

- ICP Multiparametric Microscopy Facility (Subdivision: OCR station)
- Report Ser. 1-18: Digitalization of Microscopic Images of Polymers and Composite Materials from the Central Research Institute of Polymers & Artificial Leathers (*SEM, TEM, optical plastolgraphy / polymerography*).

OCR Report Index: 181906

Object(s): Polyethylene terephthalate sample

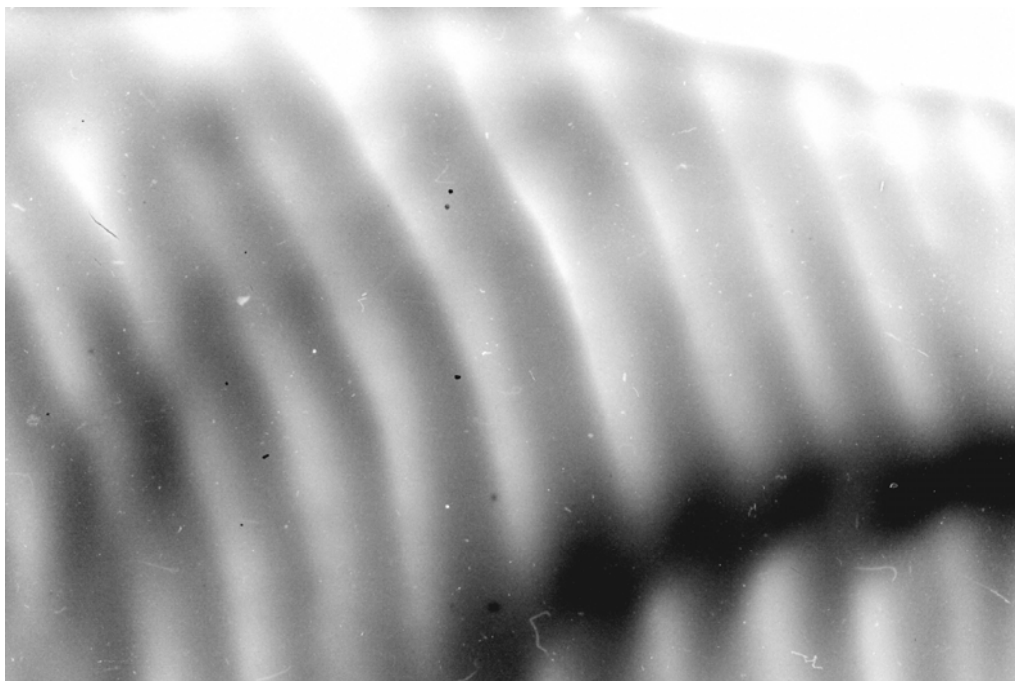
Introduction: Basic properties

Polyethylene terephthalate	
Names	
IUPAC name	
Poly(ethyl benzene-1,4-dicarboxylate)	
Identifiers	
CAS Number	25038-59-9
Abbreviations	PET, PETE
ChemSpider	none
ECHA InfoCard	100.121.858

