# ENGINEERED PRODUCTS FOR INDUSTRIAL EQUIPMENT





# VERSATILE PRODUCTS WITH PERFORMANCE & EFFICIENCY IN MIND

Custom manufactured from initial chemistry to end components, Nylacast Engineered Products help to deliver increased application safety, performance and efficiency with lower whole life costs.

Nylacast Engineered Products help to reduce machine downtime and maintenance need through being low weight, low friction, self-lubricating and corrosion resistant.

# **ABOUT NYLACAST**

Nylacast is a world-leading manufacturer of engineering polymers and products.

Holding over five decades of engineering excellence and know-how, Nylacast employs passionate engineering teams across international sites (UK, USA, South Africa and China), and is committed to meeting the needs of critical applications within key global industries. Nylacast's unique engineering and R&D capability provides full engineering solutions from initial concepts and raw chemistry, through to final products.

The unique material range developed by Nylacast is proven to improve performance whilst reducing maintenance and running costs; often recognised as the ideal replacement to traditional engineering materials such as steel, cast iron, bronze and ceramics.

# **KEY FACTS**

- Established in 1967
- State of the art manufacturing facilities
- Worldwide locations
- ISO14001: 2008, ISO 9001:2008, ISO29001:2011
- FPAL registered
- In-house Research, Development & Testing centre
- Award winning engineering academy
- Industry specific sales and engineering teams
- Fast route to market from concept to completion
- Consignment/schedule ordering
- Kanban and JIT systems



















# **MATERIALS TECHNOLOGY**

Nylacast Engineered Products are created from initial chemistry to end component using unique materials technology developed through more than fifty years of field experience in design, testing and material selection.

Premium chemicals and state of the art manufacturing facilities are coupled with engineering know-how to produce high quality engineering polymers capable of delivering increased performance and replacing traditional materials such as steel and bronze.

In addition to custom formulated materials for more demanding needs, Nylacast offer a wide range of standard grades renowned for being low weight, low friction, self-lubricating, corrosion resistant, highly versatile and dimensionally stable.

# NYLACAST'S WORLD RENOWNED RANGE OF STANDARD GRADES INCLUDES

- Nylube
- Oilon
- Aquanyl PA 6/12
- PA 6 Natural
- Molv
- H.S Blue
- Impact

### ADDITIONAL MATERIALS INCLUDE

- Acrylic
- Acetal
- · Polycarbonate
- Polyurethane
- PTFE
- POM
- PET
- PEEK
- Polypropylene
- Nylon 66
- Polyethylene
- PVDF
- PVC

- CF150
- CF160
- CF306
- Nylube GF (glass filled)
- FDA compliant nylon including Nylube FG (food grade)
- Nylastat (ATEX approved) (Ex)

# **INDUSTRIES SERVED**

**BENEFITS & ADVANTAGES** 

#### **COST SAVING**

Lower whole life costs are achieved in addition to increased efficiency through reduced frictional losses and lower power requirement.

#### MAINTENANCE REDUCTION

Self-lubrication and corrosion resistance results in longer lasting materials with highly reduced maintenance need and machine downtime.

#### **CORROSION RESISTANCE**

Corrosion resistant materials technology protects against the arduous industry environments.

#### **LIGHT-WEIGHTING**

Nylacast Engineered Products are typically 1/7th the weight of an equivalent steel product, helping to reduce overall equipment weight.

#### WEAR REDUCTION

Low friction materials technology results in high resistance to wear and abrasion when in application.

#### **SELF-LUBRICATION**

Reduced and often eliminated need for additional and costly grease and lubricants through the use of low friction materials technology.

#### INCREASED SAFETY

Light-weight results in lighter loads being handled by personnel during installation and servicing, eliminating the need for lifting equipment.

#### **CUSTOM SOLUTIONS**

Engineered products custom developed for specific application need from initial chemistry to end product.

Custom manufactured for specific client requirements, Nylacast Engineered Products are widely featured within key equipment for the following industries



AUTOMOTIVE

AVIATION





**ENERGY, OIL & GAS FOOD & BEVERAGE** 



PHARMACEUTICAL

**QUARRYING & MINING** 



**CIVIL ENGINEERING** 

#### CONSTRUCTION & AGRICULTURE

#### **MARINE & DEFENCE**

#### PACKAGING



### RAIL

# RENEWABLES

# SOME APPLICATIONS FEATURING NYLACAST ENGINEERED PRODUCTS



# **CUSTOM COMPONENTS**

As leaders in the design and manufacture of engineering polymer solutions, Nylacast work closely with customers worldwide, delivering significant increases in product performance, safety and efficiency.

With full control of the manufacturing process from design and initial chemistry to end products, Nylacast are able to offer custom manufactured components based around specific application and industry requirements.

