

Oil & Gas

***Onshore/Offshore/Top-side/SURF/
Subsea/Seabed/Down-hole***



Some facts about VINK Norway AS

Vink Norway AS have been serving the oil and gas industry since founding more than 40 years ago. Extensive knowledge through long experience means we are able to meet the expectations and requirements in the market and to serve our customers as an reliable partner and supplier.

Established in 1977

Member of the VINK Group since 1994
Main office in Oslo and a branch office in Bryne, Rogaland.

Core business

Being a global supplier and distributor of semi-finished and finished parts of technical plastics.

Vink Group

Established 1954.
Locations in 11 European countries
Part of the "Plastic Family" spanning 4 continents.

"The Plastic Family"

"The Plastic Family" consists of companies in the United States, Canada, Australia, New Zealand in addition to many in Europe. They are represented by Amari Plastics PLC in England and Scotland and by the VINK brand in 11 different European countries. A global network of 134 companies engaged in the distribution of semi-finished and finished parts of technical plastics.

VINK takes the environment seriously!

As the industry's leading provider VINK Norway has chosen to focus on the environment. "There are several ways to demonstrate its environmental commitment on, we have chosen to become an Eco-Lighthouse Business. On the way we engage our employees, customers, partners and it is obviously good for the environment"

40 years serving the marked. VINK has the experience

Ever since 1977 Vink Norway has been providing the oil and gas industry with engineering plastics and advice on how and where to use it.

To our customers we have been and will continue to be a constant, present and willing partner. Offering advice, the best of knowledge and state of the art products.

All information in this brochure is given on the basis of our best knowledge, and without liability for VINK. Technical data are based largely on information from our different suppliers.

VINK provides

The Oil & Gas Industry requires materials which can cope with varying temperatures, loads, chemicals and more. VINK Norway AS continues to provide the widest portfolio of Advanced Engineering Plastics and General Engineered Plastics to the market. This, together with our knowledge and experience helps us to provide cost effective solutions in plastic to our customers chosen applications.

We have Norway's most extensive delivery program, ranging from semi-finished stock shapes to special products on demand.

Technical plastics

Sheets, plates, rods, bars, tubes, pipes, foil and custom made parts. Technical plastics are normally divided into:

• Commodity plastics

Commodity plastics are known for their low cost. Mostly used in mass production or in short time usage. Commodity plastics of interest is most typically PMMA(Acrylics), PVC, LWPE and PP

• Engineering plastics

Engineering plastics are the most commonly used plastics for components within most industry segments. Advantages engineering plastics include long life span and excellent mechanical, electrical and chemical resistance

properties. Typically used offshore are PEHD, PA, POM, PC, PUR, GRP

• High performance plastic

High performance plastic is a joint term used for plastics which offer a combination of good mechanical capabilities, temperature resistance as well as chemical resistance. Typically used are PEEK, PI, PPS and PVDF.

• Custom made parts

We offer custom made parts in ISO-9000 certified work-shops with complete documentation package. At our disposal we have both processing facilities and/or sub-suppliers skilled in various processing techniques. All ISO-9000 certified and with the ability to deliver complete and traceable documentation.

GRP- Glass Reinforced Plastics

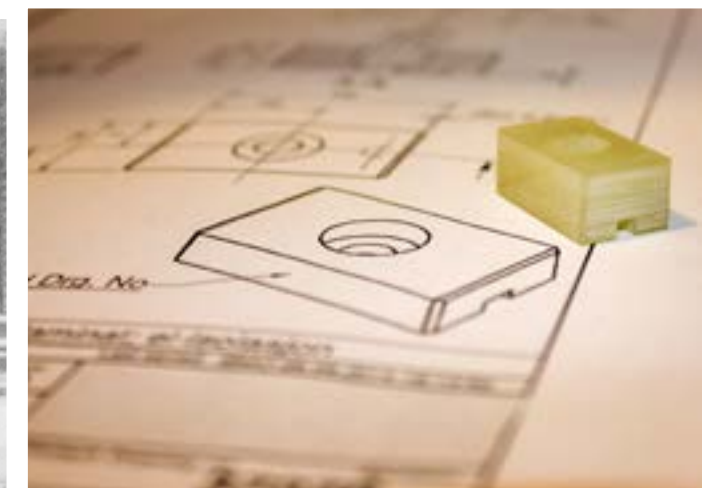
Gratings and profile program, engineering services.
Larger parts and structures on demand

Elastomers

Plates, rods, bars, tubes, and complete parts. Various grades available, sizes not in stock on demand.

