



YOUNG'S CORPORATION

242-8 YANGJAE-DONG, SEOCHO-GU, SEOUL, 137-132, KOREA

TEL: 82-2-555-1040 FAX: 82-2-2057-0399

E-mail: export@youngscorp.com

Website: www.youngscorp.com

PHENOL

Phenol, which is also referred to as carboic acid, Phenylic acid, benzophenol, hydroxybenzo and mono- hydroxy benzene, is used to produce a wide variety of chemical intermediates, including phenolic resins, bisphenol A, caprolactam, alkyl phenols, adipic acid, plasticizers, and others.

Phenol can be shipped in water solutions to eliminate molten storage. Health and safety information is available through the appropriate Material Safety Data Sheet(MSDS).

SPECIFICATION 1

Molten Color, Pt/Co	20 max.
Water, wt. %	0.1 max.
Pt/Co Solidification Point, °C	40.7 min.
Water solubility @25°C	clear
Purity *, wt. %	99.7 min.

Specification 1 – Phenol for phenolic resin production

* Purity = 100 – (Total GC impurities + Water)

■ SPECIFICATION 2

Molten Color, Pt/Co	10 max
Water, wt. %	0.03 max.
Total GC impurity, wt.ppm	50 max.
Iron content, wt.ppm	0.1 max.

Specification 2

High purity phenol for PC grade Bisphenol A production

■ TYPICAL PROPERTIES

Empirical formula	C6H5OH
Molecular weight	94.11
Color	Colorless to light pink solid or white molten
Appearance	liquid
Deliquescent	White crystalline(at room temperature)
Dielectric constant, @ 48°C	Yes
Light sensitive	9.9
Odor	Yes, darkens slowly on exposure to light
Odor threshold	Characteristically sweet
Physical state	0.05 ~ 0.5 ppm
Reactivity	Liquid or solid
	Stable
Density	
25°C	1.071 kg/l
50°C"	1.050 kg/l
Specific Gravity @ 25/25°C	
1% aqueous solution	1.0009
2% aqueous solution	1.0025
5% aqueous solution	1.0044"
Specific gravity	
Solid at 25/4°C	1.071
Liquid at 41/4°C	1.058
Liquid at 50/4°C	1.049
Liquid at 60/4°C"	1.041
Autoignition temperature	715°C(1319°F)
Boiling point, @ 760mm	181.8°C(359°F)
Coefficient of expansion	0.00085 per °C(approximate)
Explosive limit in air, lower	1.5% v/v
Flammable limits	Lower limit approx. 1.5%
Flash point	85°C(185°F)
Tag open cu	79°C(174°F)"
Closed cup	40.8°C(105 °F)
Freezing point	
Heat of Combustion	

(cal/g)	-7754
(Btu/lb)	-13957
Heat of Fusion	
(cal/g)	29.22
(Btu/lb)"	52.6
Heat of Vaporization at b.p.	
(Btu/lb)	210
(cal/g)"	116.6
Specific heat, (cal/g°C)	
Solid at 4°C	0.306
Solid at 22.7°C	0.338
Liquid at 70–74°C "	0.548"
Critical pressure, atmospheres	60.5
Critical temperature	419°C (786°F)
Solubility	
Water 16°C (61°F)	6.7 g/100ml
66°C (151°F)	all
Alcohol	all
Solubility, water in phenol	28wt.% at 20°C
Surface tension	
at melting point (Dynes/cm)"	37.9
Threshold limit value, 8hours	5 ppm or 19 mg/m ³
Vapor density, (Air=1)	3.24
Vapor pressure, (mbar)	
25°C	0.29
50°C	3.5
100°C	54
160°C "	530
Viscosity, (centistokes)	
at 45°C	3.8
at 60°C	2.47
at 80°C	1.56
at 100°C "	1.09