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Hytrel® HTR8206

THERMOPLASTIC POLYESTER ELASTOMER

Hytrel® HTR8206 is a High Performance Polyester Elastomer with High Moisture Vapor Transmission Rate Developed for Extrusion and Injection Molding

Product information

Resin Identification	TPC-ET		ISO 1043
Part Marking Code	>TPC-ET<		ISO 11469

Rheological properties

Melt volume-flow rate	14	cm^3/10min	ISO 1133
Temperature	220	°C	
Load	2.16	kg	
Moulding shrinkage, parallel	1.4	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.5	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	80	MPa	ISO 527-1/-2
Stress at 5% strain	3.4	MPa	ISO 527-1/-2
Stress at 10% strain	5.1	MPa	ISO 527-1/-2
Tensile stress at 50% strain, 1BA	9.5	MPa	ISO 527-1/-2
Tensile stress at break	20	MPa	ISO 527-1/-2
Nominal strain at break	420	%	ISO 527-1/-2
Tensile strain at break	>300	%	ISO 527-1/-2
Flexural modulus	80	MPa	ISO 178
Charpy impact strength, 23°C	N	kJ/m^2	ISO 179/1eU
Charpy impact strength, -30°C	N	kJ/m^2	ISO 179/1eU
Charpy notched impact strength, 23°C	N	kJ/m^2	ISO 179/1eA
Charpy notched impact strength, -30°C	N	kJ/m^2	ISO 179/1eA
Poisson's ratio	0.49		
Shore D hardness, 15s	38		ISO 48-4 / ISO 868
Shore D hardness, max	40		ISO 868

Thermal properties

Melting temperature, 10°C/min	200	°C	ISO 11357-1/-3
Vicat softening temperature, 50°C/h 10N	153	°C	ISO 306
Thermal conductivity of melt	0.16[DS]	W/(m K)	ISO 22007-2
Effective thermal diffusivity, flow	5.44E-8[DS]	m^2/s	ISO 22007-4
Specific heat capacity of melt	2100[DS]	J/(kg K)	ISO 22007-4

[DS]: Derived from similar grade

Flammability

FMVSS Class	B		ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<80	mm/min	ISO 3795 (FMVSS 302)

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Physical/Other properties

Humidity absorption, 2mm	1.3	%	Sim. to ISO 62
Water absorption, Immersion 24h	35	%	Sim. to ISO 62
Density	1190	kg/m³	ISO 1183
Density of melt	1020	kg/m³	

Injection

Drying Recommended	yes	
Drying Temperature	100	°C
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.08	%
Melt Temperature Optimum	230	°C
Min. melt temperature	220	°C
Max. melt temperature	240	°C
Mold Temperature Optimum	45	°C
Min. mould temperature	40	°C
Max. mould temperature	50	°C

Extrusion

Drying Temperature	110	°C
Drying Time, Dehumidified Dryer	2 - 3	h
Processing Moisture Content	≤0.06	%
Melt Temperature Range	215 - 230	°C

Characteristics

Processing	Injection Moulding, Film Extrusion, Extrusion, Sheet Extrusion, Other Extrusion, Casting
Delivery form	Pellets

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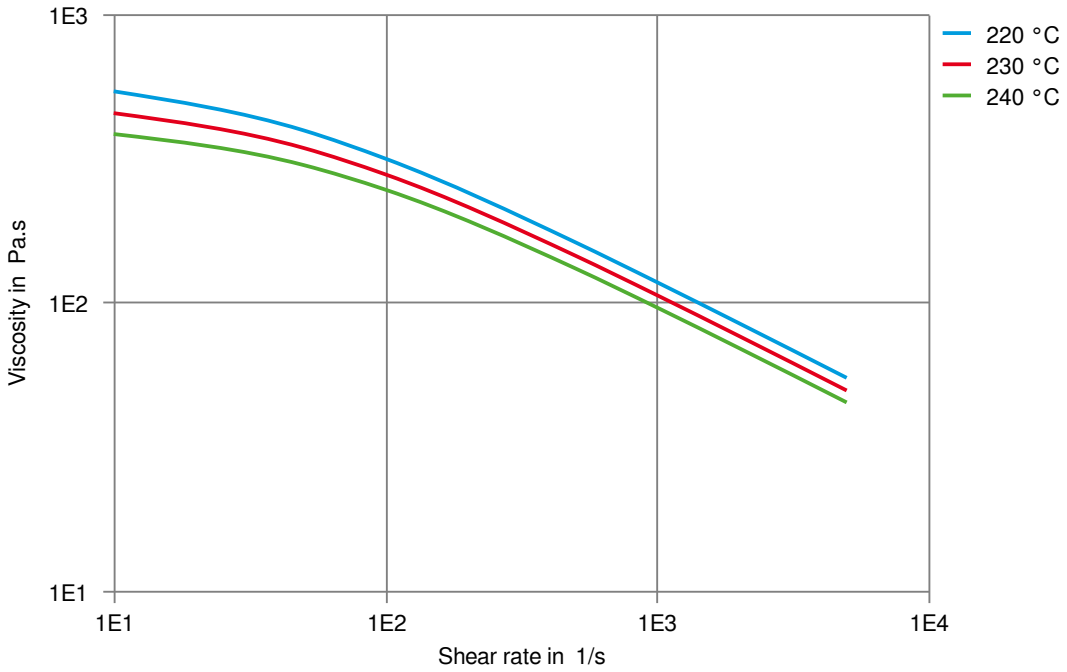
Viscosity-shear rate



