

Product information

Product full identity:

Polypropylene Homopolymer

PPH is light weight (SG 0.91) has improved chemical resistance, stiffness, improved higher working temperature compared to PPC (0°C to +100°C). PPH retains its low water absorption, is easily weldable and food compliant.

Properties

- » Excellent weldability
- » Excellent chemical resistance
- » High corrosion resistance
- » High rigidity in upper temperature range
- » Higher working temperature than PPC
- » Food compliant

Applications

- » Chemical tanks
- » Water applications
- » Medical
- » Equipment construction

This document contains

- » Technical Datasheet (Page 2)
- » Chemical Datasheet (Page 3)
- » Safety Datasheet (Pages 4-5)

For any further information regarding food, fire and water certificates then please contact the sales team on 0116 232 1010

Technical Properties

Physical Properties	Test	Unit	Result
1. Specific gravity	ISO 1183	g/cm ³	0.95
2. Maximum service temp. Upper temp limit (no stronger mechanical stress involved)	-	°C	100
Lower temp limit	-	°C	0
Mechanical Properties	Test	Unit	Result
1. Elongation at yield	ISO 527	%	8
2. Yield Stress	ISO 527	MPa	32
3. Impact strength	ISO 179	kJ/m ²	no break
4. Notch impact strength	ISO 179	kJ/m ²	7
5. Ball indentation	ISO 2039-1	MPa	70
6. Shore-D	ISO 868	-	70
7. Modulus of elasticity	ISO 527	MPa	1400
Thermal Properties	Test Method	Unit	Result
1. Coefficient of linear thermal expansion	DIN 53752	K ⁻¹	1.6 x 10 ⁻⁴
2. Thermal conductivity	DIN 52612	W/(m*K)	0.22
Electrical Properties	Test Method	Unit	Result
1. Surface resistivity	IEC 6093	Ω	>10 ¹⁴
2. Dielectric strength	IEC 60243-1	kV/mm	58
Additional Data	Test Method	Unit	Result
1. Bondability	-	-	-
2. Food compliance	FDA + EU	-	+
3. Flammability	UL 94	-	-

All The above information is for guide purposes only. The data has been taken from standard test results provided by our manufacturers.

Key:

Yes	Limited	No data
+	O	-

Chemical Properties

Agent	Conc %	Working 20°C	Temp 60°C	Agent	Conc %	Working	Temp
Acetic Acid	100	o	o	Hydrofluoric acid	40	o	-
Acetone	100	+	+	Hydrogen peroxide	10	+	+
Ammonia	Conc.	+	+	Hydrogen Sulphide		+	+
Ammonium chloride		+	+	Isopropyl Alcohol	100	+	+
Amyl Alcohol		+	o	Mercurochrome		+	
Benzene		o	-	Methyl alcohol	100	+	+
Bleaching Solution	12,5 Cl	+	-	Methyl ethyl ketone	100	+	o
Boric Acid	100	+	+	Methylene chloride	100	o	-
Brake Fluid		+	+	Nitric acid	10	+	-
Butyl Acetate		o	-	Nitric acid	50	o	-
Calcium Chloride		+	+	Nitrobenzine		+	o
Carbon disulphide	100	-	-	Oxalic Acid		+	+
Carbon Tetrachloride		-	-	Ozone, gas	ca. 0,5 ppm	+	-
Chlorine, gas	100	-	-	Paraffin Oil	100	+	o
Chlorobenzene	100	o	-	Perchlorethylene		o	-
Chloroform		o	-	Petroleum	100	o	o
Citric Acid	10	+	+	Petroleum, aromatic free	100	o	o
Cresol		+	o	Phenol, aqu	ca.9	+	+
Cyclohexanone	100	o	o	Phosphoric Acid	50	+	+
Cyclohexene	100	-	-	Potassium hydroxide liquor	50	+	+
Diesel Fuel		o	-	Propyl alcohol		+	+
Ethyl acetate	100	+	-	Pyridine		o	o
Ethyl alcohol	96	+	+	Silicone oil		+	+
Ethylene Chloride	100	o	-	Sodium carbonate. aqu		+	+
Formic Acid	10	+	+	Sodium chloride, aqu		+	+
Frost protection agent	Petrol	+	+	Sodium Hydroxide liquor	60	+	+
Fuel, aromatic free		o	-	Sodium hydrogen sulphite		+	+
Glycerine	100	+	+	Sodium nitrate, aqu		+	+
Glycol	100	+	+	Sodium thiosulfate		+	+
Heating oil		+	-	Sulphuric Acid	96	o	-
Heptane	100	o	o	Tetrahydrofuran	100	o	-
Hydrochloric acid	10	+	+	Toluene	100	o	-
Hydrochloric acid	conc.	+	o	Trichlorethylene	100	o	-
				Xylene		o	-

All The above information is for guide purposes only. The data has been taken from standard test results provided by our manufacturers.

