

RP-modified silica plates (TLC and HPTLC)

Free choice of solvent system for special separations & HPLC pilot method

RP-modified silica layers are well suited for many separation problems that cannot be sufficiently solved by unmodified silica.

- Separation of extremely non-polar and highly polar substances using aqueous solvent systems
- Analysis of certain polar substances amenable to ion-pair chromatography, while neutral substances remain constant
- Less dependence on atmospheric humidity

In contrast to unmodified silica, RP phases do not exhibit catalytic activity and are therefore the plates of choice for unstable substances that might tend towards oxidative degradation. Furthermore, RP-modified silica plates provide ready correlation with HPLC columns and allow TLC to be used for method development and as a pilot method for HPLC.

Merck Millipore RP plates RP-2, RP-8 and RP-18 are based on silica gel 60 modified with aliphatic hydrocarbons of increasing hydrocarbon chain length resulting in increased hydrophobicity.

The hydrocarbon chain length in combination with the degree of modification strongly affects retention: Retention of the sample and migration times increases with the higher degree of modification and with growing hydrocarbon chain in the order RP-2, RP-8, RP-18 using the same solvent composition, while RF values decrease. Additionally, with rising water content in the solvent system, retention will increase.

The RP-2 sorbent exhibits higher polarity and high affinity with aqueous solutions tolerating up to 80 % water while the longer carbon chains RP-8 and R-18 can be run with up to 60 % and 40 % water, respectively, in the solvent system.

The special **HPTLC RP-18 W** with a defined lower degree of surface modification can be wetted and developed even with pure water.

The **RP-18 silica plates with concentrating zone** are especially suited for the high-resolution separation of polycyclic aromatic hydrocarbons (PAH).

Ordering information – TLC RP-modified silica gel 60, glass backed

Product	Ordering No.	Format [cm]	Contents of one package
Silica gel 60 RP-2 (silanized)	1.05746.0001	20 x 20	25 plates
Silica gel 60 RP-2 F ₂₅₄ (silanized)	1.05747.0001	20 x 20	25 plates
Silica gel 60 RP-8 F _{254s}	1.15388.0001	20 x 20	25 plates
	1.15424.0001	10 x 20	50 plates
	1.15684.0001	5 x 10	25 plates
Silica gel 60 RP-18 F _{254s}	1.15389.0001	20 x 20	25 plates
	1.15423.0001	10 x 20	50 plates
	1.15683.0001	5 x 20	50 plates
	1.15685.0001	5 x 10	25 plates

F₂₅₄: Green fluorescent indicator | F_{254s}: Blue fluorescent indicator

Ordering information – TLC RP-modified silica gel 60, aluminium backed

Product	Ordering No.	Format [cm]	Contents of one package
Silica gel 60 RP-18 F _{254s}	1.05559.0001	20 x 20	20 sheets
	1.05560.0001	5 x 7.5	20 sheets

F_{254s}: Blue fluorescent indicator

► **Classical silica TLC plates (TLC)** For versatile and reliable routine analysis of a broad range of substances
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► **High performance silica plates (HPTLC, PLC)** For fast analysis of complex samples for manual or instrumental use
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► **Concentrating zone plates (TLC, HPTLC, PLC)** Quick and easy sample application even of large volumes of diluted samples
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