

TSUBOND(4740) Introduction

TSUBOND(4740) is high-purity silica which has been treated with silicone oil. The treatment replaces the surface hydroxyl groups on the fumed silica with a polydimethyl-siloxane polymer. This treatment makes silica extremely hydrophobic.

Typical Properties TSUBOND(4740)

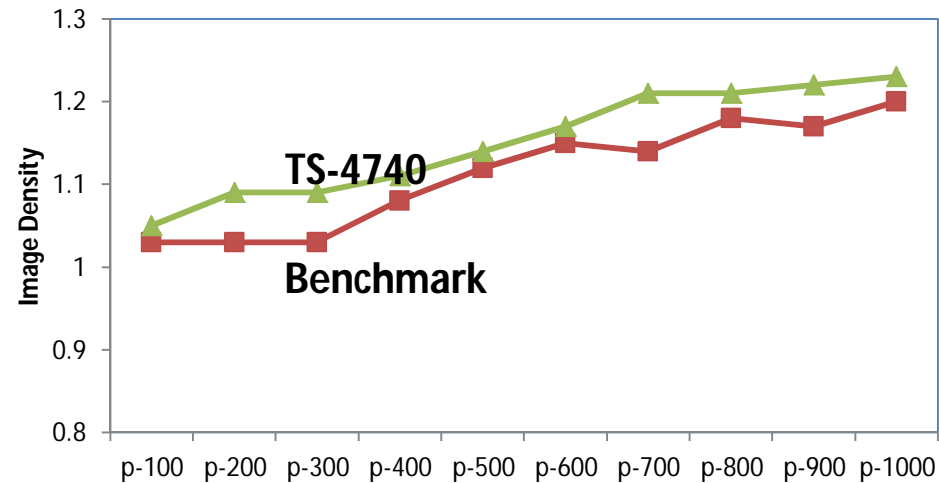
BET Area	105-135m ² /g
Loss On Heat	<0.6% Max
Carbon Content	5.1-6%
Refractive Index	1.46
X-ray Form	amorphous
Primary Particle	12nm

Application in Toner:

TSUBOND 4740 is a grade of PDMS on 200m²/g. As it is fully treated with PDMS, it is most hydrophobic grade, especially performance well under HH condition (high humidity and high temperature).

TSUBOND 4740 improves the transfer efficiency of toners, as it is silicon oil treated, alleviate the bonding power between toner particles and photosensitive drum. Therefore toners are well transferred to paper. TS4740 is very common used in MMC(example HP magnetic toner) and NMMC(example Samsung toner) toners.

Image density with printing cycles



Formulation	Image density		Transfer Efficiency/%	Per-usage (mg/page)
	Ave	Uniformity		
Benchmark	1.11	12.3%	87%	20
Toner with 4740	1.14	5.3%	85%	17