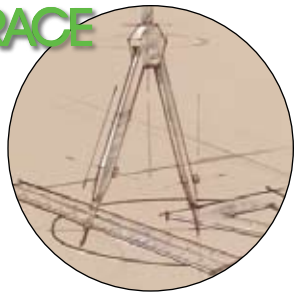
Davisil® Media



- High surface area
- Tight particle size distribution
- Wide range of pore sizes (30–2500Å) and particle sizes (10–2000µm) available
- Relied on for over 25 years

Recognized worldwide as media of high purity, Davisil® silica is the cornerstone of Grace's offering of silica media products. Consisting of irregularly shaped particles with excellent mechanical and structural properties, Davisil® silicas are versatile, consistent, and reliable. They are ideal for HPLC, solid phase extraction, flash chromatography, and scale-up to industrial process applications.

Higher Performance

Davisil® silica's chemical and structural properties are optimized for chromatographic performance. Tight control of these properties from raw material to finished product distinguishes Davisil® silica from the competition.*

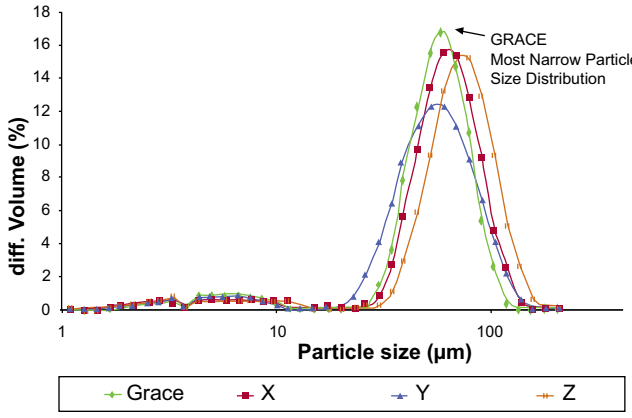
High Surface Area for Increased Loading Capacity

Company	Surface Area	Bulk Density	Surface Area of 1L Column
Grace	550m²/g	420g/L	231,000m²/L
X	515m²/g	430g/L	221,450m²/L
Y	460m²/g	430g/L	197,800m²/L
Z	450m²/g	450g/L	189,000m²/L

High Purity Silica to Reduce Unwanted Interactions and Contamination

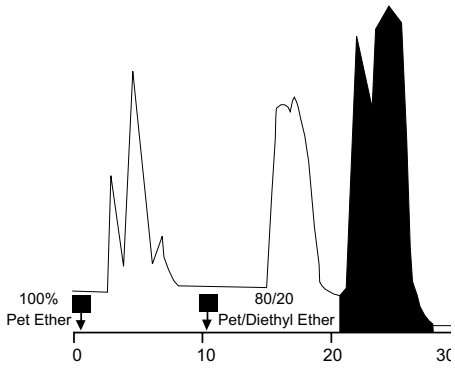
Company	Mg	Ca
Grace	25ppm	19ppm
X	27ppm	207ppm
Y	119ppm	793ppm
Z	212ppm	1775ppm

Tight Particle Size Distribution to Optimize Efficiency and Pressure Drop



*All comparative data generated on chromatographic silica labeled 60Å, 40–63µm.

Synthetic Intermediate Purification



Sample:	1g Reaction Products
Column:	50 x 500mm
Column Packing:	Davisil® LC60Å 20–45µm
Mobile Phase:	See Chromatogram
Flow Rate:	175mL/min (535cm/hr)
Detection:	UV at 254nm

Davisil® silica purification of a schiff base from a crude reaction mixture containing aldehyde, amine and other by-products. The good separation and loading capacity shown at the pilot scale allowed scale-up to a 300mm diameter column producing over 90g of purified product per run.

Global Technical Support

To assist customers, Grace offers advice, assistance or laboratory trials for intended process-scale use. Our field representatives can arrange for such support when required, as well as discuss our ability to customize grades tailored to your requirements.

Davisil® Media

Greater Selection

A wide range of Davisil® silica grades are available to meet your performance and economic requirements. The selection guide in this catalog will help you choose the best grade for your application.

