Surface Energy Data for PE: Polyethylene, CAS # 9002-88-4

Source[a]	Mst. Type[b]	Data[c]	Comments[d]
Fox, 1952[11]	Critical ST	γ_c = 31 mJ/m^2; 20°C	Test liquids not known.
Ellison, 1954[8]	Critical ST	γ_c = 31 mJ/m^2; 20°C	Various test liquids.
Fort, 1964[17]	Critical ST	γ_c = 28 mJ/m^2; 22°C, 65% RH	Test liquids: water, glycerol, and formamide.
Fowkes, 1964[73]	Critical ST	γ_c = 35 mJ/m^2; no temp cited	Test liquids not known.
Lee, 1968[131]	Critical ST	γ_c = 31 mJ/m^2; no temp cited	Test liquids: water, glycerol, formamide, alcohols, and long-chain polyglycols; low density PE.
Lee, 1968[131]	Critical ST	γ_c = 31 mJ/m^2; no temp cited	Test liquids: water, glycerol, formamide, alcohols, and long-chain polyglycols; high density PE.
Dann, 1970[94]	Critical ST	γ_c = 28.5 mJ/m^2; 25°C	Ethylene glycol/2-ethoxyethanol mixes, based on advancing contact angles.
Dann, 1970[94]	Critical ST	γ_c = 33 mJ/m^2; 25°C	Ethylene glycol/2-ethoxyethanol mixes, based on retreating contact angles.
Dann, 1970[94]	Critical ST	γ_c = 31 mJ/m^2; 25°C	Polyglycol blends, based on advancing contact angles.
Dann, 1970[94]	Critical ST	γ_c = 31 mJ/m^2; 25°C	Polyglycol blends, based on retreating contact angles.
Dann, 1970[94]	Critical ST	γ_c = 29 mJ/m^2; 25°C	Formamide/2-ethoxyethanol mixes, based on advancing contact angles.
Dann, 1970[94]	Critical ST	γ_c = 32 mJ/m^2; 25°C	Formamide/2-ethoxyethanol mixes, based on retreating contact angles.
Dann, 1970[94]	Critical ST	γ_c = 34 mJ/m^2; 25°C	Per ASTM D-2578, using formamide/2-ethoxyethanol mixes.
Hamilton, 1972[74]	Critical ST	γ_c = 33 mJ/m^2; no temp cited	Test liquids not known.
Sharma, 1991[175]	Critical ST	γ_c = 31 mJ/m^2; no temp cited	Per ASTM D-2578, using formamide/2-ethoxyethanol mixes; commercial low density PE film.
Bezigian, 1992[75]	Critical ST	γ_c = 31 mJ/m^2; no temp cited	Probably per ASTM D-2578, using formamide/2-ethoxyethanol mixes; low density PE.
Bezigian, 1992[75]	Critical ST	γ_c = 33 mJ/m^2; no temp cited	Probably per ASTM D-2578, using formamide/2-ethoxyethanol mixes; low density PE degreased with 1,1,1,trichloroethane.
Markgraf, 2005[62]	Critical ST	γ_c = 30-31 mJ/m^2; no temp cited	Test liquids not known.
Fox, 1952[11]	Contact angle	$\theta_W{}^Y$ = 94°; 20°C	Surface formed by pressing the softened polymer against acid cleaned plate glass.
de Bruyne, 1957[300]	Contact angle	$\theta_W{}^Y$ = 89°; no temp cited	
Fort, 1964[17]	Contact angle	$\theta_W{}^A$ = 101°, 22°C, 65% RH	
Schonhorn, 1966[238]	Contact angle	$\theta_W{}^A$ = 103°; no temp cited	
Schonhorn, 1966[237]	Contact angle	$\theta_W{}^A$ = 93°; no temp cited	
Zettlemoyer, 1968[239]	Contact angle	$\theta_W{}^A$ = 94°; no temp cited	
Owens, 1969[155]	Contact angle	$\theta_W{}^Y$ = 104°; no temp cited	
Petke, 1969[234]	Contact angle	$\theta_W{}^A$ = 96°; no temp cited	
Dann, 1970[94]	Contact angle	$\theta_W{}^A$ = 95°; 25°C	Measured by sessile drop method; cleaned with detergent and

			rinsed with distilled water.