Key:

Resistant	Partly Resistant	Non resistant
+	o	-

Safety Properties

Substance / preparation and company detail

Polypropylene Homopolymer
Oadby Plastics
68 Scudamore Road,
Braunstone Frith Industrial Estate,
Leicester,
LE3 1UA
0116 232 1010

Composition / indications to components

Chemical characteristics: polymer of propylene
CAS-number: not necessary

Possible dangers

Unknown

First-aid measures

General comment: medical aid is not necessary
First-aid measures: none
Routes of exposure: none
Symptoms / effects: none

First-fighting measures

Suitable fire-fighting appliance: water fog, foam, fire fighting powder, carbon dioxide
Hazard warning notice: not applicable

Measures in case of unintended release

Person-related measures: none
Environmental protection measures: not applicable
Cleaning equipment: not applicable
Unsuitable cleaning products: not applicable

Handling and storage

Handling: no special regulations must be observed
Storage: unlimited good storage property

Limitation of exposition

Special design of techn. processing facilities: not required
Tolerance levels: none
Exposure measurement procedures: none
Respiratory protection: not required
Eye protection: not required
Body protection: not required

Physical and chemical characteristics

Phenotype

Phenotype / form: semi-finished product, solid state
Colour: natural
Smell: not applicable

Change of state

Crystalline melting range: 160-165 °C
Flash point: not applicable

Other remarks

Density: 0.905 g/cm³

Safety Properties

Stability and reactivity

Thermal decomposition: above appr. 300 °C

Dangerous decomposition products:

Besides carbon black also carbon dioxide and water as well as low molecular parts of PP will develop during the burning process. In case of incomplete burning also carbon monoxide may arise.

Use of stabilisers: none

Exothermic reactions: none

Notices regarding state of aggregation: none

Conditions to be avoided: none

Substances/media to be avoided: none

Toxic information

During several years of usage no effects being harmful for the health were observed.

Ecological information

No biodegradation, no solubility in water, no effects being harmful to the environment must be expected.

Mobility: not applicable

Accumulation: not applicable

Eco-toxicity: not applicable

Waste-disposal information

Can be recycled or can be disposed of together with household rubbish (acc. To local regulations).

Waste key for the unused product: EAK-Code 120 105

Waste name: waste of Polyolefine.

Transport information

No dangerous product in respect to / according to transport regulations

Notice/symbol transport containers: none

Special marking for containers: none

Regulations

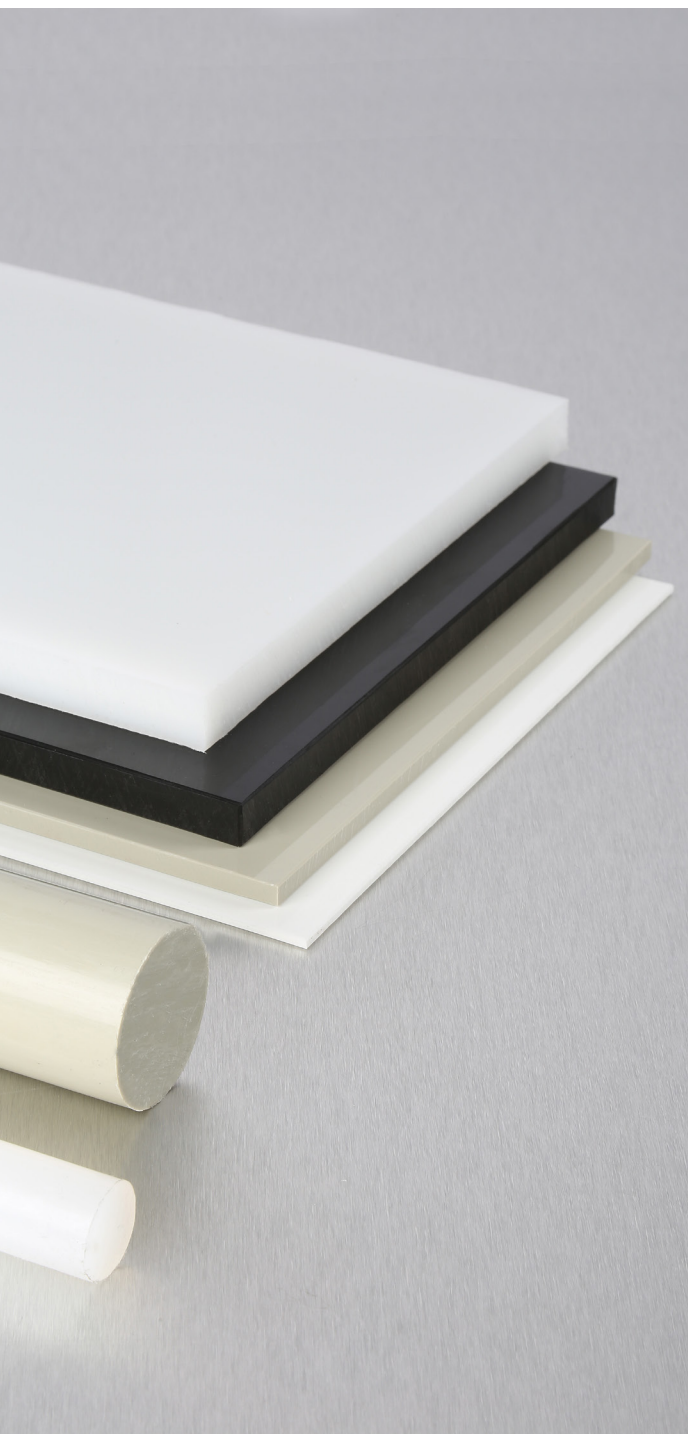
Marking according to GefStoffV/EG: no obligation for marking

Water danger class: class 0 (self classification)

Domestic requirements to be observed: none

Further information

The information is based on our current knowledge. They are meant to describe our products in respect to safety requirements. They do not represent any guarantee of the described product in the sense of the legal guarantee regulations.