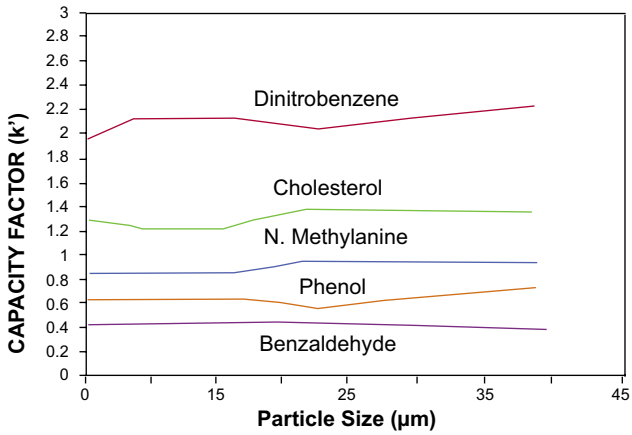
- Available in both normal phase bare silica and various bonding chemistries (C18, Amino, Diol, Cyano) for alternative selectivity
- Wide selection of distinct pore diameters (30–2500Å) for separation of various MW sizes
- Available from 500g to multi-ton quantities

DAVISIL® Silica

Look for this icon on products from Grace using Davisil® silica, such as TLC plates and SPE/ Flash cartridges, to experience the same great performance.

Predictable Scale-Up

Today we manufacture hundreds of tons of Davisil® chromatographic silica per year in multi-ton lots. Our manufacturing is at scale, so your manufacturing can be at scale. In scaling up, you can be confident that Davisil® chromatographic silica will yield consistent performance as particle size is increased.

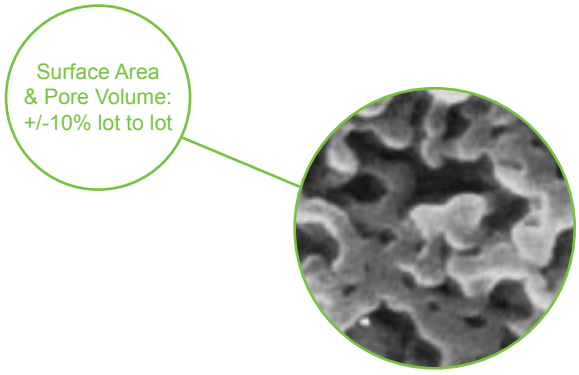


Uniform capacity (k') and selectivity (k') factors across all particle sizes for predictable scale-up.

Davisil® normal-phase silica functions through hydrophilic interactions, with more polar compounds generally retained longer. This makes it ideally suited for purification of:

Unbeatable Product Reliability

Manufactured for over 25 years, Davisil® chromatographic silica is one of the world's most widely used chromatography sorbents.



