

Non-phthalate plasticizer for waterborne adhesives

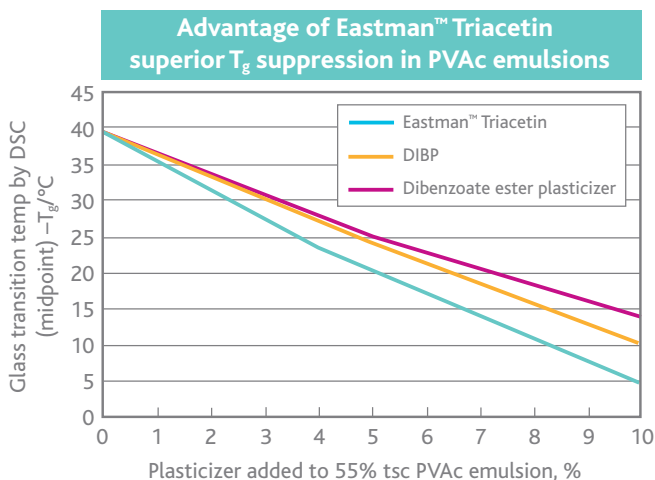
Advantages

- Excellent T_g suppression in vinyl acetate homo- and co-polymer emulsions
- Readily biodegradable
- Reliability of supply with no labeling required
- Good compatibility with natural and synthetic rubber
- Clear odorless liquid

In vinyl acetate homopolymer formulations (PVAc)

It is well known that triacetin imparts less viscosity increase than DIBP. This is compensated for by the extremely efficient T_g suppression as can be seen in the graphs. Eastman™ Triacetin can be used alone to decrease the T_g of the PVAc emulsions, or in combination with other plasticizers like Eastman TXIB™ or Eastman™ DBT to obtain its T_g suppression benefit while maximizing viscosity increase. You should determine the correct Eastman™ Triacetin level for your specific formulation.

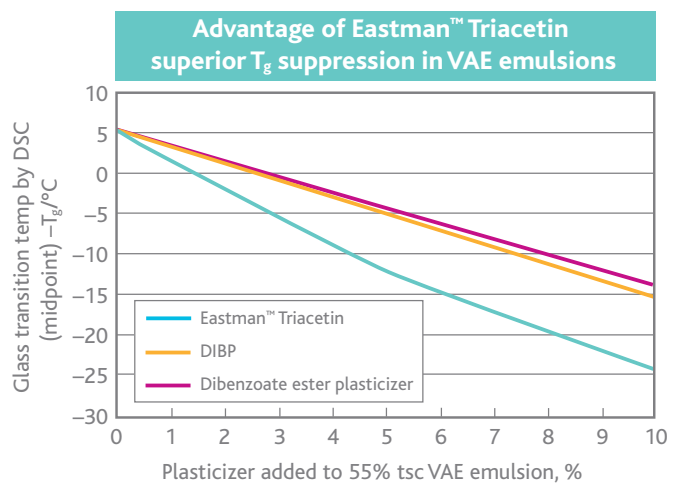
Eastman™ Triacetin has a similar effect on viscosity increase compared to DIBP at lower addition levels in PVAc emulsions.



In vinyl acetate ethylene copolymer formulations (VAE)

Eastman™ Triacetin imparts excellent T_g suppression when compared with both DIBP and benzoate plasticizers. You may be able to use less Eastman™ Triacetin than with your current DIBP and benzoate formulations. As with PVAc emulsions, the viscosity increase seen with triacetin is reduced compared to DIBP. To optimize your formulation, blends with Eastman TXIB™ or Eastman™ DBT non-phthalate plasticizers can achieve the desired balance of viscosity and T_g suppression.

As with PVAc emulsions, Eastman™ Triacetin has a similar effect on viscosity increase compared to DIBP at lower addition levels in VAE emulsions.



Eastman™ Triacetin is used as a highly effective non-phthalate plasticizer for cellulosic resins and is compatible in all proportions with cellulose acetate, nitrocellulose, and ethyl cellulose. Eastman™ Triacetin is useful for imparting plasticity and flow to laminating resins, particularly at low temperatures, and is also used as a plasticizer for vinylidene polymers and copolymers. It serves as an ingredient in inks for printing on plastics and as a plasticizer in nail polish. In other technical applications, Eastman™ Triacetin can be used as a core sand binder in the metal foundry sector.

Regulatory status

FDA Food Contact Compliance

Under regulations administered by the U.S. Food and Drug Administration (FDA), this product is lawful for use as a prior sanctioned plasticizer in food packaging for all food types under 21 CFR 181.27. The following regulations are also applicable: 21CFR 175.105, 21CFR 175.125, 21CFR 175.300; 21 CFR 175.320; 21 CFR 175.380; 21 CFR 175.390; 21 CFR 176.170; 21 CFR 177.1210 and 21CFR 177.1400.

The use of this substance is subject to the limitations stated in the respective regulations. In addition, the general provisions for indirect food additives in 21 CFR 174.5 are applicable to the use of this product.

Compliance with Directive 2002/72/EC (Plastics Directive) relating to articles intended to come into contact with foodstuffs

Commission Regulation (EC) No 975/2009 of 19 October 2009 established the Community list of monomers and other starting substances from Annex III of the Plastics Directive (2002/72/EC as amended) that may be used to manufacture plastic materials and articles intended to come into contact

with food. Triacetin, listed as glycerol, esters with acetic acid (Ref. No 56360) under Annex III of the Directive, may be lawfully used for the manufacture of food contact materials and articles that comply with the general safety requirements of the Framework Regulation 1935/2004/EC.

The product regulatory information sheet for Eastman™ Triacetin is available on request

Typical properties

Empirical formula	C ₉ H ₁₄ O ₆
Specific gravity @ 20°C	1.16
Flash point (Cleveland Open Cup)	153°C (308°F)
Boiling point at 760 mm Hg	258°C (496°F)
Freezing point	3.2°C (37.8°F)
Viscosity, Brookfield @ 25°C with #1 spindle	17.4 cP

To find out more about the secure supply and efficiency of Eastman™ Triacetin in lowering T_g, contact your Eastman representative today.

EASTMAN

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Material Safety Data Sheets providing safety precautions, that should be observed when handling and storing Eastman products, are available online or by request. You should obtain and review the available material safety information before handling any of these products. If any materials mentioned are not Eastman products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be observed.

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