



SAIB (Sucrose Acetate Isobutyrate) 80%

KEY FEATURES:

- Good color stability to heat and ultraviolet light
- High thermal and hydrolytic stability
- Very low volatility
- Soluble in most organic solvents but insoluble in water
- Odorless





SAIB

(Sucrose Acetate Isobutyrate) 80%

PRODUCT DESCRIPTION

SAIB is a high-purity carbohydrate. This sugar derivative, produced by esterification of natural sugar with acetic and isobutyric anhydrides, is a mixture of different isomers with an approximate composition of sucrose diacetate hexaisobutyrate.

SAIB 80% is an 80% solution of **SAIB** with 20% ethyl acetate (purity min. 99.7%).

APPLICATIONS

SAIB can be used for a wide range of applications. Major areas are inks, coatings and paper production. Common literature also describes the use in beverages and controlled-release formulations for pharmaceuticals.

SAIB is employed as a modifier-extender, leading to higher solids extending the film-forming polymer. The hardness of cellulose-nitrate films can be increased by the addition of **SAIB**. Flow properties are often improved, and surface imperfections can be reduced.

At more relevant temperatures, the sucrose ester may serve as a plasticizer, e.g., in printing inks for food packaging foils to improve adhesion, gloss and heat stability.

SAIB's advantageous features for coatings and inks may be:

- low volatility, resulting in higher solids content
- low color
- compatibility with most polymers and resins, oils and waxes

SAIB can also be added to hot-melt adhesives and coatings, which are used to package items such as table flatware, tools, machine parts, etc. The sucrose ester may lower the coating temperature and appears to have a stabilizing influence on the total hot-melt coatings. In such applications it may exhibit good color retention and stability on heat aging.

SAIB can help to efficiently disperse pigments. The ester can support the formation of stable suspensions with good compatibility with binder resins in coating materials and inks.

For the production of papers it serves as a clarifier and transparentizing agent due to a similar refractive index to cellulose fibers. It may increase the stability of the paper to heat and light as well as transparency and printability of the paper. The paper is usually impregnated or coated with a solution of **SAIB** in a low boiling solvent, such as an alcohol.

TYPICAL PROPERTIES

	Unit	
Molecular weight $\text{C}_{40}\text{H}_{62}\text{O}_{19}$	g/mol	846
Boiling point (decomp.)	°C	104
Density at 20°C (DIN 51 757)	g/cm ³	1.07 – 1.09
Refractive index n_D at 40°C (DIN 51 423)		1.44
Solubility in water at 25°C	wt%	Partly miscible
Appearance		Clear, yellowish viscous liquid