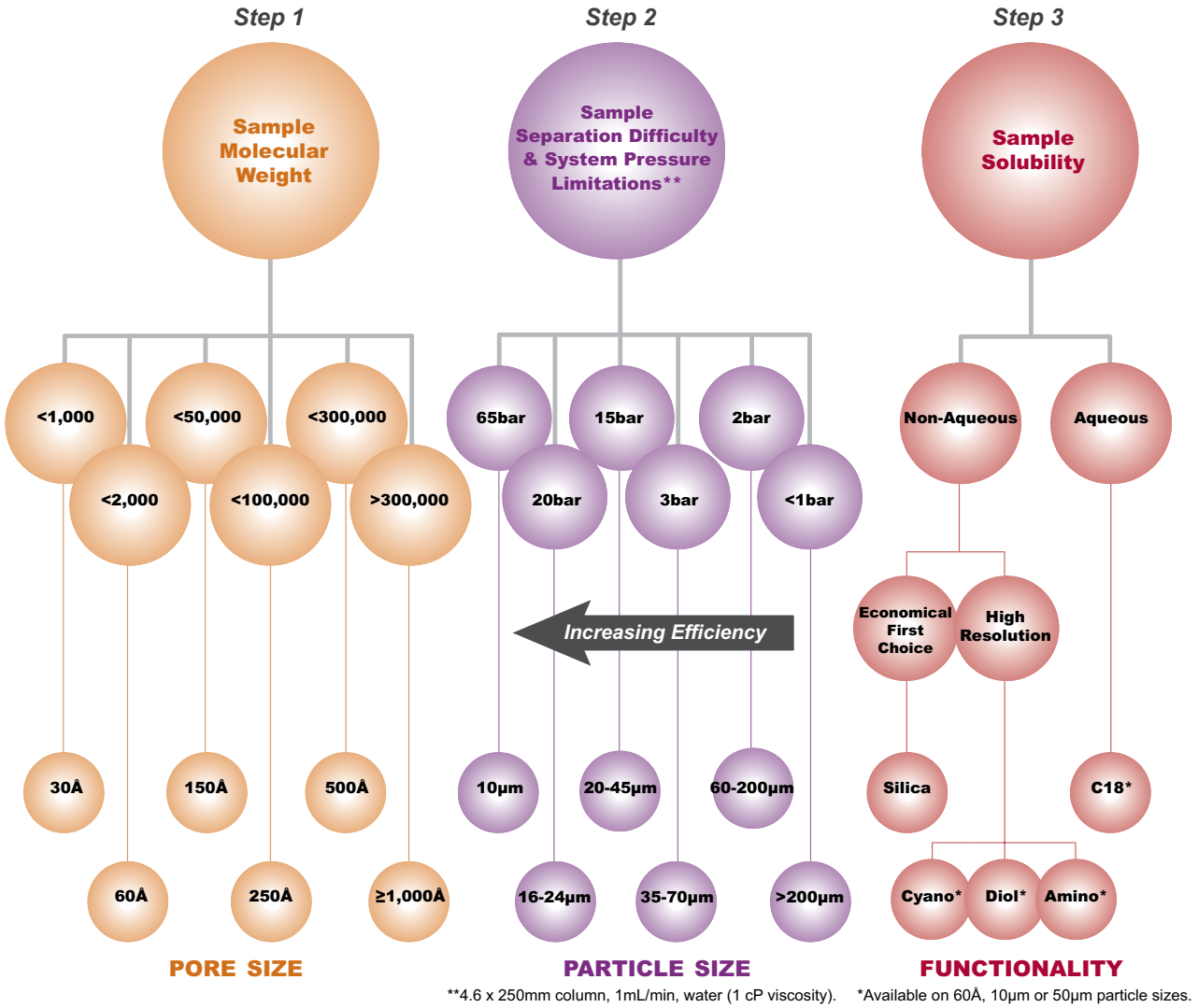
Produced at two ISO-9001 certified facilities under strict QC controls from raw material to finished product insures high lot-to-lot reproducibility.

Davisil® Media

Selection Guide

Many types of column packings are suitable for a given application. The diagram below is intended for general guidance to the chromatographer. By following each of the three paths in sequence, the proper packing media is selected.

It should be noted that Grace offers other media to complement the Davisil® packings in many of these applications.



**4.6 x 250mm column, 1mL/min, water (1 cP viscosity).

*Available on 60Å, 10µm or 50µm particle sizes.

Typical Physical and Chemical Characteristics

Exact specifications for each grade are available for download at: www.discoverysciences.com/prep.

Characteristics								
Nominal Pore Size	30Å	60Å	150Å	250Å	500Å	1000Å	1500Å	2500Å
Surface Area (m^2/g)	700	550	330	285	80	40	25	17
Pore Volume (ml/g)	0.4	0.9	1.2	1.8	1.1	1.1	1.1	1.1
pH (5% suspension)	4	7.3	7.3	7.5	8.0	9.0	9.0	9.0
H_2O (weight %)†	<6%	<6%	<6%	<6%	<6%	<6%	<6%	<6%
Bulk Density (kg/m^3)	720	530	350	210	370	370	370	370

†Moisture content (% H_2O) can be tailored (increased or decreased) to meet customer requirements.

Davisil® Media

Below is a listing of our more popular Davisil® silica grades.
For a complete listing request brochure 538.

