FORM · GENERAL PURPOSE FAMILY

TECHNICAL DATA SHEET

APET

Amorphous PET Sheet · Extruded

FOOD CONTACT
FDA
21 CFR · Food-grade

CHARACTERISTICS

- Exceptional clarity — light transmission >92%
- Ultra-low haze <2% — superior optical grade
- Higher stiffness vs rPET — flexural mod. ≥2413 MPa
- Excellent thermoformability and deep-draw capability
- FDA & EU food-contact grades available on request

APPLICATIONS

- Food packaging — trays, blisters, lids, cups
- Beverage & dairy containers
- Cosmetic & pharmaceutical packaging
- Retail clamshells & folding cartons
- Stationery & industrial thermoforming

COMPLIANCE RoHS · REACH SVHC · FDA & EU Food-Contact grades available on request · ISO 9001:2015

TYPICAL PROPERTIES

All values are typical · Mixed ASTM/ISO methods · sheet specimens unless noted

PROPERTY	TEST METHOD	VALUE	UNIT
MECHANICAL			
Tensile Strength @ Yield	ASTM D638	**≥ 58.6**	MPa
Elongation @ Break	ASTM D638	**≥ 250**	%
Flexural Modulus	ASTM D790	**≥ 2413**	MPa
IMPACT			
Pendulum Impact Str.	ISO 8256	**≥ 450**	kJ/m²
OPTICAL			
Light Transmittance	ASTM D1003	**> 92**	%
Haze	ASTM D1003	**< 2**	%
Gloss @ 20°	ASTM D2457	**≥ 150**	%
PHYSICAL			
Specific Gravity	ASTM D792	**1.33**	g/cm³
Thickness Tolerance	—	**± 0.015**	mm
Surface Tension	ASTM D2578	**≥ 38**	dyne/cm

PROPERTY	TEST METHOD	VALUE	UNIT
THERMAL			
Vicat Softening Point	ASTM D1525	**71 ± 2**	°C
Thermoforming Temp.	—	**120–160**	°C
SHRINKAGE @ 80°C / 15 min			
Thickness ≤ 300 µm	DIN 53377	**≤ 5**	%
Thickness > 300 µm	DIN 53377	**≤ 3**	%
FLAMMABILITY			
UL 94 @ 1.6 mm	UL 94	**HB**	—
PROCESSING			
Pre-drying Temp.	—	**60–80**	°C
Pre-drying Time	—	**4**	hours
Forming Temperature	—	**120–160**	°C
Mould Temperature	—	*On request*	

NOTES

Sources: Indu Thermoformers APET TDS (Apr 2022) and GPPI APET Sheet Technical Data. Tensile/Elongation per ASTM D638; Flexural Modulus ASTM D790; Pendulum Impact per ISO 8256; Vicat per ASTM D1525 @ 5 kg load. Shrinkage per DIN 53377 @ 80°C for 15 min. FDA & EU food-contact grades available on request. Values typical. Validate suitability for application.

PERFORMANCE PROFILE

> 92 %
Light transmittance

< 2 %
Haze — optical clarity

≥ 2413 MPa
Flexural modulus

71 °C
Vicat softening point

Virgin APET — superior clarity, stiffness and food-contact performance.

PRODUCTION SPECIFICATIONS

Sheet Thickness	**0.18 – 1.80 mm**	200 – 1200 µm per supplier TDS
Sheet Width	**up to 1400 mm**	Slit ±1 mm · Jumbo ±2 mm
Thickness Tolerance	**± 0.015 mm**	Multi-point validated
Layer Structure	**Mono / ABA**	ABA co-extrusion standard
Surface	**T05 Plain Smooth**	Gloss/Gloss — both sides
Colour	**Any colour or Clear**	+ *custom Pantone/RAL match*

T05
Plain Smooth

HOW TO READ THESE NUMBERS

- **Tensile Strength @ Yield**
  Force at which sheet permanently deforms. Higher = stronger.
- **Elongation @ Break**
  Stretch before snap. 250% = very ductile and tough.
- **Flexural Modulus**
  Bending stiffness. 2413 MPa = rigid, snap-back packaging.
- **Pendulum Impact**
  Energy absorbed on impact. ≥450 kJ/m² = excellent toughness.
- **Light Transmittance**
  >92% — virtually all light passes through. Crystal clear.
- **Haze**
  <2% — minimal light scatter. Superior optical clarity.
- **Gloss @ 20°**
  Surface shine. ≥150% = high-gloss premium appearance.
- **Vicat Softening**
  71°C — temperature at which sheet begins to soften.
- **Shrinkage**
  Dimensional change after thermoforming. Lower = tighter parts.
- **Surface Tension**
  ≥38 dyne/cm — ensures good ink and coating adhesion.

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