Composites

Vast range of products available from our sub-suppliers, not in stock on demand.



Technical plastics - Your advantages

Our materials have a proven track record in subsea and downhole equipment from Industrial to analytical/instrumentation components.

Our materials are used in extreme conditions for applications such as insulators, seals, manifolds, probe contacts, probe centralizers, electrical connectors, protection sleeves and many more.

Contact us and let us show you how our materials can meet your application needs

- Improved product efficiency with tighter tolerances and lower wear materials
- Reduced weight and power requirements by switching metal components to plastic
- Resolved heavy corrosion problems in harsh environments
- Reduced VOC Emissions – superior materials for seal elements help reduce leaks impacting the environment
- Reduced friction and superior coefficient of linear thermal expansion (CLTE) improve performance and design of components
Increased equipment lifetime
- Reduced maintenance cost with easy to clean non-stick materials
Our materials comply with many common industry specifications, such as ISO, ASME, Norsok, API and NACE.

TYPICAL APPLICATIONS

Pipeline systems

Rollers, pipe supports, clamps, lining

Subsea vehicles

Track plates, wheel sprockets, impact strips

Lifting equipment

Cable sheaves, lifting blocks sliding and bearing pads, protective segments, wire guides and protecting sheets.

Instrumentation

Insulating, sensor protectors, guiding.

Compressors, pumps and valves

Various components like seals, bearings, housing

Connectors

Parts for insulating, sliding and guiding



Application matrix

Applications	PUR	PA	PE	PETP	PVDF	PTFE	POM	PEEK	PAEK	PAI	PPS
Bend Restrictors	•	•									
Umbilicals			•		•		•	•	•		•
Pipe liners			•		•	•		•	•		
Transmissions							•	•	•		•
Control line encapsulation					•						
Tubing			•		•			•			
Seals and gaskets						•		•	•	•	•
Compressor components				•		•		•	•	•	•
Valve plates		•					•	•	•	•	•
Electrical connectors				•			•	•	•	•	•
Rod Guides								•	•	•	•
Bumpers	•	•	•								
Guides and fillers		•	•				•	•			
Bearings	•	•					•	•			•
Sliding surface			•	•	•			•			

PEEK NORSOK M-710



Quadrant Engineering Plastic Products, the global leader of machinable plastics, has achieved NORSOK M-710 compliance for its Ketron® 1000 PEEK (natural) injection molded and extruded stock shapes.

The engineering plastics manufacturer is the first in its industry to receive the certification under the most severe sour multiphase fluid ageing test environment with the highest H₂S levels.

The accomplishment highlights Ketron 1000 PEEK's suitability as an attractive, high strength alternative to fluoropolymers. It will also support improvements to environmental and workplace safety in the Oil and Gas industries through material parts that maintain high-level performance and restrict the potential for accidents by enabling safer application.

Vink Norway AS can offer both semi-finished stock shapes and custom made parts made in Ketron 1000 PEEK.

Product Overview

- Very high maximum allowable service temperature in air (250 °C continuously, up to 310 °C for short periods of time)
- High mechanical strength, stiffness and creep resistance, also at elevated temperatures
- Excellent chemical and hydrolysis resistance
- Excellent wear & frictional behavior
- Very good dimensional stability
- Excellent resistance to high energy radiation (gamma- and X-rays)
- Inherent low flammability and very low levels of smoke evolution during combustion

Techtron PPS

An alternative to PEEK

PPS (polyphenylene sulfide) products offer the broadest resistance to chemicals of any advanced engineering plastic.

