Think Value ...
K.D. Feddersen UK Ltd. is your specialist for high-tech solutions involving engineering plastics. As a distributor of plastics and chemical products, we are a close, exclusive partner to renowned global producers.

For over 60 years K.D. Feddersen has been consistently providing high value solutions with brand name products that meet the strictest quality requirements as well as personalised, onsite consulting services.

- We assist you in selecting the right plastic for your products.
- Show you effective, practicable solutions for your product developments.
- Deliver custom-designed distribution concepts – even for small quantities.

The Feddersen Group was established by K.D. Feddersen & Co., a company founded by Karl Detlef Feddersen in 1949. For decades, Group companies have been concentrating on trading chemical and technical products worldwide and represent well-known companies in the chemical, investment and consumer goods producing industry through its own subsidiaries in Europe and worldwide.

Besides foreign trade, our companies are actively involved in distribution of engineering compounds in Europe and Asia, in stainless steel commerce, in application-oriented development and production of special plastic compounds, as well as mechanical engineering.

The Feddersen Group

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<td>K.D. Feddersen Ueberseegeellschaft mbH (DE) - Jakarta (ID)</td>
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<td>K.D. Feddersen Norden AB (SE)</td>
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<td>Forvema AB (SE)</td>
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<td>K.D. Feddersen UK Ltd. (GB)</td>
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<td>K.D.F. Distribution (Shanghai) Co., Ltd. (CN)</td>
<td>Ho Chi Minh City (VN)</td>
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<td>K.D. Feddersen Singapore Pte. Ltd. (SG)</td>
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<td>Voss Inox Polska Sp. z o.o. (PL)</td>
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<td>OOO Voss Metall (RU)</td>
<td>Lyon (FR)</td>
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<td>RHB Voß GmbH (DE)</td>
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</table>
The production company within the Feddersen Group is AKRO-PLASTIC GmbH, along with its branches AF-COLOR for masterbatch and BIO-FED for biopolymer. We have comprehensive technical expertise in engineering plastics to draw on and utilize the synergies afforded by this alliance for the benefit of our customers:

- Innovative R&D services
- Development of formulations based on customer specifications, resulting in marketable standard products
- Toll compounding – from small orders to full size service
- Certified to the following standards:
  - ISO 9001:2008
  - ISO 9001:2008 IQNet
  - ISO/Ts 16949:2009
  - DIN EN ISO 14001:2004 + Cor 1:2009
  - DIN EN ISO 14001:2004 + Cor 1:2009 IQNet
  - DIN EN ISO 50001:2011
  - DIN EN ISO/IEC 17025:2005 (DAkkS-Accreditation), Attachment to certificate D-PL-14280-01-00,
  - BS OHSAS 18001:2007
  - BS OHSAS 18001:2007 IQNet
- Assured materials testing in an accredited test laboratory in Germany (DIN ISO/IEC 17025:2005 accredited)
## Product range

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<td>• AF-Carbon® (Carbon Black Masterbatch)</td>
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### K.D. Feddersen products

**Temperature resistance**

- **High performance plastics**
  - PI
  - PAI
  - PSU
  - PPS
  - PEEK
  - PPS
  - LCP
  - PFA/FEP
  - PA 4.6
  - PPA

- **Engineering plastics**
  - PEN
  - PPO
  - PC
  - PC Films
  - PC Blends
  - PCT
  - sPS
  - LFT
  - PET
  - PA 6
  - PA 6.6
  - PK
  - PBT
  - PA 6.6/6
  - PA 6.10
  - PA 6I/6T
  - TPU
  - POM
  - TPC-ET

- **Commodity plastics**
  - ABS
  - ASA
  - PMMA
  - ABS/PA
  - ASA/PA
  - SAN
  - MBS
  - PCTG
  - PS
  - PP
  - TPO
  - PE
  - UHMW
  - EVA
  - TPE-S

**Amorphous**

**(Semi) Crystalline**
### KOLON PLASTICS

- **KOCETAL®** (POM Copolymer)
- **KOPA®** (PA 6)
- **KOPA®** (PA 6.6)
- **Spesin®** (PBT)
- **KOPET®** (PET)
- **KOPEL®** (TPC-ET)
- **NOPLA®** (PEN)
- **SPELLOY®** (Alloys)

### TEIJIN KASEI EUROPE B.V.

- **Panlite®** (PC)
- **Panlite®** (PC/PET, PC/PBT)
- **Multilon®** (PC/ABS)

### majoris

- **PO Compounds** (PP Range)
- **MAJORIS G®** (PP, PA)
- **Venyl®** (PA 6, PA 6.6 and PA 6.6/6)
- **Nealid®** (Alloys PA/PP or PP/PA)
- **Maj’Eco®** (Conventional or Biosourced Thermoplastics)
- **Malat®** (PBT)
- **Malex®** (PC)
- **Cetal®** (POM)
- **Majoris HPS®** (PPS)

### TechnoCompound

- **TechnoFiber®** (PP LFT)
- **TechnoMid®** (PA 6)
- **TechnoMid®** (PA 6.6)
- **TechnoDur®** (PBT)
- **TechnoElast®** (TPE-S)
- **TechnoFin®** (PO Compound)

