

QUALITY PERFORMS.

QUALITY WORKS.

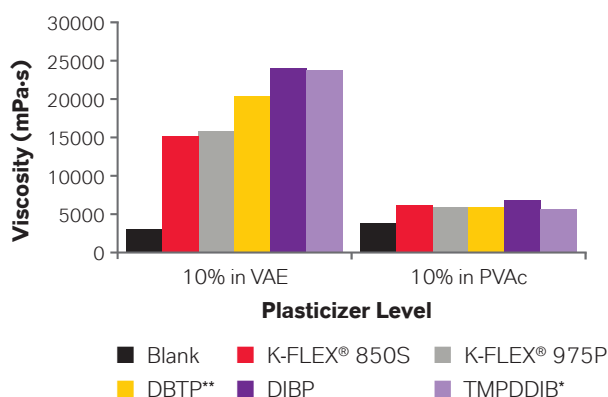
LANXESS
Energizing Chemistry

K-FLEX® Dibenzoate Plasticizers for Adhesives

Dibenzoates have long been the preferred plasticizer for waterborne adhesive compounds and are value-added alternatives to phthalates such as dibutyl phthalate and diisobutyl phthalate, which have become increasingly scrutinized for health and safety concerns. Benzoates have been proven to offer the best balance of performance and value to alternative chemistries in latex adhesives.

K-FLEX® dibenzoate plasticizers offer a range of excellent solutions for formulators looking to satisfy both legislative requirements and consumer demand. In addition to excellent performance, benzoate chemistries have favorable HSE profiles: **non-phthalate, low-VOC, global registrations, and REACH compliant.**

Viscosity Response



Dibenzoate plasticizers such as K-FLEX® 850S and K-FLEX® 975P provide strong viscosity response of the base emulsion to the plasticizer, demonstrating compatibility and allowing flexibility.

Next Generation Products

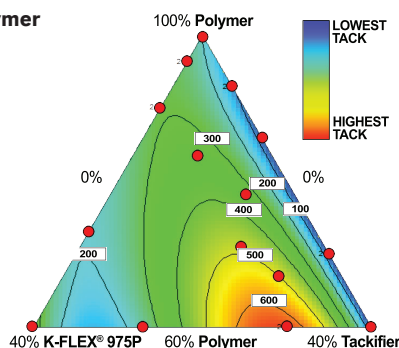
Dibenzoates are general purpose plasticizers for adhesive applications, particularly in latex compositions. The polarity of dibenzoate plasticizers results in **excellent compatibility with the polymers commonly used in the adhesives industry**, such as polyvinyl acetate and vinyl acetate-ethylene copolymers. Good compatibility is critical to **provide key performance characteristics.**

To meet the needs of the adhesives industry, LANXESS offers **K-FLEX® 850S**, a blend of dibenzoates tailored to provide an **optimal balance of handling, performance, and cost-effectiveness** in this competitive market.

K-FLEX® 850S and other **K-FLEX®** dibenzoate products offer benefits in manufacturing, due to their high compatibility with a wide range of polymers and systems, providing:

- Excellent viscosity response and chalk point/T_g depression,
- Extended open/reduced set times,
- Improved wet tack, and
- Improved dry film resistance to oil, grease, and water.

Loop Tack, -20°C Polymer



Dibenzoate plasticizers such as K-FLEX® 975P have a positive effect on the tack of a PSA, which is a key reason to use a plasticizer in this application.

Recommended Products for Adhesives

K-FLEX® 850S A value-added blend of traditional dibenzoate plasticizers optimized for waterborne applications. Very effective low-VOC choice for waterborne adhesives.

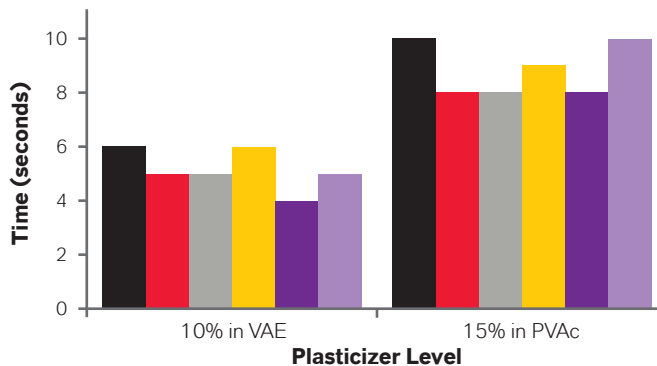
K-FLEX® 500 A classic blend of traditional dibenzoate plasticizers. Excellent choice for use in waterborne adhesives, hot melt adhesives.

K-FLEX® 975P Economical to use and created to offer a broad range of compatibility with polar polymers, with improved handling due to its lower freeze point.

*TMPDDIB: 2,2,4-trimethyl-1-3-pentanediol diisobutryate

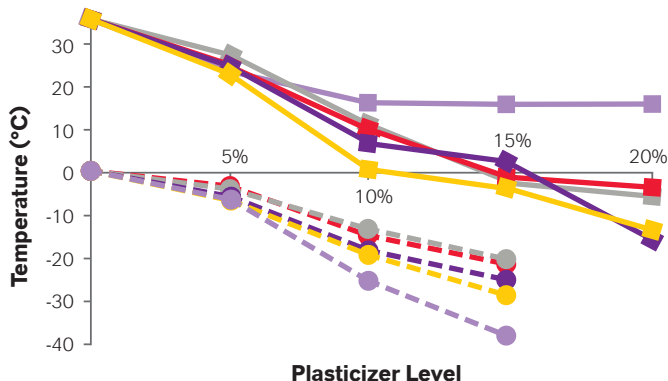
**DBTP: dibutyl terephthalate

Set Times



Legend: Blank (Black), K-FLEX® 850S (Red), K-FLEX® 975P (Grey), DBTP (Yellow), DIBP (Purple), TMPDDIB (Light Purple)

Tg Suppression



Legend: K-FLEX® 850S, PVAc (Red solid), K-FLEX® 850S, VAE (Red dashed), K-FLEX® 850S, VAE (Grey dashed), DBTP**, PVAc (Yellow solid), DBTP**, VAE (Yellow dashed), DIBP, PVAc (Purple solid), DIBP, VAE (Purple dashed), TMPDDIB*, PVAc (Light Purple solid), TMPDDIB*, VAE (Light Purple dashed)

In latex adhesives, dibenzoate plasticizers such as K-FLEX® 850S provide excellent performance in both VAE and PVAc emulsions when compared to other commercially available alternatives.

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