

Your Specialists in Chromatography



## ***Davisil® - Grace*** **Silica Gel for Flash Chromatography**



# Davisil® - Silica Gel for Flash Chromatography

**SepaChrom** offer the complete **Davisil®** product line from **W.R.Grace & Co - Conn**, one of the world's largest manufacturer of specialty silica gel used in many applications, including Laboratory and Industrial scale Purification.

Here are the 5 most important reasons why **Davisil®** is the best choice for all these applications :



**FLASH  
CHROMATOGRAPHY**



**ORGANIC SYNTHESIS  
CLEAN-UP**



**NATURAL PRODUCTS  
PURIFICATION**



**PREPARATIVE  
CHROMATOGRAPHY**

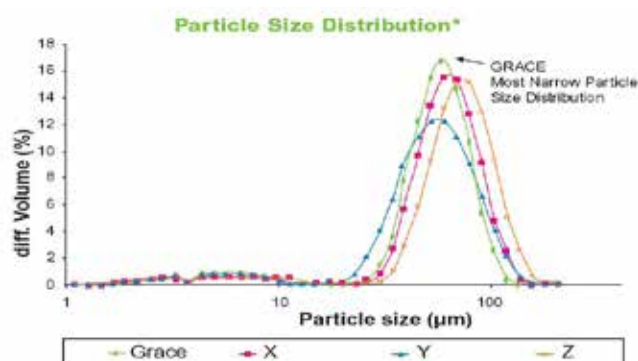
## 1 - Improved Performance

Davisil® silica's chemical and structural properties are optimized for chromatographic performance. Tight control of these properties from raw material to finished product in addition to real time monitoring of production processes distinguishes Davisil® silica and ensures consistent performance.

**High surface area increases loading capacity and High purity silica reduces unwanted and unpredictable interactions that cause contamination and poor reproducibility.**

### Davisil® and other Silica Gels for Chromatography Comparison.

Brand	Surface Area	Bulk Density	Surface Area of 1L Column	Mg	Ca
Grace	550m <sup>2</sup> /g	420g/L	231,000m <sup>2</sup> /L	25ppm	19ppm
X	515m <sup>2</sup> /g	430g/L	221,450m <sup>2</sup> /L	27ppm	207ppm
Y	460m <sup>2</sup> /g	430g/L	197,800m <sup>2</sup> /L	119ppm	793ppm
Z	450m <sup>2</sup> /g	450g/L	189,000m <sup>2</sup> /L	212ppm	1775ppm



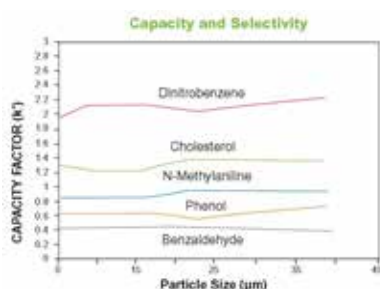
**Tight particle size distribution optimizes efficiency and pressure drop in packed columns.**

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

## 2 - Predictable Scale-Up

Hundreds of tons of Davisil® chromatographic silica are manufactured per year in multi-ton lots. Our manufacturing is at scale, so you can be confident that Davisil® silica will yield consistent chromatographic performance as particle size and volume are increased.

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



## 4 - Greater Selection

A wide range of Davisil® silica grades are available in both Normal and Bonded Phase : **C18, Amino, Diol & Cyano** are available for a wide choice of selectivity.

Davisil® silica offers the wide range of **Porosity** available on the market (30Å to 4500Å) to achieve purification of Molecules with a large range of **Molecular Weight**.

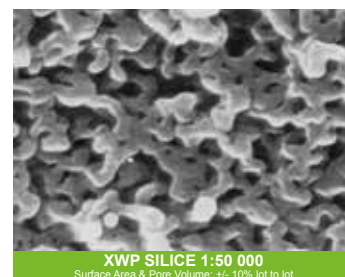
Davisil® is available in **1kg & 5kg** for laboratory application as well in **Multi-Ton quantities** for industrial purification.

**SepaChrom** not only offers media for process purification but also column hardware, packing equipment, and process HPLC systems for optimized chromatographic performance.

## 3 - Exceptional Product Reliability

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

Davisil® silica is produced at two ISO-9001 certified facilities under strict QC controls from raw material to finished product. Each step in the production process is closely monitored to proactively eliminate discrepancies and better ensure high lot-to-lot finished product reproducibility and tightly controlled specifications.



## 5 - Unmatched Technical Support

**W.R.Grace & Co.Conn** is a company founded in 1854. High quality, innovative products and complete technical support to the users are the main reason of the company success.

**SepaChrom** is an Italian company specialized in manufacturing and commercialization of product for **Chromatography**.

