



Cellulose Acetate Butyrate

CAB

Cellulose Acetate Butyrate is a versatile intermediate derived from cellulose – one of the most abundant natural resources. Actually it even might be stated that CAB's do have a high BIO-content (in the range of 35-40%).

Its special structure with Butyryl-group, Acetyl-group as well as Hydroxyl-group allows a virtually endless variety of applications. Basically every paint, coating and ink-maker might be a potential user of CAB, but CAB's may also be used for modifying plastics, process additives and for cosmetic applications (eg. nail polish (+remover), skin-care) and many more.

Examples of the advantages of CAB: In coatings CAB's provide tough films, that at the same time provide high flexibility and good weathering properties. CAB may contribute avoiding pin-holes and orange-peel in coatings. In inks performance on flex-packaging as well as adhesion will be improved considerably. Aerosol coatings and ink-jet inks will show increased performance. The list of potential applications may be nearly endless.

CAB appears as powder and is easily dissolved in a wide range of common solvents and shows good compatibility with many other resins.

Overall, CAB is a highly adaptable material used in various industries for applications that require durability, clarity, and resistance to environmental factors.

Transparency

CAB is clear and glossy, making it suitable for applications requiring optical clarity. CAB retains its optical properties even under harsh conditions, making it ideal for applications where transparency is critical.

Durability

It is tough and resistant to impact, scratching, and wear. CAB offers good mechanical properties, such as flexibility and impact resistance, which are valuable in a wide range of industrial uses.

Weather resistance

It exhibits good stability under UV exposure and resists degradation caused by weathering.

Chemical resistance

CAB is resistant to water, oils, and many solvents. The material resists degradation by chemicals, moisture, ensuring longevity in a range of products.

Adhesion and coating

It has excellent adhesion to various surfaces and is commonly used in coatings and lacquers.

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Coatings and paints

CAB is often used as a film-former in coatings, especially in automotive and wood finishes, where its durability, clarity, and resistance to UV are valued.

- **Optical coatings**

Used in coatings for optical lenses and components due to its excellent optical clarity and scratch resistance.

- **Protective coatings**

CAB is also used in protective coatings for various materials, including plastics, due to its ability to provide resistance against water, oils, and chemicals.

- **Wood finishes and paints**

CAB is used in surface finishes for wood, providing an aesthetically appealing, durable finish that is resistant to environmental wear.

- **Leather and textiles**

CAB can be applied as a coating on leather and textile materials to enhance their durability, water resistance, and tactile feel.

Inks

It serves as a binder in printing inks, enhancing flexibility and adhesion.

Adhesives

CAB is a component in adhesive formulations, offering good bonding strength and durability.

Plastics and molding

It is used in injection molding and extrusion processes for making durable plastic products like eyewear frames and tool handles or toys and sporting goods that require durable, lightweight plastic with a clear appearance.

Packaging

Some forms of CAB are used in packaging films or laminates due to its aesthetic appeal and ability to form a smooth, glossy surface.

Specialty products

Items like musical instrument parts, pens, and durable consumer goods are also made from CAB.

Safety glass

It is used in the production of laminated safety glass in vehicles, where its impact resistance is valuable.

Biomedical and pharmaceutical

CAB has potential applications in controlled drug delivery systems where it is used to form microencapsulations or coatings to release drugs at a controlled rate.

Cosmetics

in skin care and in nail polish mainly to improve film forming

Photography and imaging

CAB is used in the production of photographic films, especially in applications requiring transparency, clarity, and toughness.

Specifications		CAB 381	CAB 551
Appearance		white powder	white powder
Color	Pt-Co	< 100	< 100
Acidity (Acetic Acid)	ppm	< 300	< 300
Butyryl Content	%	35.0 – 41.5	45.0 – 58.0
Acetyl Content	%	10.0 – 18.0	0.1 – 5.0
Hydroxyl Content	%	0.0 – 3.0	0.0 – 3.0
Turbidity	NTU	< 50	< 50
Ash Content	%	< 1.5	< 1.5
Moisture	%	< 3.0	< 3.0

Type		381-0.1	381-0.5	381-2.0	551-0.01	551-0.2
Viscosity (20% in EtAc)	s	0.05–0.45	0.35–0.80	0.85–1.25	0.01–0.15	0.20–0.55
Melting Point	°C	130–145	150–165	170–185		160–185
Tg	°C	~ 113	~ 125	~ 133		~ 100
Article Number		30569	30588	30590	34602	34600