### TORAY

- **TORELINA®** (PPS)
- **SIVERAS®** (LCP)

### Idemitsu

- **Xarec®** (sPS)

### DimeLka Plast GmbH

- **CompaDur®** (PBT)
- **CompaMid®** (PA 6 Cross-linkable)
- **CompaMid®** (PA 6.6 Cross-linkable)

### FEDDEM

- **FED-MTS line** (Twin-screw Extruders)

### WPP® Custom Polyolefin Compounds (PP, TPO) [17]

### WPP® Pro-Touch™ (PP) [17]

### Extrusion blow moulding machinery suitable for:

- Consumer packaging applications [17]
- Industrial packaging applications [17]
- Automotive applications [17]
### AKROMID® A

**Properties**
- Very good impact strength (product-dependent)
- Easy to process
- Very high strength & stiffness (product-dependent)
- Minimal creep (product-dependent)
- Excellent chemical resistance
- Good dimensional stability (product-dependent)
- Good tribological properties (product-dependent)
- Good coloring
- Design material for structural components
- High-quality surface finish (product-dependent)

### PA 6.6

**Features**
- Non-reinforced grades
- Glass fibre reinforced grades up to 60 %
- Glass bead filled grades up to 50 %
- Mineral filled grades up to 40 %
- Glass-fibre/mineral and carbon fibre reinforced grades
- Tribological modified grades
- Flame-retardant grades (UL94 V-0-listed, free of red phosphorus and halogen)
- Dry-impact-resistant grades, cold-impact-resistant grades
- Hydrolytically stable grades
- Electroplating grades

### AKROMID® B

**Properties**
- Very good impact strength (product-dependent)
- Easy to process
- Very high strength & stiffness (product-dependent)
- Minimal creep (product-dependent)
- Excellent chemical resistance
- Good dimensional stability (product-dependent)
- Good tribological properties (product-dependent)
- Good coloring
- Design material for structural components
- High-quality surface finish (product-dependent)

### PA 6

**Features**
- Non-reinforced grades
- Glass fibre reinforced grades up to 60 %
- Glass bead filled grades up to 50 %
- Mineral filled grades up to 40 %
- Glass-fibre/mineral reinforced grades
- Carbon fibre reinforced grades
- Tribological modified grades
- Flame-retardant grades (UL94 V-0, free of red phosphorus and halogen)
- Dry-impact-resistant grades, cold-impact-resistant grades
- Electroplating grades

### AKROMID® C

**Properties**
- Polymer blend of PA 6.6 and PA 6
- High impact strength (product-dependent)
- Less moisture-dependent than PA 6
- High chemical resistance
- Better flow characteristics than PA 6.6
- Higher heat distortion temperature than PA 6
- Aesthetic surface finish
- Good abrasion resistance
- Easy to process

### PA 6.6/PA 6 Blend

**Features**
- Non-reinforced grades
- Glass fibre reinforced grades up to 50 %
- Impact-modified grades
- Flame-retardant grades (UL94 V-0, free of red phosphorus and halogen)
- XTC = Long-term heat stabilisation for continuous use temperatures more than 200 °C
- High flowability
- Up to 60 % long glass fibers with lower warpage and improved impact strength

### AKROMID® RM

**Properties**
- PA 6-based polymer blends with reduced moisture absorption compared with PA 6
- Low warpage
- High impact strength (product-dependent)
- Very good surface finish
- Improved CaCl₂ resistance (product-dependent)
- Greater property consistency in a moist environment than PA 6 and PA 6.6
- Greater stiffness and strength following conditioning than corresponding PA 6/PA 6.6 compounds