Kaelble, 1971[104]	Contact angle	$\theta_W^{Y} = 103^{o}$; 22^{o}C	Measured by sessile drop method; cleaned with detergent and rinsed with distilled water.
Wu, 1971[29]	Contact angle	$\theta_W^{Y} = 102^{o}$; 20^{o}C	
Sowell, 1972[48]	Contact angle	$\theta_W^{Y} = 97.5^{o}$; 20^{o}C	High density PE.
Tadros, 1974[241]	Contact angle	$\theta_W^{A} = 88^{o}$; no temp cited	
Westerdahl, 1974[63]	Contact angle	$\theta_W^{Y} = 97^{o}$; no temp cited	Commercial low density PE film, thickness 30 mils.
Westerdahl, 1974[63]	Contact angle	$\theta_W^{Y} = 96^{o}$; no temp cited	Commercial high density PE film, thickness 9.2 mils.
Moshonov, 1980[118]	Contact angle	$\theta_W^{Y} = 99^{o}$; no temp cited	Measured 60 secs. after application of water droplet; surface cleaned with isopropanol at 60^{o}C and rinsed with methanol.
Wu, 1982[298]	Contact angle	$\theta_W^{Y} = 94^{o}$; no temp cited	Branched PE.
Wu, 1982[27]	Contact angle	$\theta_W^{A} = 96^{o}$, $\theta_W^{R} = 62^{o}$, $d\theta_W = 34^{o}$; 20^{o}C	
Triolo, 1983[189]	Contact angle	$\theta_W^{R} = 87^{o}$; no temp cited	Commercial grade low density PE film. Fully hydrated sample immersed in water; interface with advancing, submerged octane bubble.
Lelah, 1985[304]	Contact angle	$\theta_W^{Y} = 88.4^{o}$; no temp cited	Low density PE; underwater captive bubble method, measured on concave tubular surface.
Vargha-Butler, 1985[180]	Contact angle	$\theta_W^{A} = 87.1^{o}$; 20^{o}C	High density PE.
Guiseppe, 1986[77]	Contact angle	$\theta_W^{Y} = 95^{o}$; no temp cited	
Kasai, 1986[64]	Contact angle	$\theta_W^{Y} = 100^{o}$; no temp cited	
Strobel, 1987[84]	Contact angle	$\theta_W^{A} = 99^{o}$; no temp cited	
Janczuk, 1989[106]	Contact angle	$\theta_W^{Y} = 96.1^{o}$; 20^{o}C	Dipped in CCl4, boiled in acetone, and ultrasonically rinsed with distilled water.
Hsieh, 1991[231]	Contact angle	$\theta_W^{Y} = 95.6^{o}$; no temp cited	PE fiber.
Inagaki, 1991[204]	Contact angle	$\theta_W^{Y} = 86^{o}$; no temp cited	
Sharma, 1991[175]	Contact angle	$\theta_W^{Y} = 92^{o}$; no temp cited	Commercial low density PE film.
Jonsson, 1992[112]	Contact angle	$\theta_W^{Y} = 87^{o}$; no temp cited	Natural low density PE, cleaned by sonification in a 70/30 ethanol/water solution and rinsed with distilled water.
Clouet, 1994[114]	Contact angle	$\theta_W^{A} = 105^{o}$; 23^{o}C	High density PE.
Fukuzawa, 1994[113]	Contact angle	$\theta_W^{Y} = 92.4^{o}$; no temp cited	Contact angle measured after stabilizing for 15 secs.
Inagaki, 1994[115]	Contact angle	$\theta_W^{A} = 102^{o}$; 20^{o}C	Low density PE.
