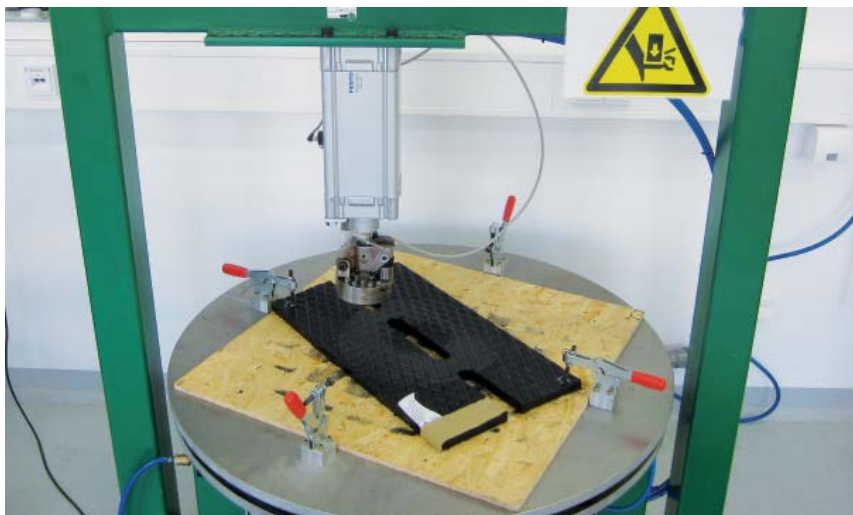
After the slat mat have been exposed to a permanent tread load exerted by a round steel foot (artificial cow's foot) having a diameter of 105 mm (contact area 75 cm<sup>2</sup>, with a 5 mm wide ring at the periphery of the sole, which projects 1 mm over the rest of the surface (bearing wall of the claw)) with alternating loads of 5.000 N (corresponding to ca. 500 kg) no noticeable wear on the surface, little wear on grooves on the underside and no damage was detected. Lasting deformation was not observed.

#### Evaluation:

- No lasting deformation      ++
- No noticeable wear on the surface      +
- Little wear on the grooves on the underside      ○



Picture 2:  
Deformability as a function of surface pressure



Picture 3:  
DLG tread load test rig



Picture 4:  
Sample after the permanent tread load

## Slip resistance

Slide pulling tests using a round plastic foot (with a contact area of 75 cm<sup>2</sup>) and with a velocity of 20 mm/s showed a good slip resistance on the dry or wet rubber surface in new condition.

The measured friction coefficients ( $\mu$ ) all surpassed the minimal value of  $\mu = 0.45$  which speaks for a good foothold.

### Evaluation:

Good slip resistance on dry and wet rubber mat surface +



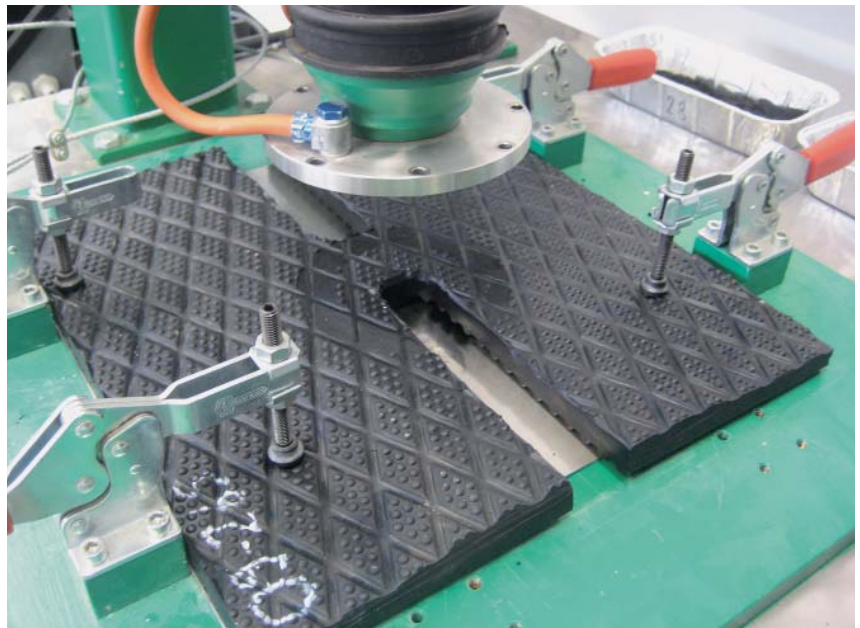
Picture 5:  
Slip resistance test

## Abrasion test

In a standardised abrasion test during which the surface was grinded with an emery cloth (granulation 280) and a grinding pressure of 500 N (= 8,1 N/cm<sup>2</sup> surface pressure), the abrasion depth after 10,000 double strokes amounted to 1.8 mm, this corresponds to approximately 8 % of the rubber thickness. Of the ground surface (61,5 cm<sup>2</sup>) 2.9 grams were rubbed off.

### Evaluation:

The minor abrasion depth and the slight grit implicate a good wear resistance of the rubber mat +



Picture 6:  
Abrasion test

Evaluation range:

++ / + / o / - / -- (o = standard)

The DLG FokusTest included technical measurements on test rigs of the DLG test station. Abrasion, Deformability and slip resistance were measured and a permanent tread load test was carried out.

Other criteria were not tested.

### Realization of the tests

DLG e.V. –  
Test Center Technology  
and Farm Inputs,  
Max-Eyth-Weg 1,  
D-64823 Groß-Umstadt

### Reporting engineer

Dr. Harald Reubold

### Project manager farm inputs and technique animals

Dr. Michael Eise



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E-mail Address: [info@entam.com](mailto:info@entam.com)

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DLG e.V. – Test Center Technology and Farm Inputs

Max-Eyth-Weg 1, D-64823 Groß-Umstadt,  
Telephone 069 247 88-600, Fax: 069 247 88-690, E-mail: [Tech@DLG.org](mailto:Tech@DLG.org),  
Internet: [www.DLG.org](http://www.DLG.org)

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