



RA-10 Series Release Coat

Introduction: RA-10 Series Release Coat is a non-silicone product especially suited for printers of pressure sensitive labels, film, tapes including polypropylene, polyethylene, and polyester where appropriate release is needed. RA10 Release Coats are supplied in 1%, 3% and 5% solids concentrations and are ready for use without additional dilution or additives. RA-10 Series Release Coats are compatible with Mayzo's EPX-2 Primer.

Material Description: Release Coat Varnish

Chemical Name: Polyvinyl Octadecyl Carbamate (PVODC)
Isomeric hydrocarbon

Empirical Formula: (PVODC) $[\text{CH}_2\text{-CH}(\text{OCONHC}_{18}\text{H}_{37})\text{-}]_n$
Toluene C_7H_8

CAS #: (PVODC) 70892-21-6
Toluene 108-88-3

Molecular Weight: (PVODC) $[339]_n$ or 110,000 –135,000
Toluene 92

Physical Properties: Appearance: Clear to amber in color liquid [gel at low temps]
Odor: Benzol-like odor
Concentration: RA-10A: 1% solids
RA-10B: 3% solids
RA-10C: 5% solids
Solvent: Toluene
Flash Point: 45° F (7.2° C) (Closed Cup)

Application Instructions:

- Temperature of RA-10 Series Release Coats should be at least 90°F to preclude gel formation.
- Mix well. Heat and mix until no residue is present. A milky waxy material will settle out if RA-10 Series Release Coats are stored at temperatures significantly below 90°F.

- Recirculate RA-10 Series Release Coat from a heated, large container (5 gallon). The entire system must be warm including analox roller and reservoir before applying.
- For initial trial runs, operate at very slow speeds. It's important to *completely* dry ink and release coat. Rewind rolls, and allow rolls to temperature stabilize for 3-4 hours. Then unwind. Check for adhesive pick-off and tack of adhesive.

Printing:

Polypropylene, Polyester, & Polyethylene films:

Tapes coated with acrylic adhesives may have release coat on non-adhesive side. Solvent rubber and hot melt adhesive coated tape will have release coat.

Printing Sequence:

Tapes with no release coat, printing procedure is as follows:

Corona treatment -> print -> dry -> release coat -> dry

Tapes with release coat, printing procedure is as follows:

Corona treatment or Primer -> dry -> print -> dry -> release coat -> dry

Release coat should be applied out of a heated recirculating system. Since toluene is corrosive to the printing plates commonly used with flexographic printing, choose plates that are solvent resistant.

Trouble Shooting:

A. Ink will not "stick"

1. Check analox roller to make sure no "caking" of ink block gravure indentations on roller. These indentations must be cleaned to pick up ink. Same for release coat analox roller.
2. Check tape surface, is it release coated? If so, then it is almost impossible to directly apply ink. Generally rubber based adhesives are release coated. If tape is already release coated, you may need corona treating and/or a primer coating such as Mayzo's EPX-2 Primer.
3. Experiment with different inks. Consult ink supplier for inks compatible with your tape surface.

B. Ink will not dry

1. Slow press speed until drying occurs.
2. Use finer analox roller.
3. Add more heat and air movement or increase drying time.

- C. Release coat “smears” ink
 - 1. Use slower press speed. Make sure ink is dry. Add more heat and air.
 - 2. Use finer analox for release coating.
 - 3. Ask ink supplier for ink less soluble in toluene. Toluene is the solvent for RA-10 Series.

- D. When unwound after printing, tape exhibits adhesive pick-off
 - 1. Check release coat analox roller for cleanliness (blocked surfaces).
 - 2. Reduce press speed. Release coating may not be completely dry.
 - 3. Use higher solids concentration such as RA-10B or RA-10C.

Packaging: RA-10 Series Release Coats are available in 35 lb. (5 gallon) steel pails. They are classified as Resin Solution, UN 1993, Class 3 Flammable Liquid.

Storage: This product is a flammable liquid. Store in sealed containers in approved flammable storage areas. Avoid open flame, sparks, and high heat during use. Do not breathe vapors.

Toxicity & Safety: This product is a flammable liquid. (See Storage above.) This material is not intended for use in products for which prolonged contact with mucous membranes or abraded skin, or implantation within the human body is specially intended, unless the finished product has been tested in accordance with the Food and Drug Administration and/or other applicable safety testing requirements. Because of wide range of such potential uses, Mayzo, Inc. is not able to recommend this material as safe and effective for such uses and assumes no liability for any such uses. Read and understand the Material Safety Data Sheet before using or handling this product.

FDA Regulations: This product has not been tested for clearance by the FDA for use as an indirect food additive in food packaging and/or other applications. Contact your Mayzo representative if FDA clearance is needed.

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