Unbonded Silica

APS	Particle Size	Davisil® Silica Grade	Pk Size	Part No.
30Å	50–100µm	921	25kg	**5101737**
	75–150µm	923[1]	25kg	**5138973**
			5lb	**5139002**
			72 x 10g	**5139003**
			576 x 10g	**5139001**
	75–700µm	12[2]	25kg	**5139180**
	250–500µm	15[3]	25kg	**5101744**
60Å	10µm	710NW	20kg	**5136220**
	16–20µm	631	25kg	**5101778**
	40–63µm	LC60Å 40–63µm	25kg	**5054993**
			5kg	**5098468**
			1kg	**5134312**
	60–200µm	LC60Å 60–200µm	25kg	**5007446**
			5kg	**5134295**
			1kg	**5134311**
	200–500µm	LC60Å 200–500µm	25kg	**5022298**
150Å	16–24µm	LC150Å 16–24µm	25kg	**5018962**
	35–70µm	LC150Å 35–70µm	25kg	**5057993**
			5kg	**5134294**
			1kg	**5134299**
	60–200µm	LC150Å 60–200µm	25kg	**5134770**
			5kg	**5134293**
			1kg	**5134298**
250Å	40–63µm	LC250Å 40–63µm	15kg	**5134301**
			2.5kg	**5134292**
	60–200µm	LC250Å 60–200µm	15kg	**5134300**
			2.5kg	**5134291**
500Å	35–70µm	XWP500Å 35–70µm	20kg	**5030057**
			5kg	**5108711**
	90–130µm	XWP500Å 90–130µm	20kg	**5058842**
			5kg	**5134305**
	100–300µm	XWP500Å 100–300µm	20kg	**5057050**
1000Å	16–24µm	XWP1000Å 16–24µm	20kg	**5134302**
			5kg	**5016756**
	35–70µm	XWP1000Å 35–70µm	20kg	**5034754**
			5kg	**5134304**
	90–130µm	XWP1000Å 90–130µm	20kg	**5093501**
			5kg	**5134303**
1500Å	16–24µm	XWP1500Å 16–24µm	18kg	**5070159**
	90–130µm	XWP1500Å 90–130µm	18kg	**5045916**
2500Å	90–130µm	XWP2500Å 90–130µm	5kg	**5107451**

ASTM or EPA Method

[1]Grade 923 ASTM D1319: Petroleum Products by FIA
ASTM D2549: Aromatics/Non-Aromatics from Oils
EPA Method 1664: N-Hexane Extraction Method
[2]Grade 12 ASTM D2007: Rubber Extender/ Processing Oils
[3]Grade 15 EPA Method 601/624: Purgeable Halocarbons

Bonded Silica

APS	Bonded Phase	Particle Size	Davisil® Silica Grade	Pk Size	Part No.
60Å	C18	10µm	710NC18E	250g	**5135418**
				1kg	**5135305**
		35–60µm	633NC18E	250g	**5135414**
				1kg	**5134095**
	Cyano	10µm	710NCNE	250g	**5135419**
				1kg	**5134223**
		35–60µm	633NCNE	250g	**5135415**
				1kg	**5134224**
	Diol	10µm	710N2OH	250g	**5135417**
				1kg	**5135303**
		35–60µm	633N2OH	250g	**5135413**
				1kg	**5135302**
	Amino	10µm	710NNH2	250g	**5135420**
				1kg	**5134682**
		35–60µm	633NNH2	250g	**5135416**
				1kg	**5134096**

related products

Matching Davisil® Silica TLC plates for easy method development.

Davisil® Silica TLC Plates

Description	Layer Thickness	Qty.	Part No.
Hard Layer, Organic Binder, Fluorescent Indicator, 254nm			
Scored, 4, 5 x 20cm Sections			
20 x 20cm	250µm	25	**8617580**
Scored, 8, 2.5 x 10cm Sections			
10 x 20cm	250µm	25	**8617610**

related products

Column Hardware and Packing Equipment also available.
See pages 162–174.

related products

Looking for additional TLC products?
See pages 188–198.