Together, **SepaChrom** and **Grace** are committed to offer technical assistance, laboratory trials, column packing services and recommend purification solution for **Flash, Prep and Process-scale Chromatography**.

Our goal is to help the users of Chromatographic techniques to optimize the performance during their daily purification **challenges**

## Davisil® - 3 Steps for the best choice

**Step 1** - Select **Pore Size** of media based on the **Molecular Weight** of molecule to be purified

MW of Molecule	Porosity (Å) *
<350 MW	35Å
<800 MW	60Å
<15000 MW	150Å
<100000 MW	250Å
<250000 MW	500Å
>250000 MW	1000Å-4500Å

**Step 2** - Select **Particle Size** based on scale and system pressure.

Pressure	Particle Size (µm)
65 bar	10 µm
20 bar	16-24 µm
15 bar	20-45 µm
5 bar	40-63 µm
2 bar	70-200 µm
<1 bar	>200 µm

**Step 3** - Determine **Surface Functionality** based on sample solubility and separation goals.

Solubility	Functionality
Non Aqueous (NP)	Silica
Aqueous or Non Aqueous (NP, RP, HILIC)	Cyano Diol Amino
Aqueous (RP)	C18

\* Consideration of compounds being separated and bonded phase should be made when selecting the right pore size.

## Davisil® - Silica Gel - Unbonded

- Davisil® - Silica Gel unbonded for Preparative Chromatography, Flash Chromatography and for Industrial Scale Purification.



Porosity (Å)	Particle Size (µm)	Description	Packaging (kg)	Stock N#	Applications
60Å	10-14 µm	Davisil® - Grade 710NW	20kg	FA0017	Preparative LC
60Å	40-63 µm	Davisil® - LC60A - 40-63	1kg	FA0044	Flash Chromatography - Laboratory Scale
60Å	40-63 µm	Davisil® - LC60A - 40-63	5kg	FA0045	Flash Chromatography - Laboratory Scale
60Å	40-63 µm	Davisil® - LC60A - 40-63	25kg	FA0032	Flash Chromatography - Industrial Scale
60Å	30-200 µm	Davisil® - LC60A - 30-200	1kg	FA0048	Laboratory Scale-Up
60Å	30-200 µm	Davisil® - LC60A - 30-200	5kg	FA0049	Small Purification - Laboratory Scale
60Å	30-200 µm	Davisil® - LC60A - 30-200	25kg	FA0026	Industrial Scale Purification
60Å	70-200 µm	Davisil® - LC60A - 70-200	1kg	FA0046	Laboratory Scale-Up
60Å	70-200 µm	Davisil® - LC60A - 70-200	5kg	FA0047	Small Purification - Laboratory Scale
60Å	70-200 µm	Davisil® - LC60A - 70-200	25kg	FA0037	Industrial Scale Purification

## Davisil® - Silica Gel - Bonded

- Davisil® - Functionalized Silica Gel for Preparative Chromatography, Flash Chromatography and for Industrial Scale Purification

Functionalization	Porosity (Å)	Particle Size (µm)	Description	Packaging (kg)	Stock N#	Applications
C18	60Å	10-14 µm	Davisil® - 710NC18E	250g	FA0043	Preparative LC Column Chromatography Flash Chromatography SPE (Solid Phase Extraction)
C18	60Å	10-14 µm	Davisil® - 710NC18E	1kg	FA0018	
C18	60Å	35-70 µm	Davisil® - 633NC18E	250g	FA0042	
C18	60Å	35-70 µm	Davisil® - 633NC18E	1kg	FA0030	
Cyano	60Å	10-14 µm	Davisil® - 710NCNE	250g	FA0050	
Cyano	60Å	10-14 µm	Davisil® - 710NCNE	1kg	FA0021	
Cyano	60Å	35-70 µm	Davisil® - 633NCNE	250g	FA0051	
Cyano	60Å	35-70 µm	Davisil® - 633NCNE	1kg	FA0028	
Diol	60Å	10-14 µm	Davisil® - 710N2OH	250g	FA0052	
Diol	60Å	10-14 µm	Davisil® - 710N2OH	1kg	FA0019	
Diol	60Å	35-70 µm	Davisil® - 633N2OH	250g	FA0053	
Diol	60Å	35-70 µm	Davisil® - 633N2OH	1kg	FA0027	
Amino	60Å	10-14 µm	Davisil® - 710NNH2	250g	FA0054	
Amino	60Å	10-14 µm	Davisil® - 710NNH2	1kg	FA0020	
Amino	60Å	35-70 µm	Davisil® - 633NNH2	250g	FA0055	
Amino	60Å	35-70 µm	Davisil® - 633NNH2	1kg	FA0029	