

Surface Energy Data for Paraffin, CAS # 8002-74-2

Source ^(a)	Mst. Type ^(b)	Data ^(c)	Comments ^(d)
Fox, 1952 ⁽¹¹⁾ Fox, 1952 ⁽¹¹⁾	Critical ST Contact angle	$\gamma_c = 23 \text{ mJ/m}^2$; 20°C $\theta_W^Y = 108^\circ$; 20°C	Various test liquids. Surface formed by pressing softened paraffin against acid cleaned plate glass.
Dann, 1970 ⁽⁹⁴⁾ Janczuk, 1989 ⁽¹⁰⁶⁾ McNally, 1993 ⁽⁵⁾ Fowkes, 1965 ⁽²⁷⁴⁾ Wu, 1971 ⁽²⁹⁾	Contact angle Contact angle Contact angle Contact angle Contact angle	$\theta_W^A = 110^\circ$; 25°C $\theta_W^Y = 110.6^\circ$; 20°C $\theta_W^A = 107^\circ$, $\theta_W^R = 96^\circ$, $d\theta_W = 11^\circ$; 25°C $\gamma_s = 25.5 \text{ mJ/m}^2$; 20°C $\gamma_s = 25.4 \text{ mJ/m}^2$ ($\gamma_s^d = 25.4$, $\gamma_s^p = 0.0$); 20°C	Measured by sessile drop method. Test liquids: not known. Test liquids: water and diiodomethane, by geometric mean equation.
Wu, 1971 ⁽²⁹⁾	Contact angle	$\gamma_s = 31.0 \text{ mJ/m}^2$ ($\gamma_s^d = 31.0$, $\gamma_s^p = 0.0$); 20°C	Test liquids: water and diiodomethane, by harmonic mean equation.
Kitazaki, 1972 ⁽¹⁹¹⁾	Contact angle	$\gamma_s = 24.4 \text{ mJ/m}^2$ ($\gamma_s^d = 24.4$, $\gamma_s^p = 0.0$); no temp cited	Various test liquids; original results split polar component into hydrogen- and non-hydrogen bonding parameters.
Wu, 1979 ⁽⁴⁵⁾	Contact angle	$\gamma_c = 32.0 \text{ mJ/m}^2$; 20°C	Test liquids not known; calculated by the equation of state method.
Janczuk, 1988 ⁽¹⁰⁷⁾	Contact angle	$\gamma_s = 25.1 \text{ mJ/m}^2$ ($\gamma_s^d = 25.1$; $\gamma_s^p = 0.0$); no temp cited	Various test liquids, by geometric mean equation.
Janczuk, 1989 ⁽¹⁰⁸⁾	Contact angle	$\gamma_s = 27.6 \text{ mJ/m}^2$ ($\gamma_s^d = 27.6$; $\gamma_s^p = 0.0$); no temp cited	Various test liquids, by harmonic-geometric mean equation.
Janczuk, 1989 ⁽¹⁰⁸⁾	Contact angle	$\gamma_s = 28.7 \text{ mJ/m}^2$ ($\gamma_s^d = 28.7$; $\gamma_s^p = 0.0$); no temp cited	Various test liquids, by harmonic mean equation.
Janczuk, 1990 ⁽¹⁰⁵⁾ Janczuk, 1990 ⁽¹⁰⁵⁾ Della Volpe, 2000 ⁽¹⁶³⁾ Kwok, 2000 ⁽¹⁶⁶⁾	Contact angle Contact angle Contact angle Contact angle	$\gamma_s = 22.2 \text{ mJ/m}^2$; no temp cited $\gamma_s = 27.0 \text{ mJ/m}^2$; no temp cited $\gamma_s = 28.6 \text{ mJ/m}^2$; no temp cited $\gamma_c = 19.3 \text{ mJ/m}^2$; no temp cited	Test liquids: water and diiodomethane. Averaged over 28 test liquids. Re-calculated from data produced by Janczuk, 1990 ⁽¹⁰⁵⁾ . Re-calculated by equation of state method from data produced by Fox, 1952 ⁽¹¹⁾ .
Wu, 1971 ⁽²⁹⁾ Wu, 1989 ⁽²⁷³⁾	From polymer melt From polymer melt	$\gamma_s = 35.0 \text{ mJ/m}^2$; 20°C $\gamma_s = 34.7 \text{ mJ/m}^2$ ($\gamma_s^d = 34.7$; $\gamma_s^p = 0.0$); 20°C	Direct measurement of polymer melt extrapolated to 20°C. Direct measurement of polymer melt extrapolated to 20°C; melting point 65°C.