### PA 6 Blend

**Features**
- RM-D: PA 6 blend with amorphous blending component, non-reinforced and reinforced
- RM-M: PA 6 blend with crystalline blending component, reinforced
- Glass fibre reinforced grades up to 50 %
- Process-optimised compounds
- Compounds with increased chemical resistance
<table>
<thead>
<tr>
<th>AKROMID® S</th>
<th>PA 6.10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Properties</strong></td>
<td>Biopolymer: Polyamide 6.10 on basis of renewable raw materials (not bio-degradable). Property profile similar to PA 6, but with the following essentials:</td>
</tr>
<tr>
<td>• Greatly reduced moisture absorption compared with PA 6 and PA 6.6</td>
<td>• Non-reinforced grades for injection moulding and extrusion</td>
</tr>
<tr>
<td>• Good impact strength</td>
<td>• Glass fibre reinforced grades up to 50 %</td>
</tr>
<tr>
<td>• Very good hydrolysis resistance</td>
<td>• Flame-retardant grades</td>
</tr>
<tr>
<td>• Very good chemical resistance</td>
<td></td>
</tr>
<tr>
<td>• Good tribological properties</td>
<td></td>
</tr>
<tr>
<td><strong>Features</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AKROMID® T</th>
<th>PPA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Properties</strong></td>
<td>High performance polymer: Polyphthalamide for highly mechanical and highly temperature loaded components. Property profile surpasses PA 6.6:</td>
</tr>
<tr>
<td>• High heat resistance</td>
<td>• Non-reinforced grades</td>
</tr>
<tr>
<td>• High heat ageing resistance</td>
<td>• Glass fibre reinforced grades up to 55 %</td>
</tr>
<tr>
<td>• Very good chemical resistance</td>
<td>• Process optimised grades</td>
</tr>
<tr>
<td>• Low moisture absorption</td>
<td>• Glass bead filled grades</td>
</tr>
<tr>
<td>• High mechanical properties</td>
<td>• Carbon fibre reinforced grades</td>
</tr>
<tr>
<td>• Good dimensional stability</td>
<td></td>
</tr>
<tr>
<td><strong>Features</strong></td>
<td></td>
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<table>
<thead>
<tr>
<th>AKROLOY® PA</th>
<th>PA Blend</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Properties</strong></td>
<td>Blend of PA 6.6 with partially aromatic CoPA</td>
</tr>
<tr>
<td>• Low moisture absorption</td>
<td>• Reinforced and non-reinforced grades</td>
</tr>
<tr>
<td>• Dimension stable</td>
<td>• Up to 60 % glass fibre reinforced grades for parts under high mechanical stress</td>
</tr>
<tr>
<td>• High stiffness and strength even after absorbing moisture</td>
<td>• Up to 60 % glass fibre reinforced grades for use in drinking water applications incl. approval for KTW/W270, WRAS, ACS and NSF61</td>
</tr>
<tr>
<td>• Metal replacement</td>
<td>• Mineral-filled grades up to 40 %</td>
</tr>
<tr>
<td>• Excellent surface finish, even on highly reinforced grades</td>
<td>• Carbon fibre reinforced grades up to 50 %</td>
</tr>
<tr>
<td>• Extremely easy to process</td>
<td>• Up to 60 % long glass fibers with lower warpage and improved impact strength</td>
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<tr>
<td><strong>Features</strong></td>
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<thead>
<tr>
<th>AKROMID® Lite</th>
<th>PA Blend</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Properties</strong></td>
<td>PA 6/PA 6.6-based polymer blend with lower density vs. neat PA 6 or PA 6.6</td>
</tr>
<tr>
<td>• Meets automotive industry requirements for weight savings and CO₂ reduction</td>
<td>• Non-reinforced and reinforced grades, e.g. with glass fibre up to 40 %</td>
</tr>
<tr>
<td>• Lower moisture absorption than PA 6</td>
<td>• Glass bead filled grades up to 30 %</td>
</tr>
<tr>
<td>• Greater notched impact strength than PA 6</td>
<td>• Glass-fibre/mineral reinforced grades</td>
</tr>
<tr>
<td>• Volume/cost pricing advantages</td>
<td>• Hydrolitically stable grades</td>
</tr>
<tr>
<td></td>
<td>• Up to 60 % long glass fibers with lower warpage and improved impact strength</td>
</tr>
<tr>
<td><strong>Features</strong></td>
<td></td>
</tr>
</tbody>
</table>
# Product range

## AKROMID® XtraLite

### Properties
- PA 6-based polymer blend with lower density vs. neat PA 6
- Even greater density advantage over AKROMID® Lite product line
- Meets automotive industry requirements for weight savings and CO₂ reduction
- Lower moisture absorption than ordinary PA 6/PA 6.6
- Mechanical properties less affected by conditioning compared to ordinary PA 6

## PA Blend

### Features
- Non-reinforced and reinforced grades, e.g. with glass-fibre

## AKROLEN® PP

### Properties
- Blend and hybrid systems
- Tailor-made products
- Custom colors
- Flame retardant (UL94 V-0)

## PP Compound

### Features
- Customer-specific compounds

## AKROTEK® PEEK

### Properties
- High-performance thermoplastic
- Excellent mechanical properties
- High fatigue resistance
- Extremely high heat resistance
- Outstanding chemical resistance
- Low creep, even at elevated temperatures
- Low abrasion tendency
- Low smoke gas density
- Inherently flame-retardant
- High resistance to gamma radiation (sterilisation)

## High Temperature Compound

### Features
- Customer-specific compounds
- Glass fibre reinforced grades up to 60 %
- Carbon fibre reinforced grades up to 50 %
- Tribological modified grades
- Different viscosities for all processing technologies
- Micro granulate
- Standard coloring for color coding

## AKROTEK® PK

### Properties
- Low permeability
- Short cycle times
- Good resilience
- Extremely high chemical resistance
- Easily colored
- Construction material for structural components

## Aliphatic Polyketone

### Features
- Non-reinforced grades for injection moulding and extrusion
- Glass fibre reinforced grades up to 60 %
- Flame-retardant grades
- Impact modified grades
- Carbon fibre reinforced grades
- Tribological modified grades
- Up to 60 % long glass fibers with lower warpage and improved impact strength

## AKROMID® ICF + AKROLOY® ICF + AKROTEK® ICF

### Properties
- Good tribological properties (low-wear)
- Good electrical conductivity
- Good thermal conductivity
- Excellent stiffness and flexural stiffness
- Good flexural stress
- Low linear thermal expansion
- Excellent price/performance ratio