Product information

Product full identity:

Polypropylene Copolymer

PPC is light weight (SG 0.91), low water absorption, high impact strength combined with very good chemical properties. PPC has a wide operating temperature range (-20°C to +80°C), easily weldable and food compliant.

Properties

- » Lower working temperature than PPH
- » Good chemical resistance
- » lower susceptibility to stress cracking
- » Improved impact strength at lower temperatures
- » High welding ability
- » Food compliant

Applications

- » Ventilation
- » Food Industry
- » Chemical tanks
- » Pharmaceutical

This document contains

- » Technical Datasheet (Page 2)
- » Chemical Datasheet (Page 3)
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Technical Properties

Physical Properties	Test	Unit	Result
1. Specific gravity	ISO 1183	g/cm ³	0.91
2. Maximum service temp. Upper temp limit (no stronger mechanical stress involved)	-	°C	80
Lower temp limit	-	°C	-20
Mechanical Properties	Test	Unit	Result
1. Elongation at yield	ISO 527	%	7
2. Yield Strength	ISO 527	MPa	26
3. Impact strength	ISO 179	kJ/m ²	no break
4. Notch impact strength	ISO 179	kJ/m ²	45
5. Ball indentation	ISO 2039-1	MPa	50
6. Shore-D	ISO 868	-	67
7. Modulus of elasticity	ISO 527	MPa	1200
Thermal Properties	Test Method	Unit	Result
1. Coefficient of linear thermal expansion	DIN 53752	K ⁻¹	1.6 x 10 ⁻⁴
2. Thermal conductivity	DIN 52612	W/(m*K)	52
Electrical Properties	Test Method	Unit	Result
1. Surface resistivity	IEC 6093	Ω	>10 ¹⁴
2. Dielectric strength	IEC 60243-1	kV/mm	52
Additional Data	Test Method	Unit	Result
1. Bondability	-	-	-
2. Food compliance	FDA + EU	-	+
3. Flammability	UL 94	-	-

All The above information is for guide purposes only. The data has been taken from standard test results provided by our manufacturers.

Key:

Yes	Limited	No data
+	O	-

Chemical Properties

Agent	Conc %	Working 20°C	Temp 60°C	Agent	Conc %	Working	Temp
Acetic Acid	100	o	o	Hydrofluoric acid	40	o	-
Acetone	100	+	+	Hydrogen peroxide	10	+	+
Ammonia	Conc.	+	+	Hydrogen Sulphide		+	+
Ammonium chloride		+	+	Isopropyl Alcohol	100	+	+
Amyl Alcohol		+	o	Mercurochrome		+	
Benzene		o	-	Methyl alcohol	100	+	+
Bleaching Solution	12,5 Cl	+	-	Methyl ethyl ketone	100	+	o
Boric Acid	100	+	+	Methylene chloride	100	o	-
Brake Fluid		+	+	Nitric acid	10	+	-
Butyl Acetate		o	-	Nitric acid	50	o	-
Calcium Chloride		+	+	Nitrobenzine		+	o
Carbon disulphide	100	-	-	Oxalic Acid		+	+
Carbon Tetrachloride		-	-	Ozone, gas	ca. 0,5 ppm	+	-
Chlorine, gas	100	-	-	Paraffin Oil	100	+	o
Chlorobenzene	100	o	-	Perchlorethylene		o	-
Chloroform		o	-	Petroleum	100	o	o
Citric Acid	10	+	+	Petroleum, aromatic free	100	o	o
Cresol		+	o	Phenol, aqu	ca.9	+	+
Cyclohexanone	100	o	o	Phosphoric Acid	50	+	+
Cyclohexene	100	-	-	Potassium hydroxide liquor	50	+	+
Diesel Fuel		o	-	Propyl alcohol		+	+
Ethyl acetate	100	+	-	Pyridine		o	o
Ethyl alcohol	96	+	+	Silicone oil		+	+
Ethylene Chloride	100	o	-	Sodium carbonate. aqu		+	+
Formic Acid	10	+	+	Sodium chloride, aqu		+	+
Frost protection agent	Petrol	+	+	Sodium Hydroxide liquor	60	+	+
Fuel, aromatic free		o	-	Sodium hydrogen sulphite		+	+
Glycerine	100	+	+	Sodium nitrate, aqu		+	+
Glycol	100	+	+	Sodium thiosulfate		+	+
Heating oil		+	-	Sulphuric Acid	96	o	-
Heptane	100	o	o	Tetrahydrofuran	100	o	-
Hydrochloric acid	10	+	+	Toluene	100	o	-
Hydrochloric acid	conc.	+	o	Trichlorethylene	100	o	-
				Xylene		o	-

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Key:

Resistant	Partly Resistant	Non resistant
+	o	-

Safety Properties

Substance / preparation and company detail

Polypropylene copolymer
Oadby Plastics
68 Scudamore Road,
Braunstone Frith Industrial Estate,
Leicester,
LE3 1UA
0116 232 1010

Composition / indications to components

Chemical characteristics: polymer of propylene
CAS-number: not necessary

Possible dangers

Unknown

First-aid measures

General comment: medical aid is not necessary
First-aid measures: none
Routes of exposure: none
Symptoms / effects: none

First-fighting measures

Suitable fire-fighting appliance: water fog, foam, fire fighting powder, carbon dioxide
Hazard warning notice: not applicable