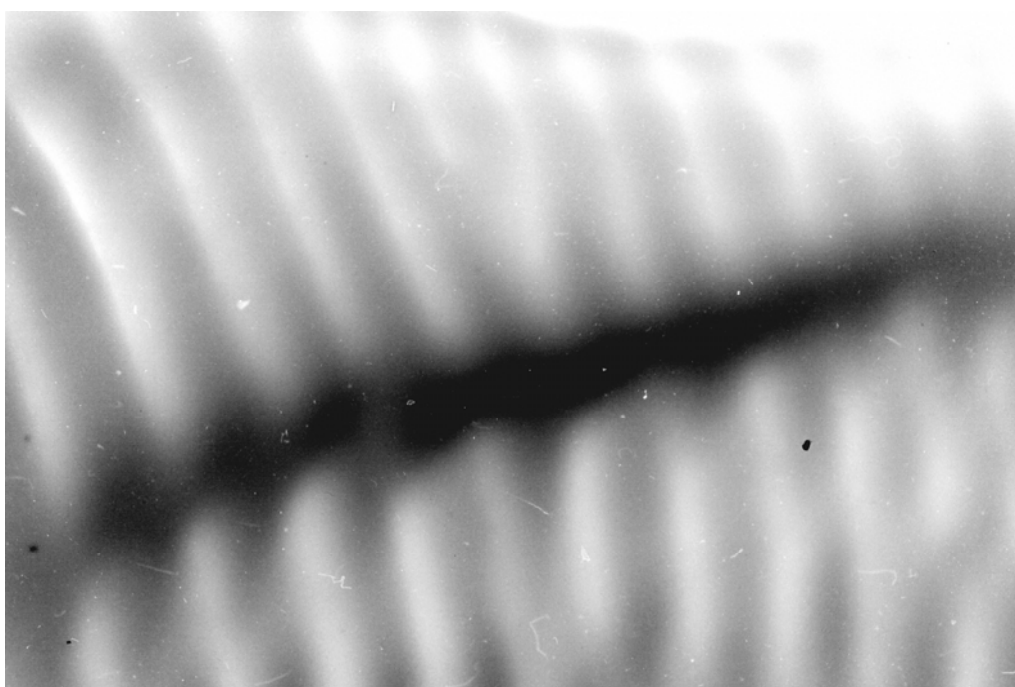
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Properties	
Chemical formula	$(C_{10}H_8O_4)_n$
Molar mass	variable
Density	1.38 g/cm ³ (20 °C), amorphous: 1.370 g/cm ³ , single crystal: 1.455 g/cm ³
Melting point	> 250 °C (482 °F; 523 K) 260 °C
Boiling point	> 350 °C (662 °F; 623 K) (decomposes)
Solubility in water	practically insoluble
log <i>P</i>	0.94540
Thermal conductivity	0.15 to 0.24 W m ⁻¹ K ⁻¹
Refractive index(<i>n</i> _D)	1.57–1.58, 1.5750
Thermochemistry	
Heat capacity (<i>C</i>)	1.0 kJ/(kg·K)

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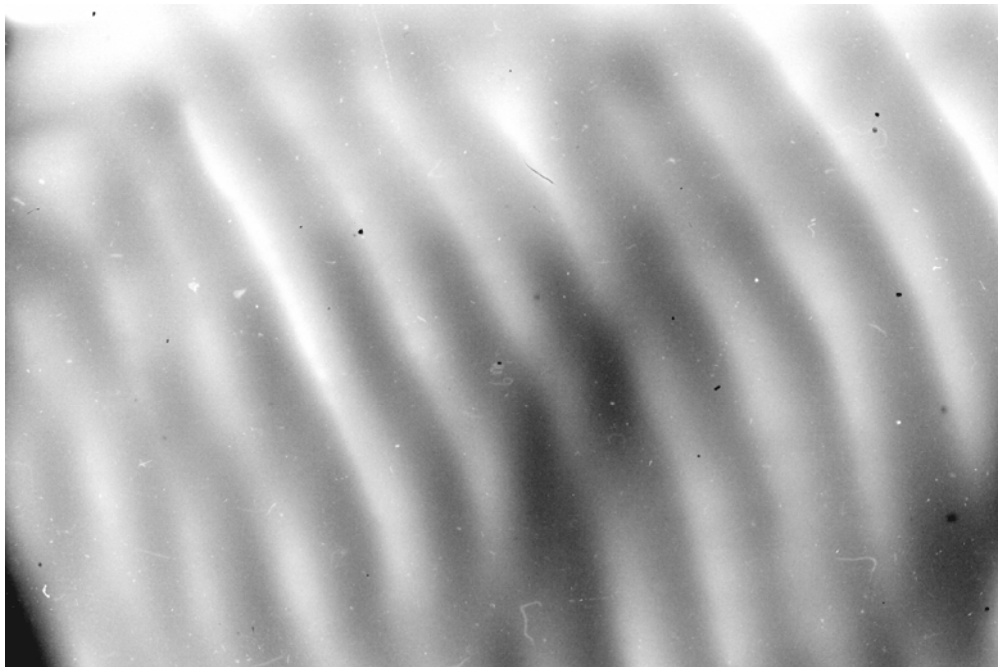