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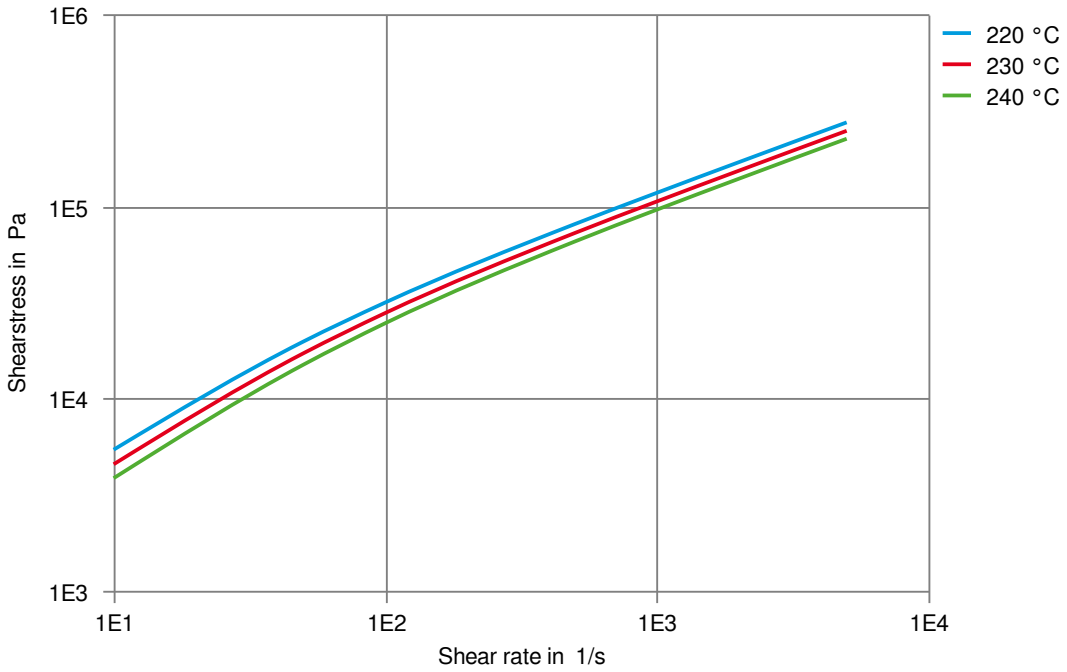
Shearstress-shear rate



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Chemical Media Resistance

Acids

- ✔ Acetic Acid (5% by mass), 23°C
- ✔ Citric Acid solution (10% by mass), 23°C
- ✔ Lactic Acid (10% by mass), 23°C
- ✘ Hydrochloric Acid (36% by mass), 23°C
- ✘ Nitric Acid (40% by mass), 23°C
- ✘ Sulfuric Acid (38% by mass), 23°C
- ✔ Sulfuric Acid (5% by mass), 23°C
- ✘ Chromic Acid solution (40% by mass), 23°C

Bases

- ✔ Sodium Hydroxide solution (35% by mass), 23°C
- ✔ Sodium Hydroxide solution (1% by mass), 23°C
- ✔ Ammonium Hydroxide solution (10% by mass), 23°C

Alcohols

- ✔ Isopropyl alcohol, 23°C
- ✔ Methanol, 23°C
- ✔ Ethanol, 23°C

Hydrocarbons

- ✔ n-Hexane, 23°C
- ✔ Toluene, 23°C
- ✔ iso-Octane, 23°C

Ketones

- ✘ Acetone, 23°C

Ethers

- ✘ Diethyl ether, 23°C

Mineral oils

- ✔ SAE 10W40 multigrade motor oil, 23°C
- ✘ SAE 10W40 multigrade motor oil, 130°C
- ✘ SAE 80/90 hypoid-gear oil, 130°C
- ✔ Insulating Oil, 23°C

Standard Fuels

- ✘ ISO 1817 Liquid 1 - E5, 60°C
- ✘ ISO 1817 Liquid 2 - M15E4, 60°C
- ✘ ISO 1817 Liquid 3 - M3E7, 60°C
- ✘ ISO 1817 Liquid 4 - M15, 60°C
- ✔ Standard fuel without alcohol (pref. ISO 1817 Liquid C), 23°C
- ✔ Standard fuel with alcohol (pref. ISO 1817 Liquid 4), 23°C
- ✔ Diesel fuel (pref. ISO 1817 Liquid F), 23°C
- ✔ Diesel fuel (pref. ISO 1817 Liquid F), 90°C
- ✘ Diesel fuel (pref. ISO 1817 Liquid F), >90°C

Salt solutions

- ✔ Sodium Chloride solution (10% by mass), 23°C
- ✘ Sodium Hypochlorite solution (10% by mass), 23°C

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- ✔ Sodium Carbonate solution (20% by mass), 23°C
- ✔ Sodium Carbonate solution (2% by mass), 23°C
- ✔ Zinc Chloride solution (50% by mass), 23°C

Other

- ✔ Ethyl Acetate, 23°C
- ✘ Hydrogen peroxide, 23°C
- ✘ DOT No. 4 Brake fluid, 130°C
- ✘ Ethylene Glycol (50% by mass) in water, 108°C
- ✔ 1% nonylphenoxy-polyethyleneoxy ethanol in water, 23°C
- ✔ 50% Oleic acid + 50% Olive Oil, 23°C
- ✔ Water, 23°C
- ✘ Water, 90°C
- ✔ Phenol solution (5% by mass), 23°C

Symbols used:

✔ possibly resistant
Defined as: Supplier has sufficient indication that contact with chemical can be potentially accepted under the intended use conditions and expected service life. Criteria for assessment have to be indicated (e.g. surface aspect, volume change, property change).

✘ not recommended - see explanation
Defined as: Not recommended for general use. However, short-term exposure under certain restricted conditions could be acceptable (e.g. fast cleaning with thorough rinsing, spills, wiping, vapor exposure).

Revised: 2025-04-22 Source: Celanese Materials Database