Measures in case of unintended release

Person-related measures: none
Environmental protection measures: not applicable
Cleaning equipment: not applicable
Unsuitable cleaning products: not applicable

Handling and storage

Handling: no special regulations must be observed
Storage: unlimited good storage property

Limitation of exposition

Special design of techn. processing facilities: not required
Tolerance levels: none
Exposure measurement procedures: none
Respiratory protection: not required
Eye protection: not required
Body protection: not required

Physical and chemical characteristics

Phenotype

Phenotype / form: semi-finished product, solid state
Colour: grey
Smell: not applicable

Change of state

Crystalline melting range: 160-164 °C
Flash point: not applicable

Other remarks

Density: 0.91 g/cm³

Safety Properties

Stability and reactivity

Thermal decomposition: above appr. 300 °C

Dangerous decomposition products:

Besides carbon black also carbon dioxide and water as well as low molecular parts of PP will develop during the burning process. In case of incomplete burning also carbon monoxide may arise.

Use of stabilisers: none

Exothermic reactions: none

Notices regarding state of aggregation: none

Conditions to be avoided: none

Substances/media to be avoided: none

Toxic information

During several years of usage no effects being harmful for the health were observed.

Ecological information

No biodegradation, no solubility in water, no effects being harmful to the environment must be expected.

Mobility: not applicable

Accumulation: not applicable

Eco-toxicity: not applicable

Waste-disposal information

Can be recycled or can be disposed of together with household rubbish (acc. To local regulations).

Waste key for the unused product: EAK-Code 120 105

Waste name: waste of Polyolefine.

Transport information

No dangerous product in respect to / according to transport regulations

Notice/symbol transport containers: none

Special marking for containers: none

Regulations

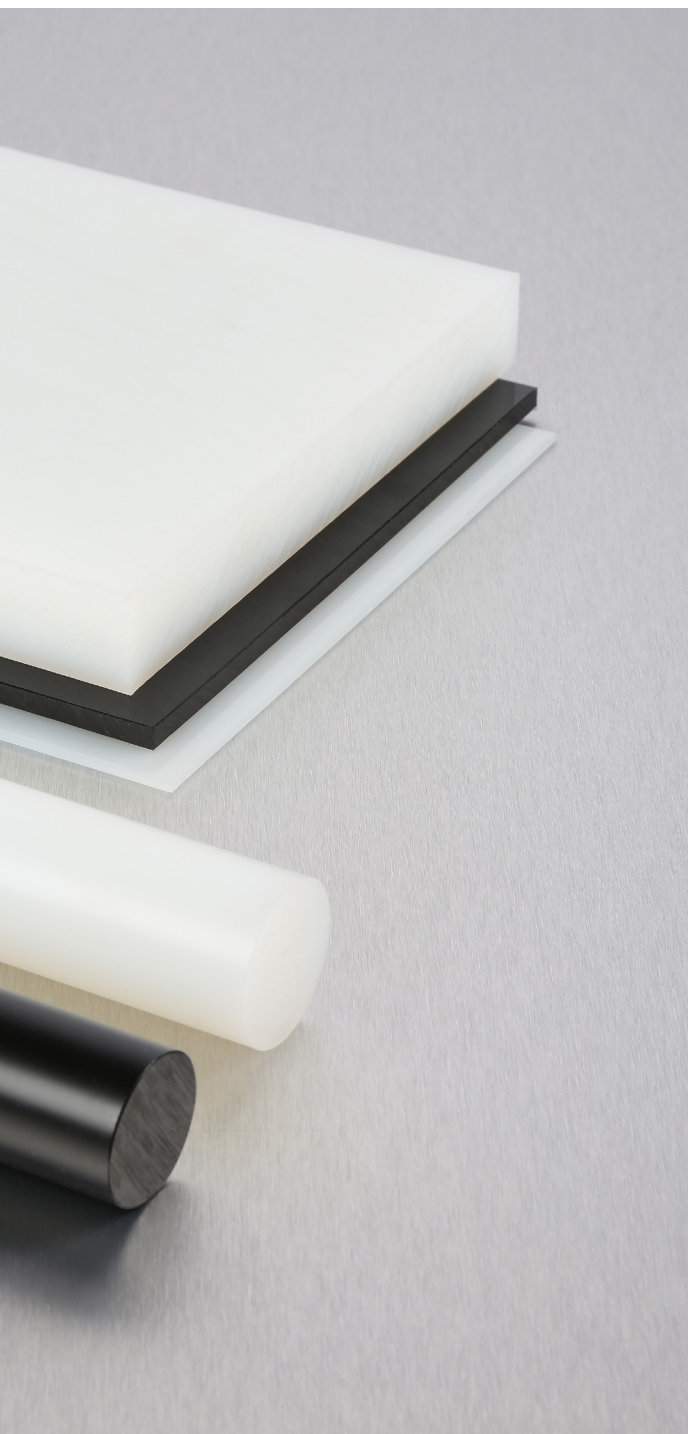
Marking according to GefStoffV/EG: no obligation for marking

Water danger class: class 0 (self classification)

Domestic requirements to be observed: none

Further information

The information is based on our current knowledge. They are meant to describe our products in respect to safety requirements. They do not represent any guarantee of the described product in the sense of the legal guarantee regulations.



Product information

Product full identity:

Cast Polyamide 6

Cast Nylon 6 has improved characteristics over the extruded alternative. Offering higher strength, stiffness, hardness and an improved operating temperature of 0°C to +90°C. Cast Nylon 6 range of materials are food compliant.