## Carbon Fibre Reinforced Compounds

### Features
- Carbon fibre reinforced compounds up to 40 %
- Based on PA 6, PA 6.6, PPA, PA blend and aliphatic polyketone
- XTC = Long-term heat stabilisation for continuous use temperatures more than 200 °C
- GIT optimised grades
<table>
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<tr>
<th><strong>AF-Color®</strong></th>
<th><strong>Color Masterbatch</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Properties</strong></td>
<td>Custom masterbatches according to customer requirements. In addition to standard colors, the following effects are possible: • Two-tone effects • Luminescence • Phosphorescence • Thermochromism • Photochromism • Fibre effects • Marbling</td>
</tr>
<tr>
<td><strong>Features</strong></td>
<td>Standard for coloring the following based on grade-compliance: • PO • PA • POM • PBT, PET • ABS, SAN, ASA • PS, SB • All other engineering polymers</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th><strong>AF-Carbon®</strong></th>
<th><strong>Carbon Black Masterbatch</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Properties</strong></td>
<td>Engineering carbon black masterbatch based on different pigment types: • Carbon black • Lamp black • Organic blackening • Nigrosine • Electrically conductive carbon blacks • IR-reflecting preparations</td>
</tr>
<tr>
<td><strong>Features</strong></td>
<td>Standard for coloring the following based on grade-compliance: • PO • PA • POM • PBT, PET • ABS, SAN, ASA • PS, SB • All other engineering polymers</td>
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<tr>
<th><strong>AF-Complex®</strong></th>
<th><strong>Additive Masterbatch</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>Properties</strong></td>
<td>Custom masterbatches according to customer requirements. The following is a brief selection: • UV stabilisers • Static inhibitors • Lubricants • Laser additives • Antioxidants/heat stabilisers • Endothermic blowing agents • Further additive combinations available on request</td>
</tr>
<tr>
<td><strong>Features</strong></td>
<td>Standard for coloring the following based on grade-compliance: • PO • PA • POM • PBT, PET • ABS, SAN, ASA • PS, SB • All other engineering polymers Combination masterbatches are possible in many cases.</td>
</tr>
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<table>
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<tr>
<th><strong>AF-Eco®</strong></th>
<th><strong>Biobased/Biodegradable Color Concentrates</strong></th>
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<tr>
<td><strong>Properties</strong></td>
<td>Vinçotte certified color concentrates within the DIN EN 13432 • Individual color design according to customer requirements • Standard range alternatively available</td>
</tr>
<tr>
<td><strong>Features</strong></td>
<td>Grade-compliance based on M-VERA® • Preservation of the biodegradable characteristics of bio-based/biodegradable polymer is guaranteed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>M-VERA®</strong></th>
<th><strong>Biopolymer</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Properties</strong></td>
<td>Made of renewable primary products, bio-based • Biodegradable • Manifold “End-of-life” options • Workable in injection moulding process • Printable and easy self-coloring • Weldable • Resistant to gamma sterilisation • Good barrier properties • HDT &gt;115 °C</td>
</tr>
<tr>
<td><strong>Features</strong></td>
<td>PHA for injection moulding and extrusion • PHA blends • Long fibre reinforced PLA blends</td>
</tr>
</tbody>
</table>
# Product range

## KOCETAL®

**Properties**
- General purpose
- High strength, hardness
- Excellent tribological properties
- High toughness
- Electrically conductive
- Weather and UV resistant

## POM Copolymer

**Features**
- High, medium, low and extremely low viscosity
- Food contact grades
- WRAS approved grades (hot & cold water up to 85 °C)
- NSF approved grades
- UL approved grades
- Low VOC grades

## KOPA®

**Properties**
- General purpose, thick sections
- High flow
- Improved impact resistance
- Increased stiffness, toughness
- High thermal resistance
- Flame-retardant
- Good dimension stability

## PA 6

**Features**
- Medium viscosity, high viscosity
- Medium viscous and fast cycling grades
- High viscous, impact modified grades
- Glass fibre reinforced grades (15 – 30 %) for parts under higher mechanical stress
- Impact modified unreinforced and reinforced grades with 33 % glass-fibre
- Glass fibre reinforced grades 15 – 35 %
- Unreinforced grades
- Reinforced halogen free grades
- Mineral filled grades
- Combination of reinforcements (e.g. mineral, glass-fibre)
- Hybrid grades – dimensional stability and high thermal resistance

## KOPA®

**Properties**
- General purpose, high flow
- Increased flexibility
- High thermal resistance
- Increased stiffness, toughness
- Flame-retardant
- Dimensional stability, good bearing properties
- Low friction
- Weather resistant

## PA 6.6

**Features**
- Medium viscosity; fast cycling
- Glass fibre reinforced grades (15 – 45 %) for parts under higher mechanical stress
- Hydrolysis resistant grades
- Impact modified grades
- Unreinforced grades
- Glass fibre reinforced grades (up to 30 %) halogen free
- Mineral filled grades
- Carbon fibre reinforced grades
- Hybrid grades – dimensional stability and high thermal resistance