They have no known solvents below 200 °C (392 °F) and offer inertness to steam, strong bases, fuels and acids.

Minimal moisture absorption and a very low coefficient of linear thermal expansion, combined with Quadrant's proprietary stress relieving processes, make these PPS products ideally suited for precise tolerance machined components. In addition, PPS products exhibit excellent electrical characteristics and are inherently flame retardant.

Very high maximum allowable service temperature in air (220°C continuously, up to 260°C for short periods of time)

- High mechanical strength, stiffness and creep resistance, also at elevated temperatures
- Excellent chemical and hydrolysis resistance
- Excellent wear & frictional behavior
- Very good dimensional stability
- Physiologically inert (suitable for food contact)
- Excellent resistance to high energy radiation (gamma- and X-rays)
- Good UV-resistance
- Inherent low flammability
- Good electrical insulating and dielectric properties



Nylon underestimated as a good alternative for offshore

Many assume that nylon, due to its water absorption characteristics and related dimensional variation, is often overlooked as an alternative for subsea use.

However, use of correct design techniques can often compensate for these factors.

This material offers an optimal combination of mechanical strength, stiffness, toughness, mechanical damping properties, low price and wear resistance.

Typical properties are:

- High mechanical strength, stiffness, hardness and toughness
- Good fatigue resistance
- High mechanical damping ability
- Good sliding properties
- Excellent wear resistance
- Good electrical insulating properties
- Good resistance to high energy radiation (gamma- and X-rays)
- Good machinability

These properties, together with a good electrical insulating ability and a good chemical resistance make Nylon “general purpose” grade for mechanical construction and maintenance.

“ Traditional materials used in manufacturing are often heavy, rust and wear out quickly. Plastics are often a cost-effective and durable solution in harsh environments ”

Ertacetal POM

ERTACETAL POM – The multipurpose material.

VINK offers both homopolymer and copolymer grades of Ertacetal, including an enhanced bearing grade material. Copolymer grade, ERTACETAL C, is the most used quality in Europe, and VINK have a Large range of POM C on stock.

Product Overview:

- High mechanical strength, stiffness and hardness
- Excellent resilience
- Good creep resistance
- High impact strength, even at low temperatures
- Very good dimensional stability (low water absorption)
- Good sliding properties and wear resistance
- Excellent machinability and low price.
- Good electrical insulating and dielectric properties
- Physiologically inert (most grades are suitable for food contact)

PUR

PUR – Polyurethane – The shock absorber

PUR is a “chemical rubber” in the Elastomeric range of materials. Semi-finished or finished parts are made from a liquid raw material cured in rather simple molding forms . This gives a huge freedom to make designed parts directly in quit low volume, with less startup costs than other materials . Depending on use, PUR can be designed property-wise to handle different tasks. Typical is to adjust hardness from very soft to hard depending on load and use. Due to the softness and rip strength it can be somewhat difficult to machine PUR and obtain narrow tolerances.

PUR, as a material, has some extremely good features:

- Excellent shock absorbing properties
- Excellent fatigue resistance
- Excellent wear resistance
- Good flexibility, even at low temperatures.
- High tear resistance.
- Design-freedom and color possibilities.