Pilichowski, 1997[225]	Contact angle	$\theta_W^{Y} = 94^{o}$; no temp cited	
Sheu, 1997[79]	Contact angle	$\theta_W^{Y} = 109^{o}$; no temp cited	Porous PE sheet with average pore size of 15*u*m.
Sheu, 1997[79]	Contact angle	$\theta_W^{Y} = 109^{o}$; no temp cited	Porous PE sheet with average pore size of 15*u*m; prewashed 3 times in distilled water
Chen, 1998[70]	Contact angle	$\theta_W^{A} = 104^{o}$, $\theta_W^{R} = 92^{o}$, $d\theta_W = 12^{o}$; no temp cited	Low density PE; no additives.
Chen, 1998[70]	Contact angle	$\theta_W^{A} = 99^{o}$, $\theta_W^{R} = 89^{o}$, $d\theta_W = 10^{o}$; no temp cited	Low density PE with 2000 ppm erucamide.
Chen, 1998[70]	Contact angle	$\theta_W^{A} = 91^{o}$, $\theta_W^{R} = 74^{o}$, $d\theta_W = 17^{o}$; no temp cited	Low density PE with 1000 ppm N-(2-hydroxyethyl) erucamide.

Chen, 1998[70]	Contact angle	$\theta_W{}^A = 93^o$, $\theta_W{}^R = 80^o$, $d\theta_W = 13^o$; no temp cited	Low density PE with 2000 ppm N-(2-hydroxyethyl) erucamide.
Angu, 2000[220]	Contact angle	$\theta_W{}^Y = 85.7^o$; no temp cited	Low density PE; underwater captive bubble method, measured on concave tubular surface; technique A.
Angu, 2000[220]	Contact angle	$\theta_W{}^Y = 88.4^o$; no temp cited	Low density PE; underwater captive bubble method, measured on concave tubular surface; technique B.
Etzler, 2000[171]	Contact angle	$\theta_W{}^A = 98.0^o$; 20^{o}C	Measured by Wilhelmy plate method.
Gotoh, 2000[172]	Contact angle	$\theta_W{}^A = 110.7^o$; no temp cited	Single fiber measured by Wilhelmy plate technique.
Johansson, 2000[101]	Contact angle	$\theta_W{}^A = 93^o$; no temp cited	Low density PE.
Nalaskowski, 2000[219]	Contact angle	$\theta_W{}^A = 92^o$, $\theta_W{}^R = 77^o$, $d\theta_W = 15^o$; no temp cited	
Netravali, 2000[98]	Contact angle	$\theta_W{}^A = 93.4^o$, $\theta_W{}^R = 91.9^o$, $d\theta_W = 1.5^o$; no temp cited	Ultra-high strength PE fibers.
Starov, 2000[282]	Contact angle	$\theta_W{}^Y = 90^o$; no temp cited	PE powder pressed into wafer at 1 kg/cm^2, 110^{o}C, cleaned with alcohol and water, soaked in 50^{o}C sulfochromic acid, rinsed with distilled water, and dried with pure nitrogen.
Extrand, 2002[143]	Contact angle	$\theta_W{}^A = 104.4^o$; $\theta_W{}^R = 93.5^o$, $d\theta_W = 10.9^o$; 23^{o}C	Measured by sessile drop method; high density PE cleaned with hexane and dried under vacuum.
Nam, 2002[142]	Contact angle	$\theta_W{}^A = 93.6^o$; no temp cited	Ultra-high strength PE fibers.
B.-Petermann, 2003[139]	Contact angle	$\theta_W{}^Y = 79^o$; 20^{o}C	Measured by sessile drop method. Roll-coated polymer topcoat applied to carbon steel; surface degreased with ethanol, cleaned with detergent, and rinsed in distilled water.
Gotoh, 2004[92]	Contact angle	$\theta_W{}^A = 102.8^o$; no temp cited	Measured by sessile drop method.
