



Product information

Product full identity:

Regenerated Ultra-High Molecular Weight Polyethylene

Other Names:

PE2 / PE4

PE1000-R is a low cost alternative to our virgin grades, available in colours black and green. PE1000-R has similar technical properties to virgin PE1000 material, however is not recommended for high performance or technical applications.

Properties

- » Lower cost than PE 1000
- » Lower property level than virgin grade
- » Good wear resistance
- » Good sliding friction coefficient
- » Good chemical resistance
- » Antistatic
- » No water absorption

Applications

- » General mechanical engineering
- » Conveyor and driving technology
- » Packaging and beverage industry
- » Assembly and automation technology

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 1183-1	g/cm ³	0.94
2. Water absorption till saturation 23°C	-	%	0.01
3. Maximum service temp. Upper temp limit - Short Term (no stronger mechanical stress involved)	-	°C	120
Long Term	-	°C	85
5. Lower temp limit	-	°C	-100
Mechanical Properties	Test	Unit	Result
1. Tensile strength at yield	ISO 527	MPa	>17
2. Elongation at yield	ISO 527	%	16
3. Abrasion (sand slurry test)	ISO 527	%	>130
4. Elongation	ISO 527	%	>200
5. Impact strength	ISO 179	kJ/m ²	no break
6. Notch impact strength	ISO 179	kJ/m ²	>100
7. Ball indentation	ISO 2039-1	MPa	38
8. Shore-D	DIN 53505	-	62-65
9. Modulus of elasticity	ISO 527	MPa	>900
Thermal Properties	Test Method	Unit	Result
1. Vicat-softening point	ISO 306	°C	80
2. Coefficient of linear thermal expansion	ISO 11359	%-1	2.5-2 10 ⁻⁴
3. Thermal conductivity	ISO 52612	W/(m*K)	0.40
Electrical Properties	Test Method	Unit	Result
1. Surface resistivity	IEC 6093	Ω	>10 ¹⁴
2. Dielectric strength	IEC 60243	kV/mm	40
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
+	0	-

Chemical Properties

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

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Key:

Yes	Limited	No data
+	o	-

Safety Properties

Substance / preparation and company detail

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

Composition / indications to components

Chemical characteristics: polymer of ethylene
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

Handing 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: 130-135 °C
Flash point: not applicable

Other remarks

Density: 0.93 g/cm³

Safety Properties

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.