



## TECHNICAL DATA SHEET #405

### Silica H/HF Binderless Type TLC Plates

CAT# P10xxx (H) or P20xxx (HF)

**Analtech Brand Silica Gel H/HF TLC Plates 250 $\mu$ m 20x20cm**

**Silica Pore:** 60Å  
**Silica Particle Size:** 19  $\mu$ m average  
**Binder:** none  
**Hardness:** 1-8

Acceptable Solvents: All typical chromatography solvents (20% water max)

Visualization Techniques: Compatible with essentially all visualization reagents, even sulfuric acid charring. *Spray reagent only*. Dipping not recommended.

General Description: Very soft surface as no binder is used to adhere the layer to the glass backing. Requires extra caution during use to prevent damage to the layer, which would affect chromatography. However, it is sometimes required when the separation being run is sensitive to any materials other than silica gel in the chromatographic process. Compatible with most mobile phases except water in excess of about 20%. Dip visualization procedures not recommended, but plates do tolerate gentle spray techniques.

Special Notes: These plates have no binder and thus are very, very soft. If the softness could demonstrate in person, simply wiping a finger across the glass would remove all of the silica in that area. Binderless plates is not what you want unless you discover that the binder in the plates is hindering your separation. That is why we refer to them as "last resort" TLC plates.

Unless you are sure that you or your customer have previously used Silica H plates and loved them or are requesting these based on a published reference indicating binderless TLC plates, we would suggest another plate. Many customers have made the mistake of ordering Silica H plates based on a quick decision and find they are not what they expected.

Typically, we suggest not selling Silica Gel H/HF plates unless the customer cannot perform their separation on other TLC plates (silica gel G/GF, silica gel GHL/GHLF, or silica gel HL/HLF). All of these plates are more rugged and more typical TLC plates than silica gel H/HF. The H/HF plates are used as a last resort when all others fail to perform separation. We are the only company in the world that makes H/HF plates, but they are not for typical use.



A quick comparison of plate hardness:

CAT# P10xxx (H) or P20xxx (HF)

**Analtech Brand Silica Gel H/HF TLC Plates 250µm 20x20cm**

**Binder:** none

**Hardness:** 1-8

CAT# P01xxx (G) or P02xxx (GF)

**Analtech Brand Silica Gel G/GF TLC Plates 250µm 20x20cm**

**Binder:** Calcium sulfate a.k.a. gypsum (inorganic)

**Hardness:** 20-40

CAT# P11xxx (GHL) or P21xxx (GHLF)

**Analtech Brand Silica Gel GHL/GHLF TLC Plates 250µm 20x20cm**

**Binder:** Calcium sulfate a.k.a. gypsum (inorganic) with proprietary hardening agent (inorganic)

**Hardness:** 80-160 (can write on gently with pencil)

CAT# P46xxx (HL) or P47xxx (HLF)

**Analtech Brand Silica Gel HL/HLF TLC Plates 250µm 20x20cm**

**Binder:** Proprietary polymer (organic)

**Hardness:** 200-400 (easy to write on with pencil)

For a complete technical sheet on all 4 types of silica gel TLC plates ask for TDS # 401.

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