



## Chemical Corporation

**UNIPLEX 260**  
**GLYCERYL TRIBENZOATE**  
**CAS NO. 614-33-5**

UNIPLEX 260 is a solid polyol benzoate modifier for a wide range of polymers.

UNIPLEX 260 is considered as a very safe plasticizer with an LD<sub>50</sub> (Rats) of greater than 11.7 g/kg body weight.

UNIPLEX 260 is approved by the FDA according to Code of Federal Regulations 21:

|          |  |
|----------|--|
| 174.5    | (Indirect food additives: General)   |
| 175.105  | (Vinyl acetate/crotonic acid copolymer)  |
| 175.365  | (Vinylidene chloride copolymer coatings for polycarbonate film)  |
| 175.380  | (Xylene-formaldehyde resins condensed with 4, 4' isopropylidenediphenol-epichloro-hydrin epoxy resins) |
| 175.390  | (Zinc-silicon dioxide matrix coatings)   |
| 176.170  | (Components of paper and paperboard in contact with aqueous and fatty foods)                           |
| 176.180  | (Components of paper and paperboard in contact with dry food)  |
| 176.1210 | (Closures with sealing gaskets for food containers)  |

UNIPLEX 260 is especially recommended for use in heat seal applications. It is blended into polyvinyl acetate-based adhesives at a temperature below the melting point. Typically, a high shear mixer is used to reduce the particle size of the UNIPLEX 260 formulation until a smooth stable dispersion is obtained. The UNIPLEX 260 may be incorporated at levels of 20 to 40 parts based on 100 parts polymer. The dispersed coating is then applied to the paper stock and dried below 71°C. It is important that the UNIPLEX 260 not be melted (activated) until the coated stock (label) is to be applied to the package or other item. Melting of the UNIPLEX 260 results in a tackifying and plasticizing of the coating, which is essentially irreversible.

UNIPLEX 260 may be used in cellophane coatings to improve heat-seal properties, without affecting color and clarity of the film.

UNIPLEX 260 an outstanding plasticizer for nitrocellulose coatings where it promotes heat-sealability and adhesion, creates a moisture barrier, and resists oil/water extraction. These properties are of great value in heat seal coatings, lacquers and films.

UNIPLEX 260 is an excellent non-formaldehyde resin substitute and plasticizer in nail lacquer formulations. It imparts superior durability and aesthetic properties. The incorporation of UNIPLEX 260 into printing ink formulations and adhesives greatly improves adhesion and water resistance when applied to a variety of substrates.



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Other suggested applications for UNIPLEX 260 are:

- metallic and pigmented surface coatings
- extrusion and injection molding processing aids
- polishes
- cleaning material for hot melt roll coaters

Uniplex 260 Ground is recommended and used to clean reactive hot melt off of roll coating and laminating equipment. Uniplex 260 Ground is a white solid plasticizer supplied in ground form for convenience. The material, when exposed to heat, will liquefy and will later resolidify after the heat is removed. This material can then be disposed of as a solid waste.

The following procedure should be followed when cleaning roll coating equipment:

- Step #1: Remove excess adhesive by reversing the rolls to permit material to squeeze off the rolls and fall into the clean-up pan.
- Step #2 Run the rolls forward, add Uniplex 260 Ground to the rolls, and allow to run for several minutes.
- Step #3 Reverse the rolls to remove excess adhesive/Uniplex 260 Ground mixture.
- Step #4 Repeat Steps 2 and 3 a minimum of three times or as necessary.
- Step #5 Add one last fine layer of Uniplex 260 Ground to the rolls, which will retard curing of any residual adhesive.
- Step #6 Separate the doctor roll from the applicator roll and let cool down.

All Federal, State and Local regulations, as well as common sense, should be practiced during handling, cleaning, and disposal operations.



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### SPECIFICATIONS:

|                     |   |
|---------------------|---|
| Appearance          | White crystalline particles (lumps or granules) |
| Melting Point (°C)  | 70-73   |
| Color, Molten, APHA | 200 Maximum                                     |
| Acidity (mg KOH/g)  | 0.28 Maximum                                    |
| (as % Benzoic Acid) | 0.061 Maximum                                   |

### PROPERTIES:

|                                  |                   |
|----------------------------------|-------------------|
| Empirical Formula                | $C_{24}H_{21}O_6$ |
| Molecular Weight (Theoretical)   | 404               |
| Specific Gravity (Solid at 30°C) | 1.2619            |
| Refractive Index (Molten, 25°C)  | 1.565-1.570       |

### HANDLING INFORMATION:

Refer to Material Safety Data Sheet

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use of our products are beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions before adopting them on a commercial scale. Suggestions for uses of our products should not be understood as recommendations that they be used in violation of any patents.