Properties

- » Not as stressed as ext nylon
- » Better than ext nylons when machining
- » Similar characteristics to ext nylon 6.6
- » Good creep and wear resistance
- » High strength
- » Available in larger sizes

Applications

- » Large gears
- » Bearings
- » Bushes
- » Gear racks
- » Crane sheaves
- » Boom pads

This document contains

- » Technical Datasheet (Page 2)
- » Chemical Datasheet (Page 3)
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Technical Properties

Physical Properties	Test	Unit	Result
1. Specific gravity	ISO 1183-1	g/cm ³	1.15
2. Water absorption till saturation 23°C	-	%	6.5
3. Maximum service temp. Upper temp limit (no stronger mechanical stress involved)	-	°C	170
Long term	-	°C	105
Lower temp limit	-	°C	-30
Mechanical Properties	Test	Unit	Result
1. Tensile strength at yield	ISO 527-1/-2	MPa	86/-
2. Elongation at yield	-	%	-
4. Tensile strength at break	ISO 527-1/-2	MPa	25
5. Unnotched Impact strength	ISO 179-1/1eU	kJ/m ²	3
6. Notch impact strength	ISO 179-1/1eA	kJ/m ²	165 / M88
7. Ball indentation / Rockwell hardness	ISO 2039-1/-2	MPa	-
8. Shore-D	-	-	-
9. Flexural modulus of elasticity	-	MPa	3600
10. Tensile modulus of elasticity	ISO 527-1/-2	MPa	
Thermal Properties	Test Method	Unit	Result
1. Vicat-softening point VST/B/50	-	°C	-
2. Heat deflection temperature HDT/B	ISO 75-1/-2	°C	80
3. Coefficient of linear thermal expansion 23°C - 100°C	-	W/(m*K)	90 x 10 ⁻⁶
4. Thermal conductivity at 23°C	-	W/(m*K)	0.29
Electrical Properties	Test Method	Unit	Result
1. Volume resistivity	IEC 6093	Ω x m	>10 ¹⁴
2. Surface resistivity	IEC 6093	Ω	>10 ¹³
3. Dielectric constant at 1MHz	-	-	-
4. Dielectric loss factor at 1 MHz	IEC 60250	10 ⁶ Hz	0.016
5. Dielectric strength	IEC 60243-1	kV/mm	25
6. Comparative tracking index (CTI)	IEC 60112	-	600
Additional Data	Test Method	Unit	Result
1. Bondability	-	-	-
2. Food compliance	FDA	-	+
3. Flammability	UL 94	-	HB

All The above information is for guide purposes only. The data has been taken from standard test results provided by our manufacturers.

Key:

Yes	Limited	No data
+	O	-

Chemical Properties

Agent	Conc %	Working 20°C	Temp 60°C	Agent	Conc %	Working	Temp
Acetic Acid	100	-	-	Hydrofluoric acid	40	-	-
Acetone	100	o	o	Hydrogen peroxide	10	+/o	-
Ammonia	Conc.	+/o	-	Hydrogen Sulphide		+	
Ammonium chloride		+		Isopropyl Alcohol	100	+	+
Amyl Alcohol		+		Mercurochrome		-	-
Benzene		+	+	Methyl alcohol	100	+	
Bleaching Solution	12,5 Cl	-	-	Methyl ethyl ketone	100	+	
Boric Acid	100	+/o	o	Methylene chloride	100	o	o
Brake Fluid		+	+	Nitric acid	10	-	-
Butyl Acetate		+		Nitric acid	50	o	
Calcium Chloride		+	+	Nitrobenzine		o	
Carbon disulphide	100	+	-	Oxalic Acid		-	-
Carbon Tetrachloride		+		Ozone, gas	ca. 0,5 ppm	+	+
Chlorine, gas	100	-		Paraffin Oil	100	o	-
Chlorobenzene	100	+		Perchlorethylene		+	
Chloroform		-	-	Petroleum	100		
Citric Acid	10	+		Petroleum, aromatic free	100	-	-
Cresol		-	-	Phenol, aqu	ca.9	-	-
Cyclohexanone	100	+		Phosphoric Acid	50	o	+
Cyclohexene	100	+	+	Potassium hydroxide liquor	50		
Diesel Fuel		+	+	Propyl alcohol		+	o
Ethyl acetate	100	+		Pyridine		+	+
Ethyl alcohol	96	+	+	Silicone oil		+	+
Ethylene Chloride	100	+		Sodium carbonate. aqu		+	+
Formic Acid	10	-	-	Sodium chloride, aqu		+	
Frost protection agent		+	+	Sodium Hydroxide liquor	60	o	
Fuel, aromatic free		+	+	Sodium hydrogen sulphite		+	
Glycerine	100	+	+	Sodium nitrate, aqu		+	
Glycol	100	+	o	Sodium thiosulfate			
Heating oil		+	+	Sulphuric Acid	96	-	-
Heptane	100	-	-	Tetrahydrofuran	100	+	
Hydrochloric acid	10	-	-	Toluene	100	+	+
Hydrochloric acid	conc.	-	-	Trichlorethylene	100	-	-
				Xylene		-	-

All The above information is for guide purposes only. The data has been taken from standard test results provided by our manufacturers.