Gotoh, 2004[92]	Contact angle	$\theta_W{}^A = 101^o$; $\theta_W{}^R = 88.9^o$, $d\theta_W = 12.1^o$; no temp cited	Measured by Wilhelmy plate method.
Zeng, 2004[93]	Contact angle	$\theta_W{}^A = 92.3^o$; no temp cited	Measured by Wilhelmy plate method; UHMWPE fiber (Spectra 1000).
Cho, 2005[226]	Contact angle	$\theta_W{}^Y = 95^o$; no temp cited	Measured by sessile drop method.
Martinez-Garcia, 2005[251]	Contact angle	$\theta_W{}^Y = 92^o$; 25^{o}C	Injection molded elastomeric PE (Shore A hardness 75).
Shafrin, 1963[201]	Contact angle	$\gamma_s = 33.1$ mJ/m^2 ($\gamma_s{}^d = 32.0$, $\gamma_s{}^p = 1.1$); no temp cited	Test liquids not known.
Owens, 1969[155]	Contact angle	$\gamma_s = 33.2$ mJ/m^2 ($\gamma_s{}^d = 33.2$, $\gamma_s{}^p = 0.0$); no temp cited	Test liquids: water and diiodomethane.
Dann, 1970[94]	Contact angle	$\gamma_s{}^d = 36$ mJ/m^2; 25^{o}C	Various test liquids.
Kaelble, 1971[104]	Contact angle	$\gamma_s = 31.4$ mJ/m^2 ($\gamma_s{}^d = 30.9$, $\gamma_s{}^p = 0.5$); 22^{o}C	Various test liquids.
Wu, 1971[29]	Contact angle	$\gamma_s = 36.1$ mJ/m^2 ($\gamma_s{}^d = 35.4$, $\gamma_s{}^p = 0.7$); 20^{o}C	Test liquids: water and diiodomethane, by harmonic mean equation.
Kitazaki, 1972[191]	Contact angle	$\gamma_s = 35.6$ mJ/m^2 ($\gamma_s{}^d = 35.6$, $\gamma_s{}^p = 0.0$); no temp cited	Various test liquids; original results split polar component into hydrogen- and non-hydrogen bonding parameters.
Sowell, 1972[48]	Contact angle	$\gamma_s = 34.2$ mJ/m^2; 20^{o}C	Test liquids: water, glycerol, formamide, and tricresyl phosphate, by harmonic mean equation; high density PE.

Carroll, 1976[216]	Contact angle	γ_s = 36 mJ/m^2; no temp cited	Ultra-high modulus PE monofilament.
Wu, 1979[45]	Contact angle	γ_c = 35.9 mJ/m^2; 20^{o}C	Test liquids not known; calculated by the equation of state method.
Busscher, 1981[72]	Contact angle	γ_s = 32 mJ/m^2 (γ_s^d = 29, γ_s^p = 3.0); no temp cited	Test liquids: water and propanol.
Wu, 1982[298]	Contact angle	γ_c = 34.2 mJ/m^2; no temp cited	Various test liquids, calculated by the equation of state method.
Vargha-Butler, 1985[180]	Contact angle	γ_c = 30.3 mJ/m^2; 20^{o}C	Test liquids not known; calculated by the equation of state method; high density PE.
Inagaki, 1987[82]	Contact angle	γ_s = 32.9 mJ/m^2 (γ_s^d = 30.7, γ_s^p = 2.2); no temp cited	Test liquids: water, glycerol, formamide, ethylene glycol, and tricresyl phosphate; calculated by Kaeble's method.
Fowkes, 1987[23]	Contact angle	γ_s = 33.0 mJ/m^2 (γ_s^{LW} = 33.0, γ_s^{AB} = 0.0, γ_s^+ = 0.0, γ_s^- = 0.0); 20^{o}C	Test liquids: water, alpha-bromonaphthalene, diiodomethane, formamide, and glycerin; acid-base analysis.
Janczuk, 1989[106]	Contact angle	γ_s = 32.8 mJ/m^2 (γ_s^d = 32.1; γ_s^p = 0.7); no temp cited	Various test liquids, by geometric mean equation.