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PET-181906-ROI:A2

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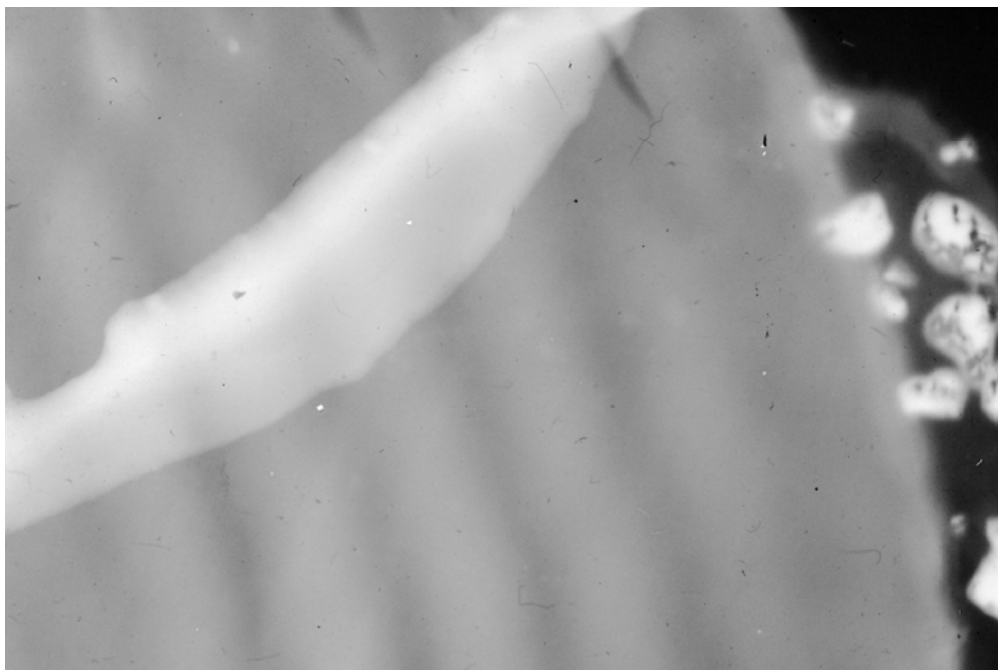


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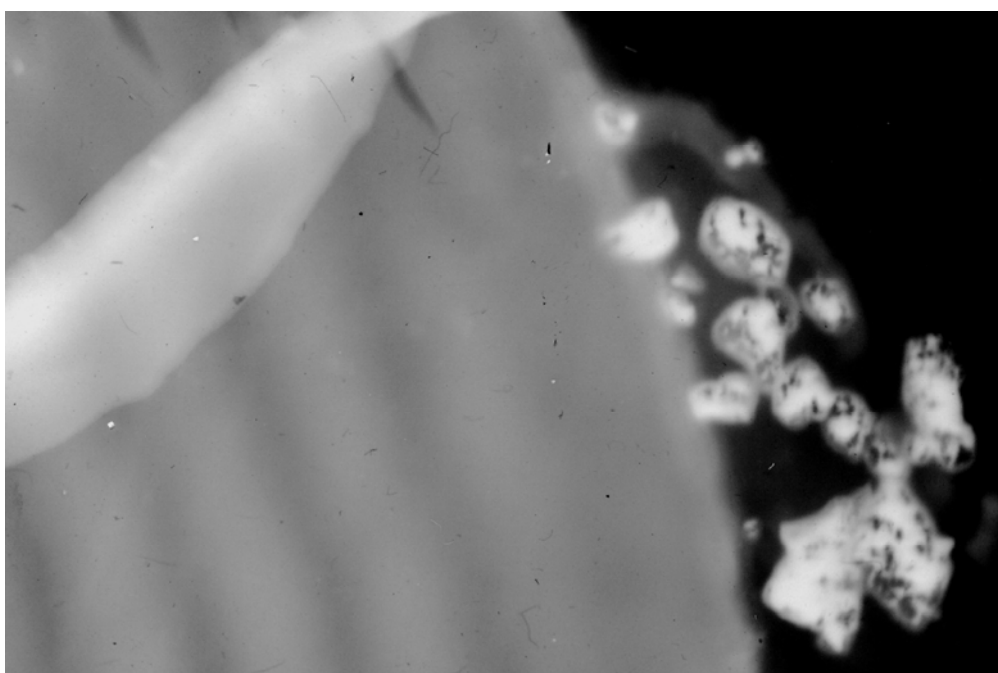


PET-181906-ROI:B1

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PET-181906-ROI:B2



PET-181906-ROI:B3