Key:

Yes	Limited	No data
+	o	-

Safety Properties

Substance / preparation and company detail

Polycaprolactam
Oadby Plastics
68 Scudamore Road,
Braunstone Frith Industrial Estate,
Leicester,
LE3 1UA
0116 232 1010

Composition / indications to components

Contains:

Caprolactam -CAS No. 105-60-2

This product is not expected to be hazardous to health as defined by the EC Dangerous Substance/Preparations Directives.

Possible dangers

Effects of overexposure: Contact with hot material may cause skin burns.

Hazardous decomposition products – refer to section 5

Un-reacted chemicals may be exposed during machining:

R20/22 – Harmful by inhalation and if swallowed;

R36/37/38 – Irritating to eyes, respiratory system and skin.

First-aid measures

Eye contact: Like any foreign object can cause irritation to the eye, Wash thoroughly with clean water and if symptoms persist, seek medical advice. Monomers vapour from heated product can cause irritation. Wash affected eyes for at least 15 for minutes under running water with eyelids open, consult an eye specialist.

Skin contact: Monomers vapour from heated product can cause irritation. Wash thoroughly with soap and water.

Inhalation: Monomers vapour from heated product can cause irritation. Keep patient calm, remove to fresh air and summon medical help.

Ingestion: If swallowed, obtain medical attention.

First-fighting measures

Extinguisher type:

Foam, Water, Water Spray, Dry Chemical and Carbon Dioxide.

Special protective equipment: For fires in enclosed areas, fire-fighters must use self-contained breathing apparatus. May generate irritating vapours when burning. Collect separately contaminated extinguishing water; do not allow to reach sewerage or effluent system.

Hazardous decomposition products: Incomplete combustion results in formation of toxic vapour, containing mainly carbon monoxide and carbon dioxide. In addition small quantities of the following substances can be formed; nitrogen oxides, hydrogen cyanide.

Measures in case of unintended release

General: Avoid obstacle hazard by removing released material. Take care to avoid unstable stacks.

Methods for cleaning up: Sweep/shovel up.

Handling and storage

Handling: No special precautions are necessary beyond normal good hygiene practices. See section 8 for additional personal protection advice when handling this product.

Storage: No special precautions are necessary beyond normal good working practices.

Safety Properties

Limitation of exposition

Ventilation: Use local exhaust ventilation over machining operations.

Respiratory protection: No special requirements under ordinary conditions of use with adequate ventilation.

Eye protection: Generally eye contact with solid material is unlikely. However in machining areas adequate eye protection should be worn.

Skin protection: Gloves suitable to resist abrasion and cutting should be worn. Good personal hygiene practices should always be followed.

Physical and chemical characteristics

Typical physical properties are given below. Consult Product Data Sheet for specific details.

Physical state: Solid

Colour:

Odour: Mild

Melting point: >200°C

PH: NA

Explosive properties: NA

Relative density: 1.13 – 1.15 g/cm³

Solubility in water: Insoluble

Stability and reactivity

Thermal decomposition: Thermal decomposition begins at temperatures above melting point. See section 5 for hazardous decomposition products.

Hazardous reactions: Material is resistant to many chemicals. Chemical resistance can be obtained with technical data for the material.

Toxic information

No toxic – see section 5 for hazardous decomposition products.

Ecological information

Environmental rate and effects not established

Waste-disposal information

Waste from residues: Dispose in accordance with local and national regulations.

The material can be recycled by extrusion process into pellets for further processing.

Waste from packing: Dispose in accordance with local and national regulations.

Transport information

Not classified as hazardous under transport regulations.