## Spesin®

**Properties**
- General purpose
- High impact resistance
- Increased stiffness

## PBT

**Features**
- Unreinforced grades
- Glass fibre reinforced grades (15 – 30 %) for parts under high mechanical stress
- Glass fibre reinforced grades (30 %) for higher strength requirements
- Long term weather resistance
- Flame-retardant grades (up to UL94 V-0)

## KOPEL®

**Properties**
- High stiffness
- Good dimensional stability

## PET

**Features**
- Glass fibre reinforced grades (15 – 45 %)
- Flame-retardant grades (up to UL94 V-0)

## KOPEL®

**Properties**
- Thermoplastic elastomer
- Flexible shore D 40 – 72

## TPC-ET

**Features**
- Unreinforced grades
<table>
<thead>
<tr>
<th><strong>NOPLA®</strong></th>
<th><strong>PEN</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Properties</strong></td>
<td></td>
</tr>
<tr>
<td>PEN - PET Co-Polyester:</td>
<td></td>
</tr>
<tr>
<td>• Excellent clarity</td>
<td></td>
</tr>
<tr>
<td>• Improved gas barrier properties</td>
<td></td>
</tr>
<tr>
<td><strong>Features</strong></td>
<td></td>
</tr>
<tr>
<td>• Unreinforced grades</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SPELLOY®</strong></th>
<th><strong>Alloys</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Properties</strong></td>
<td></td>
</tr>
<tr>
<td>• High impact resistance</td>
<td></td>
</tr>
<tr>
<td>• Excellent surface</td>
<td></td>
</tr>
<tr>
<td>• Dimensionally stable</td>
<td></td>
</tr>
<tr>
<td><strong>Features</strong></td>
<td></td>
</tr>
<tr>
<td>• PC/ABS grades</td>
<td></td>
</tr>
<tr>
<td>• PC/PBT grades</td>
<td></td>
</tr>
<tr>
<td>• Flame-retardant grades</td>
<td></td>
</tr>
<tr>
<td>• Unreinforced grades</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Panlite®</strong></th>
<th><strong>PC</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Properties</strong></td>
<td></td>
</tr>
<tr>
<td>• Outstanding transparency (water-clear)</td>
<td></td>
</tr>
<tr>
<td>• Very good impact strength</td>
<td></td>
</tr>
<tr>
<td>• Good dimensional stability</td>
<td></td>
</tr>
<tr>
<td>• High thermal resistance</td>
<td></td>
</tr>
<tr>
<td><strong>Features</strong></td>
<td></td>
</tr>
<tr>
<td>• Standard, Injection moulding and extrusion grades</td>
<td></td>
</tr>
<tr>
<td>• UV stabilised grades</td>
<td></td>
</tr>
<tr>
<td>• Glass fibre reinforced grades</td>
<td></td>
</tr>
<tr>
<td>• Carbon fibre reinforced grades</td>
<td></td>
</tr>
<tr>
<td>• Lightdiffusing, -conducting or -reflecting grades</td>
<td></td>
</tr>
<tr>
<td>• Antistatic grades</td>
<td></td>
</tr>
<tr>
<td>• Flame-retardant and halogen-free grades</td>
<td></td>
</tr>
<tr>
<td>• EMI shielding grades</td>
<td></td>
</tr>
<tr>
<td>• Temperature conductive grades</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Panlite®</strong></th>
<th><strong>PC/PET, PC/PBT</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Properties</strong></td>
<td></td>
</tr>
<tr>
<td>• Chemical resistance</td>
<td></td>
</tr>
<tr>
<td>• Low water absorption</td>
<td></td>
</tr>
<tr>
<td>• Good paintability</td>
<td></td>
</tr>
<tr>
<td>• High stiffness</td>
<td></td>
</tr>
<tr>
<td>• High surface finish</td>
<td></td>
</tr>
<tr>
<td>• High heat resistance</td>
<td></td>
</tr>
<tr>
<td><strong>Features</strong></td>
<td></td>
</tr>
<tr>
<td>• Standard grades</td>
<td></td>
</tr>
<tr>
<td>• UV stabilised grades</td>
<td></td>
</tr>
<tr>
<td>• Glass fibre reinforced grades</td>
<td></td>
</tr>
<tr>
<td>• Special filler grades</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Multilon®</strong></th>
<th><strong>PC/ABS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Properties</strong></td>
<td></td>
</tr>
<tr>
<td>• High impact strength</td>
<td></td>
</tr>
<tr>
<td>• Balanced processability</td>
<td></td>
</tr>
<tr>
<td>• Wide processing window</td>
<td></td>
</tr>
<tr>
<td><strong>Features</strong></td>
<td></td>
</tr>
<tr>
<td>• Standard grades</td>
<td></td>
</tr>
<tr>
<td>• Automotive grades</td>
<td></td>
</tr>
<tr>
<td>• Flame-retardant, halogen free grades</td>
<td></td>
</tr>
<tr>
<td>• Antistatic grades</td>
<td></td>
</tr>
<tr>
<td>• Glass fibre reinforced grades</td>
<td></td>
</tr>
<tr>
<td>• Electroplating grades</td>
<td></td>
</tr>
</tbody>
</table>

