

#### ENGINEERING PLASTIC SOLUTIONS



# **NYLACAST BIG FOOT®** THE CORRECT TOOL FOR THE JOB

The Nylacast Big Foot crane outrigger pad has been utilised as a key safety product for major crane hire companies and operators over the last four decades. Nylacast Big Foot was developed in conjunction with industrial demand, where a need arose for a reliable, strong and safe crane outrigger pad. The pad needed to be made from tough, affordable material, strong enough to withstand heavy load yet still be light and easily manoeuvrable by users.

Stable support for crane outriggers is essential for safe operation. With Nylacast Big Foot you can be sure you are using the correct tool for the job.

Unfortunately the capsizing of cranes can occur and cause a significant injuries and fatalities. Many of these accidents are caused by operators using inappropriate materials or the use of no crane pads at all.

When weighing up the small cost involved in providing a stable support for the outriggers and preventing damage to the ground surface, in comparison to the high capital equipment costs involved with cranes, Nylacast Big Foot makes perfect sense.

## Features & Benefits of Nylacast Big Foot include:

- Extremely strong & hard wearing
- Lightweight
- High visibility yellow
- Rope handles for ease of transport and positioning
- Elimination of damage to ground surfaces
- Corrosion resistant with no need for coating or external protection
- Improved replacement for wood
- Range of sizes available

### Proven Technology

Nylacast Big Foot has been utilised in industry for decades, helping to improve lifting and protect high investment equipment and loads.

Here we have Bigfoot in 2003 being used to lift a Japanese bullet train on delivery to a museum.









Fig.3: PE500 Recovery

Fig.2: 3080 N Load

Fig.4: Big Foot Recovery

#### **PE500 vs Nylacast Big Foot:**

To demonstrate the strength and recovery of Nylacast Big Foot in comparison to standard PE crane mats, two tests were conducted utilising the same size sample of each material, 250mm x 50mm x 25mm.

Each material was put under the same load (3080 N), this resulted in the PE 500 Confetti material having 25mm flex (Fig.1), with Nylacast's Big Foot material only flexing 6.5mm (Fig.2). Each sample was then photographed after 5 seconds of the load being lifted from the pad sample. Whilst the PE 500 Confetti remained curved and deformed (Fig.3) the Nylacast Big Foot material recovered instantly with significantly less deformation (Fig.4).

A second test was conducted to investigate how much load is needed for Nylacast's Big Foot material to flex to 25mm. This resulted in being 11,802 N which is 3.8 times more load than the 3080 N it took to flex the PE 500 Confetti to 25mm.

The results from this test should only be used to serve as a comparison between materials. The tests were conducted in laboratory conditions, real life environment, equipment and load conditions may vary from user to user.

| Physical Property   | ISO/ASTM Specified Method | Nylacast | PE 500 |
|---|---------------------------|----------|--------|
| <b>Density</b> , g/cm <sup>3</sup>                                      | ISO 1183                  | 1.140    | 0.951  |
| Izod, kJ/mm <sup>2</sup> - Sample Type A                                | ISO 180                   | 6.5      | >30    |
| Tensile Strength, MPa   | ISO 527/ASTM D638         | 75       | 28     |
| Breaking Strength   | ISO 527/ASTM D638         | 82       | 38     |
| Modulus of Elasticity MPa   | ISO 527/ASTM D638         | 3700     | 1350   |
| <b>Torsional Stiffness @ 23°C</b> , as<br>Flexural <i>Modulus</i> , MPa | ISO 178                   | 2925     | 350    |
| ",@-60,   | ISO 178                   | 3604     | -      |
| -40,  |                           | 3224     | 700    |
| +50   |                           | 2157     | -      |
| +100°C  |                           | 1977     | -      |
| as Flexural <i>Modulii</i> , MPa  |                           |          |        |
| Shore Hardness D @ 23°C   | ISO 868                   | 80       | 62     |

#### Comparison between Nylacast Big Foot Material and PE500 Physical Properties (Metric Units)

#### **Nylacast Big Foot Standard Sizes:**

|             |                 |                   | ROUND                 |                |                 |                           |
|-------------|-----------------|-------------------|-----------------------|----------------|-----------------|---------------------------|
| O/D<br>(mm) | O/D<br>(inches) | Thickness<br>(mm) | Thickness<br>(inches) | Weight<br>(KG) | Weight<br>(Ibs) | Number of<br>rope handles |
| 300         | 11.81           | 40                | 1.57                  | 3.22           | 7               | 1                         |
| 500         | 19.68           | 40                | 1.57                  | 9              | 19.84           | 2                         |
| 600         | 23.62           | 40                | 1.57                  | 13             | 28.66           | 2                         |
| 750         | 29.52           | 40                | 1.57                  | 20             | 44.09           | 2                         |
| 900         | 35.43           | 40                | 1.57                  | 29             | 63.93           | 2                         |
| 1000        | 39.37           | 40                | 1.57                  | 36             | 79.36           | 2                         |
| 1000        | 39.37           | 50                | 1.96                  | 49             | 108             | 2                         |
| 1220        | 48.03           | 50                | 1.96                  | 66             | 145.5           | 2                         |

| SQUARE      |                 |                   |                       |                |                 |                           |
|-------------|-----------------|-------------------|-----------------------|----------------|-----------------|---------------------------|
| O/D<br>(mm) | O/D<br>(inches) | Thickness<br>(mm) | Thickness<br>(inches) | Weight<br>(KG) | Weight<br>(Ibs) | Number of<br>rope handles |
| 300         | 11.81           | 40                | 1.57                  | 4              | 8.81            | 1                         |
| 500         | 15.74           | 40                | 1.57                  | 11.5           | 25.35           | 2                         |
| 600         | 23.62           | 40                | 1.57                  | 16.5           | 36.37           | 2                         |
| 750         | 29.52           | 40                | 1.57                  | 26             | 57.32           | 2                         |
| 900         | 35.43           | 40                | 1.57                  | 37             | 81.57           | 2                         |
| 1000        | 39.37           | 40                | 1.57                  | 46             | 101.41          | 2                         |
| 1000        | 39.37           | 50                | 1.96                  | 62             | 136.68          | 2                         |
| 1220        | 48.03           | 50                | 1.96                  | 93             | 205.03          | 2                         |

**All Nylacast Bigfoot pads include the following as standard:** - Rope handles for ease of transport and positioning - High visibility yellow colour for increased safety - www.nylacast.com engraving.

**Additional options include:** - 'Grippy' coating - Additional non standard sizes, designs and colours (enquire for further details and prices) - Personalised engraving of reference name or number (up to 11 characters).

**Additional information:** - It is the customers responsibility to ensure the correct size pad is used for their equipment and ground conditions - Nylacast accept no liability or responsibility for misuse or incorrect size selection and any accidents or safety issues this may cause.

**Availability:** Nylacast Big Foot is available from all worldwide locations (UK, USA, South Africa), some sizes and availability will vary according to location. All worldwide locations also offer custom sized Big Foot pads on request.

**Quantity discounts:** Ask us about our discounts available on orders of 5 pads or more.

Euros & USD: Want to purchase in Euro's or USD? Ask about our up to date EURO/USD prices too.



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