



Today's Automotive Finishes



From Then to Now

1921 Nitrocellulose Lacquer



Gun Cotton



Liquid Nitrocellulose





From Then to Now

1923 Spray Painting



The 1924 Oakland (a precursor of the Pontiac) was the first production automobile to be spray painted.

From Then to Now

➤ Nitrocellulose Lacquer



➤ Acrylic Lacquer



✓ Alkyd Enamel



✓ Acrylic Modified Alkyd Enamel



✓ Polyurethane



✓ Acrylic Urethane



1930s-1970s Nitrocellulose Lacquer and
Alkyd Enamel

1970 First aftermarket polyurethane enamel - Imron

1978 High solids acrylic enamel becomes the paint
choice of most manufacturers

1982 Base Coat Clear Coat becomes industry
standard

1989 Water-borne base coats introduced

1990 Clean Air Act sets strict limits on VOC's

Fast Forward to Today

- Solvent-borne or Waterborne Urethane Basecoat



- ✓ Low VOC Urethane Clear Coat



- ✓ Single Stage or Multi-component Clear Coat



Clear Coat

Acrylic Resins Acrylic Resins - Polymer Emulsion Acrylic Resins - Solid Acrylic Resins - Solution
Acrylic Resins - Water Reducible Acrylic Styrene Emulsions Alkyd Resins Alkyd Resins - Alkyd & Oil
Copolymers Alkyd Resins - Alkyd Latex Alkyd Resins - Drying Oil - Modified Alkyd Resins - Non Drying
Alkyd Resins - Oil - Modified Alkyd Resins - Semi Drying Alkyd Resins - Thixotropic
Alkyd Resins - Water Reducible Amino Resins Cellulose Derivatives Copolymer - Polyester
Polyurethanes Copolymer - Polyethers Copolymers Copolymers - Acrylic / Vinyl Copolymers - Polyester /
Urethane Copolymers - Polyether / Urethane Copolymers - Urethane Copolymers - Vinylidene Chloride
Crosslinking Resins Dispersion - Aqueous Emulsions Emulsions - Vinyl Acetate Ethylene Emulsion
Polymers (VAE) Emulsions - Vinyl Chloride Copolymers Epoxies Epoxy Resins Epoxy Resins -
Ester Epoxy Resins - Liquid Epoxy Resins - Solid Epoxy Resins - Solution Ester Gums Ester Gums -
Solid Ester Gums - Solution Exoxy Resins Hybrid Resins Hydrocarbon
Resins Hydrocarbon Resins - Coupling Resins - Emulsion Hydrocarbon Resins
- Liquid / Solution Hydrocarbon Resins - Terpene Maleic Resins Melamine /
Melamine Type Methacrylic Monomers Nylon Resins Oleoresinous Varnishes
Oleoresinous Varnishes - Modified Oleoresinous Varnishes - Phenolic Oleoresinous Varnishes
- Phenolic-Free Phenolic Resins Phenolic Resins - Modified Phenolic Resins - Polyamide Phenolic
Resins - Solid Phenolic Resins - Soluble Phenolic Resins - Waterborne Phenoxy Resins Polyamide
Resins Polybutadienes Polybutene Water Resins Polyester Resins - Drying Polyester Resins - Non
Drying Polyester Resins - Oil Free Polyester Resins - Powder Polyester Resins - Saturated Polyester
Resins - Solid Polyester Resins - Unsaturated Polyester Resins - Water Reducible Polyethylene Resins
Polypropylene Resins Rosin Esters Rosin Salts Rubber Silanes Silicone Polyesters Silicone Resins
Solventborne Stabilizers Styrene Resins Styrene Vinyl / Toluene Polymer & Copolymer Solid Styrene
Vinyl / Toluene Polymer & Copolymer Solution Terpenes TGIC Resins Urea Resins Urethane And
Polyurethane Resins Urethane Crosslinkers Urethane Lacquers UV Curing Resins Vinyl Chloride Vinyl
Resins Vinyl Resins - Polyvinyl Acetate Vinyl Resins - Polyvinyl Alcohol / Formal / Butyral Vinyl Resins -
Polyvinyl Chloride / Polyvinylidene Chloride Vinyl Resins - Solid Vinyl Resins - Solution Vinyl Resins -
Vinyl Acetate Ethylene Copolymers Vinyl Resins - Vinyl Acetate Polymer Emulsions Vinyl Resins - Vinyl
Copolymers Water Thinned Resins Waterborne Waterborne - Aliphatic



Complicated?