Here you find information about the portfolio of TEIJIN: or http://kunststoff.kfeddersen.com/teijin-en
## Product range

### PO Compounds

**Properties**
- Custom made quality
- Substitution of over specified products
- Eco-concept
- Electrical conductivity
- Thermal conductivity
- High density
- Surface finish

**Features**
- Compound based on PP or PE for injection moulding, extrusion, thermoforming, blow moulding
- Mineral or glass filled (fibres, beads)
- Impact modified
- Special stabilisation (UV, anti-detergent, heat,...)
- Electrical or thermal conductive performance
- Flame retardant halogen free unfilled and filled
- High density and surface treatment for aesthetic applications
- Natural or colored versions
- Food contact regulation for PP short glass-fibres (FDA, EEC)

### MAJORIS G®

**Properties**
- Custom made quality
- Excellent mechanical properties
- Exceptional balance of impact/stiffness
- Weight reduction
- Price versus performance
- LASER welding
- Dimensional stability
- Lower warepage

**Features**
- Range for injection moulding
- Long glass-fibres (20 – 60 %) in natural or colored versions, length from 6 to 25 mm
- PP long glass-fibres with special additives package
- PP long glass-fibres with halogen free flame-retardant
- Water approval (NSF61, ACS) and food contact regulation (FDA, EEC) on some PP long glass-fibres reinforced grades

### Venyl®

**Properties**
- Custom made quality
- Ready colored version approved by OEMs
- High density for heavy parts or finished surfaces

**Features**
- Range for injection moulding
- Unfilled and filled in ready colored version for Automotive (RSA, PSA, VW, Audi, Mercedes, Jaguar, FIAT,...)
- Special stabilisation
- Carbon fibres (10 – 30 %)
- Low coefficient of friction
- Electrical conductivity
- High density
- Grades for metallisation

### Nealid®

**Properties**
- Custom made quality
- Superior mechanical properties in high moisture environment
- Enhanced HDT properties
- Lower density
- Processing savings

**Features**
- Range for injection moulding
- Mineral fillers or glass-fibres
- Special stabilisation
- Natural and colored versions
- Long term UV stabilisation
<table>
<thead>
<tr>
<th><strong>Maj’Eco®</strong></th>
<th><strong>Conventional or Biosourced Thermoplastics</strong></th>
</tr>
</thead>
</table>
| **Properties** | • Custom made quality  
                  • Eco-design  
                  • CO₂ impact  
                  • Weight reduction  
                  • Good mechanical properties  
                  • Lower abrasion properties  
                  • Less energy consumption in processing  
                  • Innovation  
                  • Social impact |
| **Features**   | • Range for injection moulding, extrusion, thermoforming, blow moulding  
                  • Conventional thermoplastics as PP, PE and PS  
                  • Bio-sourced thermoplastics (starch grafted, PLA, PHA,...)  
                  • Natural fillers or hybrid fillers  
                  • Flame halogen free stabilisation  
                  • Natural or colored version |

<table>
<thead>
<tr>
<th><strong>Malat®</strong></th>
<th><strong>PBT</strong></th>
</tr>
</thead>
</table>
| **Properties** | • High performance  
                  • Balanced properties  
                  • Ready colored version |
| **Features**   | • Range for injection moulding  
                  • Mineral fillers or glass-fibres  
                  • Flame-retardant halogen free stabilisation with mineral fillers or glass-fibres  
                  • Colored versions for Automotive applications |

<table>
<thead>
<tr>
<th><strong>Malex®</strong></th>
<th><strong>PC</strong></th>
</tr>
</thead>
</table>
| **Properties** | • High mechanical and thermal properties  
                  • Good electrical properties  
                  • Excellent chemical properties  
                  • Dimensional stability |
| **Features**   | • Range for injection moulding  
                  • Mineral fillers or glass-fibres  
                  • Flame-retardant halogen free stabilisation with mineral fillers or glass-fibres  
                  • Natural or colored versions |

<table>
<thead>
<tr>
<th><strong>Cetal®</strong></th>
<th><strong>POM</strong></th>
</tr>
</thead>
</table>
| **Properties** | • Very high stiffness  
                  • Hardness and toughness  
                  • Good chemical resistance  
                  • Good hydrolysis resistance  
                  • High resistance to thermal and oxidative degradation |
| **Features**   | • Range for injection moulding  
                  • Low coefficient of friction  
                  • Mineral fillers or glass-fibres  
                  • Impact modifier  
                  • Special stabilisation  
                  • Natural or colored versions  
                  • Tribological quality |

<table>
<thead>
<tr>
<th><strong>Majoris HPS®</strong></th>
<th><strong>PPS</strong></th>
</tr>
</thead>
</table>
| **Properties**  | • Exceptional mechanical properties  
                  • Inherently flame retardant UL94 V0  
                  • High thermal and electrical properties  
                  • Excellent chemical and oxidation resistance  
                  • Lower shrinkage |
| **Features**    | • Range for injection moulding  
                  • Mineral filled  
                  • Short glass-fibres (10 – 30 %)  
                  • Hybrid fillers  
                  • Natural or colored versions |
# Product range