Janczuk, 1989[108]	Contact angle	γ_s = 34.0 mJ/m^2 (γ_s^d = 33.3; γ_s^p = 0.7); no temp cited	Various test liquids, by harmonic-geometric mean equation.
Janczuk, 1989[108]	Contact angle	γ_s = 34.2 mJ/m^2 (γ_s^d = 30.5; γ_s^p = 3.7); no temp cited	Various test liquids, by harmonic mean equation.
Janczuk, 1990[105]	Contact angle	γ_s = 30.5 mJ/m^2; no temp cited	Test liquids: water and diiodomethane.
Janczuk, 1990[105]	Contact angle	γ_s = 33.3 mJ/m^2; no temp cited	Averaged over 28 test liquids.
Good, 1991[135]	Contact angle	γ_s = 33 mJ/m^2 (γ_s^{LW} = 33, γ_s^{AB} = 0.0, γ_s^+ = 0.0, γ_s^- = 0.1); no temp cited	Test liquids water and glycerol; acid-base analysis based on advancing contact angles. Commercial film grade PE.
Sharma, 1991[175]	Contact angle	γ_s = 28.1 mJ/m^2 (γ_s^d = 25.4, γ_s^p = 2.6); no temp cited	Test liquids: water and diiodomethane; commercial low density PE film.
Fukuzawa, 1994[113]	Contact angle	γ_s = 30.8 mJ/m^2 (γ_s^{LW} = 31.0, γ_s^{AB} = -0.2, γ_s^+ = 0.0, γ_s^- = 4.2); no temp cited	Test liquids: water, formamide, and diiodomethane; acid-base analysis, calculated per Good and Van Oss[86]. Contact angles measured after stabilizing for 15 secs.
Fukuzawa, 1994[113]	Contact angle	γ_s = 33.0 mJ/m^2; no temp cited	Test liquids: water, formamide, and diiodomethane; acid-base analysis calculated by arithmetic and geometric means.
Micale, 1995[174]	Contact angle	γ_s = 35 mJ/m^2 (γ_s^d = 34; γ_s^p = 1); no temp cited	Test liquids: water and alpha-bromonaphthalene, by geometric mean equation.
Inagaki, 1996[83]	Contact angle	γ_s = 36 mJ/m^2 (γ_s^d = 30, γ_s^p = 6); no temp cited	Test liquids not known; low density PE.
Pilichowski, 1997[225]	Contact angle	γ_s = 34 mJ/m^2; no temp cited	Various test liquids.
Morra, 1999[134]	Contact angle	γ_s = 34.2 mJ/m^2 (γ_s^{LW} = 34.2, γ_s^{AB} = 0.0, γ_s^+ = 0.0, γ_s^- = 0.0); no temp cited	Test liquids not known; acid-base analysis based on reference values for water of γ^+ = 48.5 mJ/m^2 and γ = 11.2 mJ/m^2.
Chang, 2000[162]	Contact angle	γ_s = 32.0 mJ/m^2; no temp cited	
Della Volpe, 2000[163]	Contact angle	γ_s = 33.4 mJ/m^2; no temp cited	Re-calculated from data produced by Janczuk, 1990[105].
Etzler, 2000[171]	Contact angle	γ_s = 26.9 mJ/m^2 (γ_s^{LW} = 26.9, γ_s^{AB} = 0.0, γ_s^+ = 0.0, γ_s^- = 0.0); 20^{o}C	Various test liquids; acid-base analysis, by Good-van Oss method.
Gotoh, 2000[172]	Contact angle	γ_s = 30.1 mJ/m^2 (γ_s^{LW} = 29.7, γ_s^{AB} = 0.4,	Test liquids: water, diiodomethane, and ethylene glycol; acid-

		$\gamma_s^+ = 0.2$, $\gamma_s^- = 0.2$); no temp cited	base Wilhelmy plate analysis from advancing contact angles.