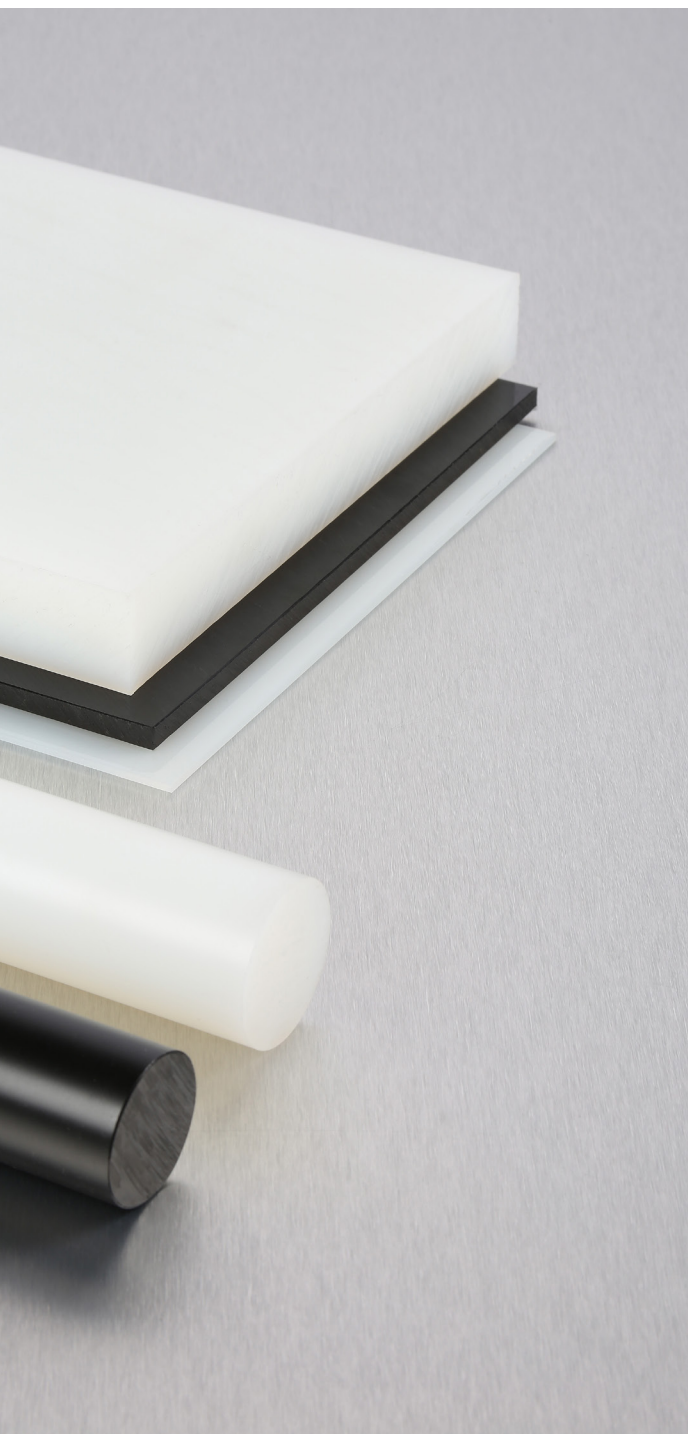
Regulations

The product is expected to be in compliance with the inventory listing requirements of the US Toxic Substances Control Act (TSCA)

Chemical Substance Inventory.

Further information

The information is based on our current knowledge. They are meant to describe our products in respect to safety requirements. They do not represent any guarantee of the described product in the sense of the legal guarantee regulations.



Product information

Product full identity:

Nylon 6

Extruded Nylon 6 offers strength, stiffness and good mechanical properties whilst offering good electrical insulation and chemical resistance at a wide operating temperature range (-40°C to +70°C). Nylon 6 is regarded as a general purpose material and is food compliant.

Properties

- » General purpose grade
- » Favourable electrical insulating ability
- » Available in smaller diameters
- » Excellent wear resistance
- » Food compliant

Applications

- » Gears
- » Bushes
- » Washers
- » Spacers
- » Rollers

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Technical Properties

Physical Properties	Test	Unit	Result
1. Specific gravity	ISO 1183	g/cm ³	1.14
2. Water absorption	ISO 62	%	9
3. Maximum service temp. Upper temp limit - Short Term (no stronger mechanical stress involved)	-	°C	160
Long Term	-	°C	85
5. Lower temp limit	-	°C	-40
Mechanical Properties	Test	Unit	Result
1. Tensile strength at yield	ISO 527-2	MPa	76
2. Elongation at yield	ISO 527-2	%	-
3. Tensile strength at break	ISO 527-2	MPa	-
4. Elongation at break	ISO 527-2	%	>50
5. Impact strength	ISO 179 / 1eU	kJ/m ²	no break
6. Notch impact strength	ISO 179 / 1eA	kJ/m ²	5.5
7. Ball indentation / Rockwell hardness	ISO 2039-1/-2	MPa	150 / M85
8. Shore-D	-	-	-
9. Flexural strength	ISO 178	MPa	-
10. Modulus of elasticity	ISO 527	MPa	3250
Thermal Properties	Test Method	Unit	Result
1. Vicat-softening point VST/B/50	ISO 306	°C	-
2. Heat deflection temperature HDT/B	ISO 75-2	°C	-
3. Coefficient of linear thermal expansion	ISO 11359	k ⁻¹ *10 ⁻⁴	0.9
4. Thermal conductivity at 23 °C	DIN 52612	W/(m*K)	0.28
Electrical Properties	Test Method	Unit	Result
1. Volume resistivity	VDE 0303	Ω x m	-
2. Surface resistivity	IEC 6093	Ω	10 ¹³
3. Dielectric constant at 1MHz	IEC 60250	-	3.3
4. Dielectric loss factor at 1 MHz	IEC 60250	10 ⁶ Hz	0.021
5. Dielectric strength	IEC 60243-1	kV/mm	25
6. Comparative tracking index (CTI)	IEC 60112	-	600
Additional Data	Test Method	Unit	Result
1. Bondability	-	-	-
2. Food compliance	FDA	-	+
3. Flammability	UL 94	-	HB

All The above information is for guide purposes only. The data has been taken from standard test results provided by our manufacturers.

Key:

Yes	Limited	No data
+	O	-

Chemical Properties

Agent	Conc %	Working 20°C	Temp 60°C	Agent	Conc %	Working	Temp
Acetic Acid	100	-	-	Hydrofluoric acid	40	-	-
Acetone	100	o	o	Hydrogen peroxide	10	+/o	-
Ammonia	Conc.	+/o	-	Hydrogen Sulphide		+	
Ammonium chloride		+		Isopropyl Alcohol	100	+	+
Amyl Alcohol		+		Mercurochrome		-	-
Benzene		+	+	Methyl alcohol	100	+	
Bleaching Solution	12,5 Cl	-	-	Methyl ethyl ketone	100	+	
Boric Acid	100	+/o	o	Methylene chloride	100	o	o
Brake Fluid		+	+	Nitric acid	10	-	-
Butyl Acetate		+		Nitric acid	50	o	
Calcium Chloride		+	+	Nitrobenzine		o	
Carbon disulphide	100	+	-	Oxalic Acid		-	-
Carbon Tetrachloride		+		Ozone, gas	ca. 0,5 ppm	+	+
Chlorine, gas	100	-		Paraffin Oil	100	o	-
Chlorobenzene	100	+		Perchlorethylene		+	
Chloroform		-	-	Petroleum	100		
Citric Acid	10	+		Petroleum, aromatic free	100	-	-
Cresol		-	-	Phenol, aqu	ca.9	-	-
Cyclohexanone	100	+		Phosphoric Acid	50	o	+
Cyclohexene	100	+	+	Potassium hydroxide liquor	50		
Diesel Fuel		+	+	Propyl alcohol		+	o
Ethyl acetate	100	+		Pyridine		+	+
Ethyl alcohol	96	+	+	Silicone oil		+	+
Ethylene Chloride	100	+		Sodium carbonate. aqu		+	+
Formic Acid	10	-	-	Sodium chloride, aqu		+	
Frost protection agent		+	+	Sodium Hydroxide liquor	60	o	
Fuel, aromatic free		+	+	Sodium hydrogen sulphite		+	
Glycerine	100	+	+	Sodium nitrate, aqu		+	
Glycol	100	+	o	Sodium thiosulfate			
Heating oil		+	+	Sulphuric Acid	96	-	-
Heptane	100	-	-	Tetrahydrofuran	100	+	
Hydrochloric acid	10	-	-	Toluene	100	+	+
Hydrochloric acid	conc.	-	-	Trichlorethylene	100	-	-
				Xylene		-	-

All The above information is for guide purposes only. The data has been taken from standard test results provided by our manufacturers.

Key:

Yes	Limited	No data
+	o	-

Safety Properties

Substance / preparation and company detail

Polycaprolactam
Oadby Plastics
68 Scudamore Road,
Braunstone Frith Industrial Estate,
Leicester,
LE3 1UA
0116 232 1010

Composition / indications to components

Contains:

Caprolactam -CAS No. 105-60-2

This product is not expected to be hazardous to health as defined by the EC Dangerous Substance/Preparations Directives.

Possible dangers

Effects of overexposure: Contact with hot material may cause skin burns.

Hazardous decomposition products – refer to section 5

Un-reacted chemicals may be exposed during machining:

R20/22 – Harmful by inhalation and if swallowed;

R36/37/38 – Irritating to eyes, respiratory system and skin.

First-aid measures

Eye contact: Like any foreign object can cause irritation to the eye, Wash thoroughly with clean water and if symptoms persist, seek medical advice. Monomers vapour from heated product can cause irritation. Wash affected eyes for at least 15 for minutes under running water with eyelids open, consult an eye specialist.

Skin contact: Monomers vapour from heated product can cause irritation. Wash thoroughly with soap and water.

Inhalation: Monomers vapour from heated product can cause irritation. Keep patient calm, remove to fresh air and summon medical help.

Ingestion: If swallowed, obtain medical attention.

First-fighting measures

Extinguisher type:

Foam, Water, Water Spray, Dry Chemical and Carbon Dioxide.

Special protective equipment: For fires in enclosed areas, fire-fighters must use self-contained breathing apparatus. May generate irritating vapours when burning. Collect separately contaminated extinguishing water; do not allow to reach sewerage or effluent system.

Hazardous decomposition products: Incomplete combustion results in formation of toxic vapour, containing mainly carbon monoxide and carbon dioxide. In addition small quantities of the following substances can be formed; nitrogen oxides, hydrogen cyanide.

Measures in case of unintended release

General: Avoid obstacle hazard by removing released material. Take care to avoid unstable stacks.

Methods for cleaning up: Sweep/shovel up.

Handling and storage

Handling: No special precautions are necessary beyond normal good hygiene practices. See section 8 for additional personal protection advice when handling this product.

Storage: No special precautions are necessary beyond normal good working practices.

Safety Properties

Limitation of exposition

Ventilation: Use local exhaust ventilation over machining operations.

Respiratory protection: No special requirements under ordinary conditions of use with adequate ventilation.

Eye protection: Generally eye contact with solid material is unlikely. However in machining areas adequate eye protection should be worn.

Skin protection: Gloves suitable to resist abrasion and cutting should be worn. Good personal hygiene practices should always be followed.

Physical and chemical characteristics

Typical physical properties are given below. Consult Product Data Sheet for specific details.

Physical state: Solid

Colour: OFF WHITE

Odour: Mild

Melting point: >200°C

PH: NA

Explosive properties: NA

Relative density: 1.13 – 1.15 g/cm³

Solubility in water: Insoluble

Stability and reactivity

Thermal decomposition: Thermal decomposition begins at temperatures above melting point. See section 5 for hazardous decomposition products.

Hazardous reactions: Material is resistant to many chemicals. Chemical resistance can be obtained with technical data for the material.

Toxic information

No toxic – see section 5 for hazardous decomposition products.

Ecological information

Environmental rate and effects not established

Waste-disposal information

Waste from residues: Dispose in accordance with local and national regulations.

The material can be recycled by extrusion process into pellets for further processing.

Waste from packing: Dispose in accordance with local and national regulations.

Transport information

Not classified as hazardous under transport regulations.

Regulations

The product is expected to be in compliance with the inventory listing requirements of the US Toxic Substances Control Act (TSCA)

Chemical Substance Inventory.

Further information

The information is based on our current knowledge. They are meant to describe our products in respect to safety requirements. They do not represent any guarantee of the described product in the sense of the legal guarantee regulations.