

Fusion

Fluxes and Additives

Celebrating
50 Years
of Quality

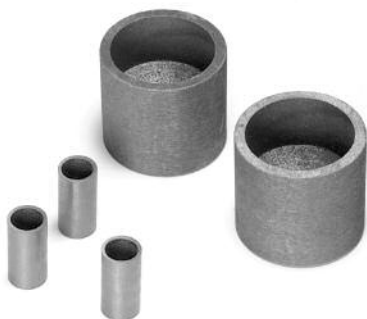
1975
Fusion Flux and
Additives Introduced





Fusion

Fluxes and Additives



SPEX CertiPrep
Graphite Crucibles

Helpful Hint:

If you don't find the flux you need (whatever the blend) call your sales rep today, and ask about our expanded list of fusion flux mixes.

Fusion is an extremely effective method to prepare oxides, sulfides, fluorides, ferroalloys and metals for analysis by XRF, AA, ICP, DCP, etc. The samples are (if necessary) pulverized, and mixed with a flux; this mixture is heated until the flux melts, and the sample dissolves in it, yielding a clear, homogeneous melt. The melt can be cast as a glass disc for XRF, or dissolved in diluted acid for analysis in solution form. In many cases fusion fluxing is simpler, or the analytical results more accurate, than if the sample were prepared by conventional acid dissolution or pressed powder methods.

SPEX CertiPrep is proud to offer a full line of fluxes and additives with exceptional qualities due to their purity and coarse texture.

Please call our sales department for a free sample of flux or information on a custom blend.

Features of SPEX CertiPrep Fluxes:

- **Homogeneity** – Each flux has the same composition throughout. If a flux is not homogenous, segregation will affect the XRF intensities.
- **Purity** – With pure fluxes, no element impurity exceeds 10ppm. With ultra pure fusion flux, impurities are practically non-existent.
- **High Density** – SPEX CertiPrep Fluxes have a density of 1.4 (as compared to 0.3 for fine fluxes). High density flux is easier to handle, measure and, with certain applications, smaller, less expensive platinumware can be used.
- **Not Hydroscopic** – All SPEX CertiPrep Fluxes have a water content <0.05%. The major disadvantage of absorbed water is a loss of accuracy in the analytical result. This is due to an error in the sample/flux ratio and also the volatilization of water can sometimes occur suddenly blowing a fraction of the flux sample out of the crucible.
- **Granularity** – All SPEX CertiPrep Fluxes have a granularity greater than 500µm which means that they contain no dust. Due to electrostatic forces, dusty flux sticks to the weighing pan, the funnel and the crucible wall resulting in a loss of flux and the formation of glass droplets on the wall of the crucible.
- **Outstanding fluidity** – Granular flux will not stick to surfaces and will leave the crucible wall clean after fusion. SPEX CertiPrep offers two approaches to fusion fluxing: the SPEX CertiPrep Automated Fluxer for rapid, repetitive fusions, and graphite crucibles for smaller scale operation.

The SPEX CertiPrep® automated fusion fluxing device is capable of simultaneously preparing either glass discs for XRF or solutions for AA and ICP-DCP analysis.

Fluxers can be placed under manual control to develop methods or process samples. Fluxing procedures can also be carried out automatically through the sequential, microprocessor controlled commands or linked to a computer.

SPEX CertiPrep graphite crucibles are a cost effective alternative to metal (platinum/gold) crucibles used to contain samples during fusion. Graphite crucibles are disposable, eliminating both the need for time consuming cleaning and the possibility for sample cross-contamination. Chemically inert and heat-resistant, graphite will not combine with samples during fusion.

■ Fusion Flux (1kg quantity)

Description	Grade	Catalog#
LITHIUM TETRABORATE	Pure	FF-0600
	Ultra Pure	FF-0601
LITHIUM TETRABORATE (FLUFFY) (Packaged in 500 gram quantities)	Pure	FF-0600-10
	Ultra Pure	FF-0601-10
LITHIUM METABORATE	Pure	FF-0610
	Ultra Pure	FF-0611
50% LITHIUM TETRABORATE/ 50% LITHIUM METABORATE	Pure	FF-0620
	Ultra Pure	FF-0621
66% LITHIUM TETRABORATE/ 34% LITHIUM METABORATE	Pure	FF-0644
	Ultra Pure	FF-0645
66% LITHIUM TETRABORATE/ 33% LITHIUM METABORATE WITH LITHIUM BROMIDE RELEASING AGENT	Pure	FF-0644-60
	Ultra Pure	FF-0645-60
66% LITHIUM TETRABORATE/ 33% LITHIUM METABORATE WITH LITHIUM IODIDE RELEASING AGENT	Pure	FF-0644-70
	Ultra Pure	FF-0645-70
SODIUM TETRABORATE	Pure	FF-0630
70% LITHIUM TETRABORATE/ 30% LITHIUM METABORATE	Pure	FF-0650
90% LITHIUM TETRABORATE/ 10% LITHIUM CARBONATE (PHYSICAL MIXTURE)	Pure	FF-0651

■ Additives

Description	Quantity	Catalog#
POTASSIUM IODIDE (KI)		
Crystals	100g	FF-0700
Crystals	250g	FF-0700-01
Solution	15mL	FF-0701
LITHIUM BROMIDE (LiBr)		
Crystals	100g	FF-0710
Crystals	250g	FF-0710-01
Solution	15mL	FF-0711
LITHIUM IODIDE (LiI)		
	100g	FF-0720
	250g	FF-0720-01
LITHIUM FLUORIDE (LiF)		
	100g	FF-0800
LITHIUM NITRATE (LiNO₃)		
	500g	FF-0900
SODIUM NITRATE (NaNO₃)		
	500g	FF-0910

Customer Testimonial:

“...the best quality and service at competitive prices (even when converted in other currencies such as South African Rand!) we have not had one single complaint from endusers over the past four years since we became the distributor for Spex CertiPrep in South Africa — for a distributor this is total peace of mind!”

– Francois Beukes