Grundke, 2000[256]	Contact angle	$\gamma_s = 33.8$ mJ/m^2; no temp cited	
B.-Petermann, 2003[139]	Contact angle	$\gamma_s = 39.9$ mJ/m^2 ($\gamma_s^d = 36.0$; $\gamma_s^p = 3.9$); 20°C	Test liquids: water, diiodomethane, and formamide, measured by sessile drop method. Roll-coated polymer topcoat applied to carbon steel; surface degreased with ethanol, cleaned with detergent, and rinsed in distilled water.
Gotoh, 2004[92]	Contact angle	$\gamma_s = 28.1$ mJ/m^2 ($\gamma_s^{LW} = 27.4$, $\gamma_s^{AB} = 0.7$, $\gamma_s^+ = 0.1$, $\gamma_s^- = 1.2$); no temp cited	Test liquids water, diiodomethane, and ethylene glycol; contact angles measured by sessile drop method; acid-base analysis.
Zeng, 2004[93]	Contact angle	$\gamma_s = 33.8$ mJ/m^2 ($\gamma_s^{LW} = 33.8$, $\gamma_s^{AB} = 0.03$, $\gamma_s^+ = 8.0E^{-5}$, $\gamma_s^- = 2.3$); no temp cited	Test liquids water, diiodomethane, and formamide. By sessile drop method; acid-base analysis. UHMWPE Spectra 1000 fiber.
Cho, 2005[226]	Contact angle	$\gamma_s = 34$ mJ/m^2 ($\gamma_s^d = 30$, $\gamma_s^p = 4$); no temp cited	Test liquids: water and formamide.
Hybart, 1960[208]	From polymer melt	$\gamma_s = 30.2$ mJ/m^2; 20°C	Direct measurement of polymer melt by maximum bubble pressure, extrapolated to 20°C; linear high density PE.
Schonhorn, 1965[33]	From polymer melt	$\gamma_s = 36.2$ mJ/m^2; 20°C	Direct measurement of polymer melt extrapolated to 20°C.
Dettre, 1966[30]	From polymer melt	$\gamma_s = 36.0$ mJ/m^2; 20°C	Measurement by Wilhelmy plate of polymer melt extrapolated to 20°C; linear PE, $M_w = 67{,}000$.
Dettre, 1966[30]	From polymer melt	$\gamma_s = 34.3$ mJ/m^2; 20°C	Measurement by Wilhelmy plate of polymer melt extrapolated to 20°C; branched PE, $M_n = 7{,}000$.
Dettre, 1966[30]	From polymer melt	$\gamma_s = 33.7$ mJ/m^2 ($\gamma_s^d = 33.7$, $\gamma_s^p = 0.0$); 20°C	Direct measurement of polymer melt extrapolated to 20°C; polarity calculated from interfacial tension with PE by harmonic mean. Branched PE, $M_n = 2000$.
Roe, 1968[32]	From polymer melt	$\gamma_s = 35.6$ mJ/m^2; 20°C	Measurement by pendant drop of polymer melt extrapolated to 20°C; linear PE, $M_w = 67{,}000$.
Roe, 1968[32]	From polymer melt	$\gamma_s = 34.8$ mJ/m^2; 20°C	Measurement by pendant drop of polymer melt extrapolated to 20°C; branched PE, $M_n = 7{,}000$.
Wu, 1969[28]	From polymer melt	$\gamma_s = 35.7$ mJ/m^2 ($\gamma_s^d = 35.7$, $\gamma_s^p = 0.0$); 20°C	Measurement by pendant drop of polymer melt extrapolated to 20°C; polarity calculated from interfacial tension with PE by harmonic mean. Linear PE, $M_w = 67{,}000$.
Wu, 1971[29]	From polymer melt	$\gamma_s = 35.3$ mJ/m^2 ($\gamma_s^d = 35.3$, $\gamma_s^p = 0.0$); 20°C	Direct measurement of polymer melt extrapolated to 20°C; polarity calculated from interfacial tension with PE by harmonic mean. Branched PE, $M_n = 7000$.