# NYLACAST OFFER A RANGE OF IN-HOUSE DESIGN, TESTING AND MANUFACTURING SERVICES INCLUDING

- Material selection
- Full material characterisation
- Full tracibility from concept to end components
- Custom formulated materials
- Testing to ASTM/ISO
- FEA, CAD, CAM
- Material integration

Nylacast is equipped with state of the art machining and manufacturing facilities which is able to cater for both high and low volume production. Nylacast's range of equipment allows for the machining of components and products in a wide range of sizes.

- CNC milling up to 3.7m long
- CNC turning up to 2m diameter
- 5 axis capability
- Gear cutting
- Keywaying







# CUSTOM COMPONENTS

# **ROPE HANDLING &** PROTECTION

The use of Nylacast rope handling products allows users to benefit from reduced or eliminated maintenance need and cost. Improved lifting and health & safety is also achieved through reduced rope damage.

Proven in industry for decades, Nylacast rope handling products are corrosion resistant, lightweight and low friction, this results in increased safety for personnel when operating equipment. Greater efficiency and cost saving is also achieved through these qualities extending the life of mating ropes with reduced maintenance need and replacement.

# NYLACAST WINCH SPOOLING SHELLS

- Low mass
- Easy installation, typically 1/7th the weight of a steel grooved shell
- Less inertia on high speed winches
- Requires no painting, protection or preservation
- Delivers excellent spooling in critical cable conditions
- Reduction of knifing in, jerking and snagging
- Reduction of maintenance and lubrication
- Custom made to suit application size and needs

## **NYLACAST SHEAVES & PULLEYS**

- · Reduced component weight resulting in increased lift capacity
- Allows for improved lifting
- Requires no painting, protection or preservation
- Provides increased rope life
- Reduces maintenance need and costs
- · Easy installation through light-weight
- Custom made to suit application, available from 25mm 3000mm diameter
- Sheave segments available for larger requirements





# ROPE HANDLING & PROTECTION

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# DOCK BUMPERS & TRAILER PLATES

Manufactured from premium cast nylon, Nylacast Dock Bumpers deliver a number of advantages for docks and loading bays. Naturally resistant to corrosion, wear and abrasion, Nylacast products also have great toughness from their high impact strength. This offers the resilience required to withstand the regular impact and abrasion experienced within daily warehouse and logistics operations.

Lightweight and easy to install, Nylacast Dock Bumpers can be fitted to both new and existing docks or loading bays. This allows for the swift replacement of HDPE bumpers, worn rubber bumpers or steel face bumpers, with no additional drill work needed. Nylacast Dock Bumpers also require no maintenance, coating or regular replacement.

### NYLACAST DOCK BUMPERS

- Manufactured from cast nylon
- · Light-weight and easy to install
- High impact strength
- Wear & abrasion resistance
- · High visibility colour
- Extremely hard-wearing
- Corrosion & chemical resistant

Nylacast Warehouse Trailer Plates also benefit from high impact strength and corrosion resistant properties, coupled with high visibility colour. This results in a product application which increases the efficiency and performance of logistics operations when docking at warehouses and distribution facilities. The Nylacast polymer application is fitted to the ground surface, protecting it from damage and trailer feet cracking the ground or sinking in, protecting both the personnel and the high value goods often transported in the containers and trailers, in addition to eliminating high cost maintenance needs and regular ground resurfacing.

The high visibility colour allow drivers to easily align with the trailer plate and ensure the feet are on a stable ground before dismounting. Similar to the Nylacast Big Foot, Nylacast warehouse Trailer Plates also help to safely spread the weight and load of the trailer, ensuring that both the ground surface and trailer itself are protected, reducing the chances of capsizing due to unstable loads or poor ground conditions.

# NYLACAST WAREHOUSE TRAILER PLATES

- High impact strength
- Chemical resistance
- Corrosion resistance
- High visibility colour
- Light-weight
- Protects ground surface and trailer
- Stabilises trailer by providing a level ground surface



# **DOCK BUMPER & TRAILER PLATES**









# **QUALITY**

Nylacast inspection departments are fully equipped with the latest coordinate measuring machines, computer controlled surface finish and gear profile testing machines as well as a comprehensive range of traditional measuring instruments.

As quality is considered to be a critical factor in the success of our products, we operate to some of the leading and highest quality standards available in industry today.

## NYLACAST EXCEED CUSTOMER **EXPECTATIONS WITH**

- Full traceability
- Initial sample inspection reports •
- Certificates of Conformity •
- Certificates of Analysis •
- Production Part Approval Process
- Advanced Product Quality Planning
- MSA / Gauge Repeatability and Reproducibility (GR&R) Studies
- PFMEA / SPC / Process Control Plans & Flow Charts
- ISO 9001 •
- ISO 14001 •
- ISO 29001 •

# QUALITY







www.nylacast.com

# **ENQUIRE**

To discover how Nylacast Engineered Products can create value for your projects and products, simply contact our Sales & Engineering team.

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