



**Herculan MF** sports floors are eco-friendly, seamless and cushioned Multi Functional floors with point elastic properties.

**Herculan MF** sports floors meet all the latest European Standards for multi purpose indoor sports surfaces, the EN 14904:2006. **Herculan MF** quality sports floors are accredited with the CE Certificate of Conformity. The **Herculan MF** systems are listed as certified and approved sport floors in the Dutch Olympic Committee's sports flooring list.

**Herculan MF** sports floors are certified by the International Handball Federation [IHF] and the Badminton World Federation [BWF]

The **Herculan MF** system passes the German AgBB/DIBt emission test and is rated as safe for indoor building materials.

The high performance, seamless surface of the **Herculan MF** system is non-porous, therefore hygienic and easy to clean. **Herculan MF** systems provide the optimum slide and slip resistance required in today's most demanding sports. Due to its high mechanical strength and elastic properties of the Herculan EX 800 thickness layer and the excellent wear resistance of its Herculan PU 145 or Herculan PU 100W top-layer, this tough and durable sports floor can also be used for exhibitions, concerts, speech-days and all kinds of other non-sports functions without extra protection.

All Herculan Sports Floors are easy to maintain and can be resurfaced quickly and economically when required.



[www.herculan.com](http://www.herculan.com)





|  |  |
|--|--|
| <b>Types of Sports Surface</b>           | Multi-purpose point-elastic indoor sports surface.   |
| <b>Aim</b>                               | Suitable for all indoor sports and multi functional use, see Herculan Systems Selection Chart. |
| <b>Description of the Sports Surface</b> | 2 or 3 mm of coated polyurethane layer on bonded rubber granulate sub-base layer.              |

## HERCULAN MF SYSTEM PROPERTIES

### Athlete Surface Interaction

| System             | Vertical Deformation<br>[EN 14809, DIN 18032-2] | Force Reduction<br>[EN 14808, DIN 18032-2] | Energy Restitution<br>[EN 14808] |
|--------------------|---|--|----------------------------------|
| Herculan MF 4 + 2  | 1 mm  | 13 %                                       | 68 %                             |
| Herculan MF 5 + 2  | 1 mm  | 18 %                                       | 69 %                             |
| Herculan MF 6 + 2  | 1 mm  | 22 %                                       | 69 %                             |
| Herculan MF 7 + 2  | 1 mm  | 25 %                                       | 67 %                             |
| Herculan MF 8 + 2  | 1 mm  | 28 %                                       | 67 %                             |
| Herculan MF 9 + 2  | 1 mm  | 32 %                                       | 66 %                             |
| Herculan MF 10 + 2 | 1.5 mm  | 35 %                                       | 62 %                             |
| Herculan MF 10 + 3 | 1.5 mm  | 33 %                                       | 61 %                             |
| Herculan MF 12 + 3 | 1.5 mm  | 39 %                                       | 60 %                             |

### System Properties of the Sports Surface

|  |                                     |
|--|-------------------------------------|
| Vertical Ball Behavior [EN 12235-DIN 18032-2]  | 99 %                                |
| Compression Set [ASTM D-395-B]   | 1.9 %                               |
| Compression Strength [N/S1.1]  | > 400 N/mm <sup>2</sup> [> 400 MPa] |
| Resistance to Impact [EN 1517-1999]  | > 16 Nm                             |
| Resistance Against Static Load [24 hours]  | 25 kg/cm <sup>2</sup>               |
| Resistance to Indentation [EN 1516]  | < 0.11 mm                           |
| Resistance to a Rolling Load [EN 1569:1999]  | > 1500 N, < 0.5 mm                  |
| Resistance to Fire [DIN 51960]   | Not flammable – Class 1             |
| Resistance to Fire [BS 476 Part 7:1997]  | Not flammable – Class 3             |
| Resistance to Fire [EN-ISO 11925:2002 & 9239-1:2002]                                     | C <sub>FL</sub> – S1                |
| Resistance to Stubbed and Burning Cigarettes [EN 1399]                                   | Resistant. No damage                |
| Formaldehyde emission [EN 717-1]   | Class E1. No Formaldehyde           |
| AgBB:Health-related Evaluation of Emissions of Volatile Organic Compounds [VOC and SVOC] | Approved for Indoor usage           |

### Properties of the Herculan EX 800 Base Layer

|   |                               |
|---|-------------------------------|
| Surface Hardness [DIN 53505, EN ISO 868]      | Shore A = 76                  |
| Tensile Strength [EN ISO 527-1, DIN 54455]    | 11 N/mm <sup>2</sup> [11 MPa] |
| Elongation at break [EN ISO 527-1, DIN 54455] | > 190 %                       |
| Tear Resistance [DIN 53515]                   | 25 N/mm                       |

### Properties of the Herculan PU 145/PU 100W Surface Layer

|   |                                   |
|---|-----------------------------------|
| Surface Texture [N/F 12.1 Macro, Micro, Porosity] | Fine, Polished, Closed            |
| Surface Color                                     | See Herculan Color Chart          |
| Resistance to Wear [EN-ISO 5470-1, ASTM C-501]    | Taber H18 1 kg 1000 cycles 165 mg |
| Gloss [EN-ISO 2813]                               | 3 – 6 %                           |
| Friction [EN 13046-4]                             | Dry 90 at 20 °C                   |
| Friction [EN 14837 Leroux]                        | Dry 0.7 at 20 °C                  |
|   | Wet 0.4 at 20 °C                  |
|   | Dry 0.4 at 20 °C                  |
|   | Wet 0.2 at 20 °C                  |
| Sliding Qualities [N/F 6.1]                       | 8 [Excellent]                     |
| Light [Color] Fastness [DIN 54004]                | 0.1 – 0.3 [Color dependent]       |
| Specular [Light] Reflectance [EN 13745]           |                                   |

### Herculan Sports Surfaces B.V.

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