Wu, 1974[47]	From polymer melt	$\gamma_s = 36.8$ mJ/m^2 ($\gamma_s^d = 36.8$, $\gamma_s^p = 0.0$); 20°C	Direct measurement of polymer melt extrapolated to 20°C; polarity calculated from interfacial tension with PE by harmonic mean. Ideal PE, infinite molecular weight.
Lee, 1968[131]	Calculated	$\gamma_s = 30$ mJ/m^2; no temp cited	Calculated from glass temperature of 237K; high density PE.
Lee, 1968[131]	Calculated	$\gamma_s = 23$ mJ/m^2; no temp cited	Calculated from glass temperature of 223K; low density PE.
Wu, 1968[182]	Calculated	$\gamma_s = 32$ mJ/m^2; 20°C	Calculated from molecular constitution; linear PE.
Wu, 1968[182]	Calculated	$\gamma_s = 30$ mJ/m^2; 20°C	Calculated from molecular constitution; branched PE.
Sewell, 1971[193]	Calculated	$\gamma_s = 42.1$ mJ/m^2; no temp cited	Calculated from parachor and cohesive energy.
Sewell, 1971[193]	Calculated	$\gamma_s = 31.8$ mJ/m^2; no temp cited	Calculated by least squares from cohesive energy and molar

			volume.
Wu, 1974[47]	Calculated	γ_s = 36.9 mJ/m^2; 20°C	Calculated from free volume theory and molecular weight.
Wu, 1974[47]	Calculated	γ_s = 37.8 mJ/m^2; 20°C	Calculated from free volume theory and molecular weight.
Wu, 1974[47]	Calculated	γ_s = 35.3 mJ/m^2; 20°C	Calculated from parachor and molecular weight; linear PE.
Van Krevelen, 1976[85]	Calculated	γ_s = 31.5 mJ/m^2; no temp cited	Calculated from parachor parameter.
Wu, 1979[45]	Calculated	γ_s = 34.7 mJ/m^2; 20°C	Calculated from liquid homologs. Infinite molecular weight.
Wu, 1982[18]	Calculated	γ_s = 32.1 mJ/m^2; 20°C	Calculated from cohesive energy density and solubility parameters.
Vargha-Butler, 1985[180]	Calculated	γ_s = 29.4 mJ/m^2; 20°C	Calculated from sedimentation volume; high density PE.
Van Ness, 1992[186]	Calculated	γ_s = 36.3 mJ/m^2; 20°C	Calculated molten surface tension value, extrapolated to 20°C.
Netravali, 2000[98]	Calculated	γ_s = 30.8 mJ/m^2 (γ_s^{LW} = 30.5, γ_s^{AB} = 0.2, γ_s^+ = 0.01, γ_s^- = 1.3); no temp cited	Test liquids water, diiodomethane, and formamide. Surface tension calculated from advancing wetting force measurements. on ultra-high strength PE fibers; acid-base analysis.
Netravali, 2000[98]	Calculated	γ_s = 36.1 mJ/m^2 (γ_s^{LW} = 35.7, γ_s^{AB} = 0.4, γ_s^+ = 0.6, γ_s^- = 0.07); no temp cited	Test liquids water, diiodomethane, and formamide. Surface tension calculated from receding wetting force measurements. on ultra-high strength PE fibers; acid-base analysis.
Mangipudi, 2002[147]	Other	γ_s = 33 mJ/m^2; no temp cited	Measured by contact deformation per Johnson-Kendall-Roberts method.
Grundke, 2000[256]	Other	γ_s = 34.4 mJ/m^2; no temp cited	Determined by capillary penetration into packed polymer powder.
Wu, 1982[49]	Unknown	γ_s = 36.2 mJ/m^2; 20°C	Measurement method not cited; PE molded under nitrogen.
Wu, 1982[49]	Unknown	γ_s = 36.2 mJ/m^2; 20°C	Measurement method not cited; PE molded against PTFE.