Fiberglass reinforced constructions

GRP and Oil and Gas

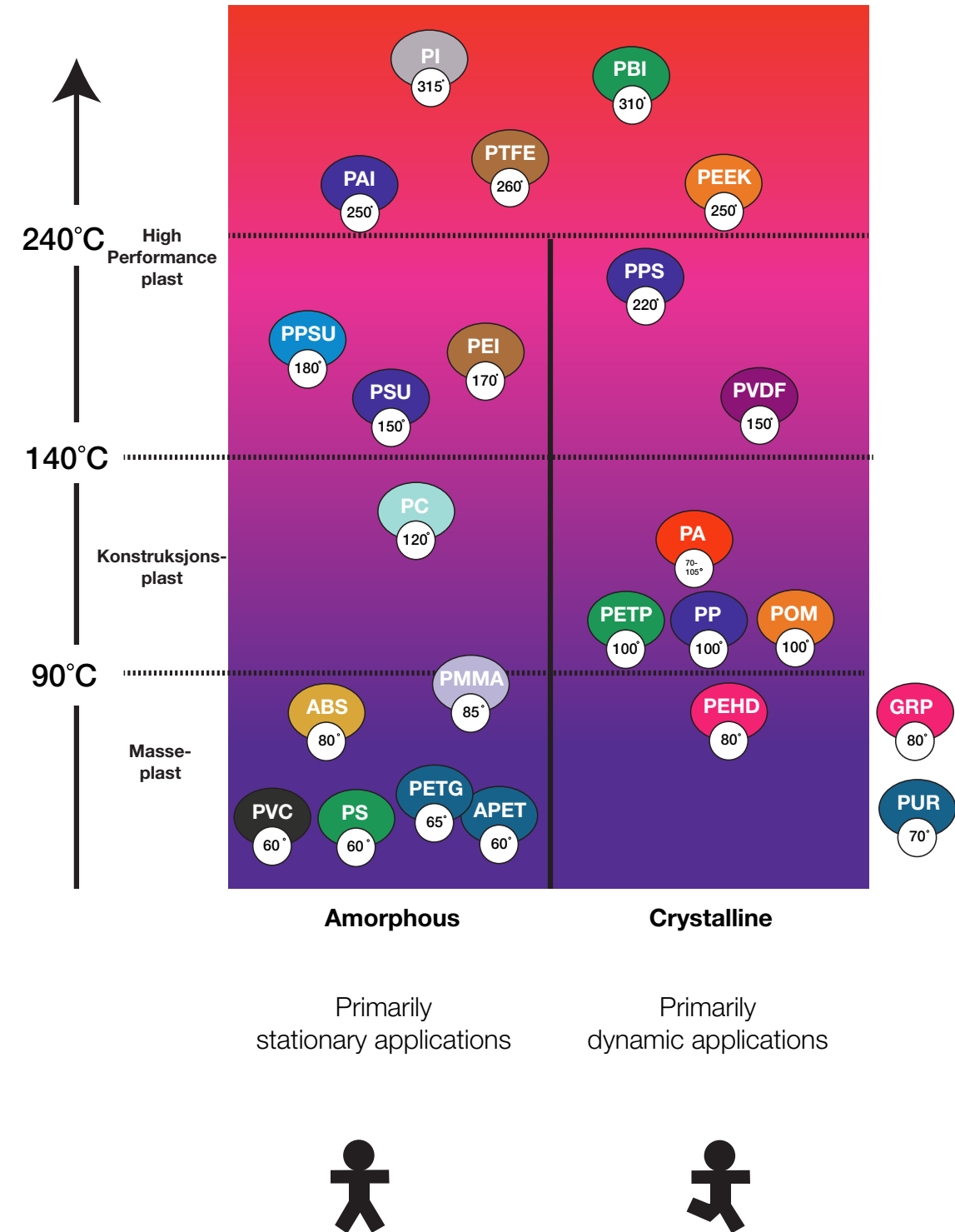
Designed to stand up to the harsh environmental conditions encountered in the oil and Gas industry, GRP products are the ideal solution for both offshore and land based production. Key features such as corrosion and slip resistance, flame retardancy, impact absorbency, non-conductivity, high strength – to –weight properties, and low maintenance make these products ideal for all types of oil and gas facilities.

Applications

- Boat Landings, Splash Zone Areas
- Stairways, Decking, Bridges, Catwalks
- Chemical Injections Skids (access Platforms)
- Walkways over Mud Pits/Mud Tanks
- Access Platforms for Metering Stations, Valve Operations and Other Areas
- Communication/Radar Platforms
- Coverings, Support, Protection for Subsea
- Manifolds & Spool Trees
- Windwalls
- Drilling Derrick (Crown, Belly Boards, Racking Boards)
- Air Intake and Personnel Protection Screens.



Max continuous application temperature



Amorphous

Crystalline

Primarily stationary applications

Primarily dynamic applications





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