

# Kromasil 100 Å

## SIL, C4, C8, C18, NH2 and Phenyl

High performance spherical silica for analytical to process scale liquid chromatography. Functionalized Kromasil 100 Å is manufactured using monofunctional silanes, and is fully end-capped<sup>1</sup>. This gives high reproducibility and chemical stability.

### Product characteristics

#### Particle sizes

Phase	Particle size [μm]							
	1.8	2.5	3.5	5	7	10	13	16
SIL	•	•	•	•	•	•	•	•
C4	•	•	•	•	•	•	•	•
C8	•	•	•	•	•	•	•	•
C18	•	•	•	•	•	•	•	•
NH2				•	•	•	•	•
Phenyl				•		•		•

#### Particle size distribution

(Coulter Multisizer)

dp [μm]	dv <sub>90</sub> /dv <sub>10</sub>
10,13,16	≤ 1.70
7	≤ 1.60
5	≤ 1.50
3.5	≤ 1.45
2.5	≤ 1.40
1.8	≤ 1.50

#### Spec surface area

320 m<sup>2</sup>/g (multi-point BET)

#### Pore volume

0.9 ml/g (N<sub>2</sub>-adsorption)

#### Pore size

110 Å (N<sub>2</sub>-adsorption)

#### Pore size distribution

80% ± 25 Å (N<sub>2</sub>-adsorption)

97% of the BET-surface is accessible for toluene

#### Coverage

(elemental analysis)

C4	8% C	3.8 μmol/m <sup>2</sup>
C8	12% C	3.7 μmol/m <sup>2</sup>
C18	20% C	3.5 μmol/m <sup>2</sup>
NH2	1.7% N	4.5 μmol/m <sup>2</sup>
Phenyl	14% C	3.7 μmol/m <sup>2</sup>

#### Chemical purity

Typical figures (AAS or ICP):

Na: < 10 ppm

Al: < 5 ppm

Fe: < 5 ppm

#### Chemical stability<sup>2</sup>

Kromasil derivatized phases are stable between pH 1.5 and 10 and as high as 12 under certain conditions.

#### Mechanical stability

Allows repeated packing at up to 700 bar (10 000 psi).

#### Packed density

SIL:	0.50 g/ml
C4:	0.57 g/ml
C8:	0.60 g/ml
C18:	0.66 g/ml
NH2:	0.53 g/ml
Phenyl:	0.59 g/ml

### Delivery

Kromasil bulk is delivered in polyethylene bottles or in polyethylene bags packed in plastic drums.

Kromasil, patented by Nouryon, is manufactured in multi-kilogram batches with high reproducibility.

The Kromasil production is ISO 9001 and ISO 14 001 certified.

#### Footnotes

1) Kromasil NH2 is derivatized using a trifunctional silane, and is not end-capped.

2) Applies to derivatized phases except NH2.