**TechnoFiber®**
- **Properties**
  - Excellent mechanical properties
  - Very good impact strength and notched impact strength
- **Features**
  - Long glass fibre reinforced grades (20 – 50 %) with pellet/fibre length 10, 15 and 20 mm

**TechnoMid®**
- **PA 6**
  - **Properties**
    - High damping properties
    - Weather and light resistant
  - **Features**
    - Impact modified grades
    - Glass fibre reinforced grades

**TechnoMid®**
- **PA 6.6**
  - **Properties**
    - High damping properties
    - Weather and light resistant
  - **Features**
    - Impact modified grades
    - Glass fibre reinforced grades

**TechnoDur®**
- **PBT**
  - **Properties**
    - Hard surface
    - Good anti-friction performance
    - Good abrasion resistance
    - High thermal resistance
    - Increased stiffness
    - Enhanced impact performance
    - Flame-retardant
    - Blends PBT/PET
    - Excellent surface
    - Balanced properties
    - Outdoor use
  - **Features**
    - Unreinforced grades
    - Impact modified grades
    - Glass fibre reinforced grades (10 – 30 %)

**TechnoElast®**
- **TPE-S**
  - **Properties**
    - Thermoplastic Elastomers
    - SEBS Shore A75 - 90
    - Enhanced toughness
  - **Features**
    - Unreinforced grades
    - Injection moulding and extrusion grades

**TechnoFin®**
- **PO Compound**
  - **Properties**
    - Good abrasion resistance
    - Good damping characteristics
    - Increased stiffness
    - Enhanced impact performance
    - Electrically conductive
    - General purpose
    - Flame-retardant
  - **Features**
    - Unreinforced grades
    - Glass fibre reinforced grades (10 – 40 %); chemically coupled
    - PP and HDPE
    - Mineral filled grades
    - Talc reinforced grades
    - Magnetite filled grades
<table>
<thead>
<tr>
<th><strong>Xarec®</strong></th>
<th><strong>sPS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Properties</strong></td>
<td><strong>Features</strong></td>
</tr>
<tr>
<td>• Extremely hydrolytically stable</td>
<td>• Glass fibre reinforced grades (up to 40 %)</td>
</tr>
<tr>
<td>• Low warpage</td>
<td>• Flame-retardant grades with UL listing</td>
</tr>
<tr>
<td>• Low specific weight</td>
<td>• WRAS compliant grade (hot &amp; cold water up to 85 °C)</td>
</tr>
<tr>
<td>• High dimensional stability</td>
<td>• KTW-compliant grades (for use in hot-water and cold-water applications)</td>
</tr>
<tr>
<td>• Very good electrical characteristics</td>
<td>• FDA-compliant grades</td>
</tr>
<tr>
<td>• High continuous service temperature</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>TORAY</strong></th>
<th><strong>PPS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Properties</strong></td>
<td><strong>Features</strong></td>
</tr>
</tbody>
</table>
| • Excellent long-term heat resistance  
  (UL temperature index: 200 – 240 °C, UL file No. E41797) | • Cross-link grades |
| • Low mould shrinkage | • Linear grades |
| • Low linear thermal expansion | • Various grades of products from base polymer to compounds |
| • Low water absorption | |
| • Excellent dimensional stability even when used under high-temperature, high-humidity conditions | |
| • Excellent chemical resistance | |
| • High strength | |
| • High rigidity | |
| • Low degradation characteristic even in high temperature conditions | |
| • Excellent fatigue endurance and creep resistance | |
| • Inherent self-extinguishing – passes UL94 V-0 standard without adding flame-retardant | |
| • Excellent electric characteristics in high-temperature, high-humidity and high-frequency conditions | |
| • Good flow property | |

<table>
<thead>
<tr>
<th><strong>SIVERAS®</strong></th>
<th><strong>LCP</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Properties</strong></td>
<td><strong>Features</strong></td>
</tr>
<tr>
<td>• Excellent toughness in thin-walled mouldings, by higher molecular orientation</td>
<td>• Glass fibre reinforced grades</td>
</tr>
<tr>
<td>• Excellent thermal resistance (more than 250 °C)</td>
<td>• Glass fibre and inorganic filler reinforced grades (GF and MD)</td>
</tr>
<tr>
<td>• Excellent flowability</td>
<td>• High valued grades (specialised application)</td>
</tr>
<tr>
<td>• Lower warpage in reflow soldering, due to lower-pressure moulding</td>
<td></td>
</tr>
<tr>
<td>• Excellent attenuate character and high modulus</td>
<td></td>
</tr>
</tbody>
</table>

Here you find information about the portfolio of Idemitsu:  
## Product range

### CompaDur®

**Properties**
- Extremely hard
- Favourable sliding and wear characteristics
- Easily processed
- Perfect flow behaviour
- High tenacity in temperatures
- Cross-linkable available
- Lead-free soldering (up to +280 °C)
- Short-term high temperature soldering (up to +450 °C)
- Maximum electrical properties

