

SOLUBILITY ENHANCEMENT

Application



Trends in drug characteristics increasingly favor greater degrees of lipophilicity, higher molecular weight, greater physical form complexity and significantly lower aqueous solubility. Consequently, many chemical entities in drug development pipelines suffer from poor water solubility.

Low aqueous solubility severely limits a compound's bioavailability and therefore also limits the therapeutic potential of a new product. As a consequence, many active pharmaceutical ingredients that could potentially help cure diseases and improve consumers' lives never enter the market.

Enabling Technologies

IFF is committed to addressing the solubilization performance requirements of developing APIs with a portfolio of unique solutions.

AFFINISOL™ HPMC HME improves upon existing HPMC materials by offering expanded thermal processing ranges which allow it to be extruded without the need for additional plasticizers. It is available in a range of molecular weights which are suitable for both immediate and modified release.

Product Recommendations*

Application	Recommended Products	Benefits
Spray-drying	AFFINISOL™ HPMCAS 126, 716, 912	Designed for spray-dried dispersions, Formulation by Design (FbD) samples offers flexibility in acetate and succinate substitution levels, facilitating the optimization of both solubility enhancement and material processing
	AFFINISOL™ HPMCAS HP** 126, 716, 912	Same as AFFINISOL™ HPMCAS, but improves spray-drying-solution throughput by as much as 1.7x over conventional HPMCAS
Hot-melt extrusion	AFFINISOL™ HPMCAS 126, 716, 912	Enables stable and continuous and solvent-free HME processing
	AFFINISOL™ HPMCAS HP** 126, 716, 912	Enables a larger processing window in HME processing
	AFFINISOL™ HPMC HME 15LV, 100LV, 4M	Extrudable HPMC with processing versatility that requires no plasticizer and provides expanded IR or CR functionality

* Examples only and not representative of a complete list of recommended products or benefits

** Developmental materials



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