**Features**
- Cross-linkable grades
- Unreinforced grades
- Glass fibre and glass bead reinforced grades (10 – 50 %)
- Flame-retardant grades
- Low warp grades
- Blends (PBT/PET)

### CompaMid®

**CompaMid® PBT**

**Properties**
- Extreme heat distortion temperature to 350 °C
- Greater shape retention under thermal load
- Maximum electrical properties
- Significantly higher RTI (Relative Thermal Index) according to UL 746
- Improvement in classification according to UL 746 A for low flammability tested by hot wire ignition
- Passes the hot wire test according to VDE 0471, even without flame-retardants
- Improved resistance to chemicals
- Greatly reduced danger of stress cracking
- Higher continuous working temperature
- Better HWI-values (Hot Wire Ignition according to UL)

**Features**
- Cross-linkable grades
- Non-reinforced grades
- Glass fibre reinforced grades (up to 60 %)
- Glass bead reinforced grades (up to 50 %)
- Mineral filled grades
- Flame-retardant grades
- Cold impact grades
- Hydrolytically stable grades

### CompaMid®

**CompaMid® PA 6 Cross-linkable**

**Properties**
- Extreme heat distortion temperature to 400 °C
- Greater shape retention under thermal load
- Maximum electrical properties
- Significantly higher RTI (Relative Thermal Index) according to UL 746
- Improvement in classification according to UL 746 A for low flammability tested by hot wire ignition
- Passes the hot wire test according to VDE 0471, even without flame-retardants
- Improved resistance to chemicals
- Greatly reduced danger of stress cracking
- Higher continuous working temperature
- Better HWI-values (Hot Wire Ignition according to UL)

**Features**
- Cross-linkable grades
- Non-reinforced grades
- Glass fibre reinforced grades (up to 60 %)
- Glass bead reinforced grades (up to 50 %)
- Mineral filled grades
- Flame-retardant grades
- Cold impact grades
- Hydrolytically stable grades

### CompaMid®

**CompaMid® PA 6.6 Cross-linkable**

**Properties**
- Extreme heat distortion temperature to 400 °C
- Greater shape retention under thermal load
- Maximum electrical properties
- Significantly higher RTI (Relative Thermal Index) according to UL 746
- Improvement in classification according to UL 746 A for low flammability tested by hot wire ignition
- Passes the hot wire test according to VDE 0471, even without flame-retardants
- Improved resistance to chemicals
- Greatly reduced danger of stress cracking
- Higher continuous working temperature
- Better HWI-values (Hot Wire Ignition according to UL)

**Features**
- Cross-linkable grades
- Non-reinforced grades
- Glass fibre reinforced grades (up to 60 %)
- Glass bead reinforced grades (up to 50 %)
- Mineral filled grades
- Flame-retardant grades
- Cold impact grades
- Hydrolytically stable grades

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**FED-MTS line**

With the **FED-MTS** models, the available torque and the conveying volumes of the screw elements are specially adapted to meet the requirements of compounding engineering plastics and masterbatches.

**Features**
- Unique screw geometry
- Gentle process technology
- Quick changeover of materials
- High flexibility, easy to re-configure
- High output rates at lower temperatures
- Patented die plate design
- Variable process lengths up to 42 L/D
- Minimising shear stress
- Unique side feeding and venting
- Highest quality products
- Able to provide full turnkey solutions

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**Twin-screw Extruders**

Here you find information about the portfolio of DimeLika Plast GmbH:

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Here you find information about the portfolio of FEDDEM:
Markets

### Consumer packaging
- KBB Machines – all electric models: KBB 20, KBB40, KBB60, KBB80
- KLS Machines – long stroke models: KLS65-100, KLS6D-100, KLS85-100, KLS8D-100, KLS10S-100, KLS10D-100, KLS12S-100, KLS12D-100, KLS14S-100, KLS14D-100
- KEB Machines – Single station models: KEB10, KEB20
- KCC Machines – Versatile models: KCC5S, KCC5D, KCC10S, KCC10D, KCC15S, KCC15D, KCC20S, KCC20D, KCC20D (900 mm), KCC20D (1150 mm)
- KBS Machines – all round flexibility, complexity, variety models: KB520, KB561, KB5120

### Industrial packaging
- KLS Machines – long stroke flexible models: KLS30S, KLS30D, KLS60S, KLS60D
- KEB Machines – single station model: KEB30
- KCC Machines – versatile models: KCC20S, KCC20D, KCC20D (900 mm), KCC20D (1150 mm), KCC25S, KCC25D, KCC30
- KBS Machines – all round flexibility, complexity, variety models: KB520, KB561, KB5120

### Automotive
- KBS Machines – all round flexibility, complexity, variety models: KB520, KB561, KB5120, KB5241
- KCC Machines – versatile model: KCC30
- K3D Machines – monolayer and co-ex 3D curved part models: K3D-HP, K3D-HPD, K3D-SPB

### Disclaimer:
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We look forward to meeting with you!

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