

Chemical Processes – ACID STRIPPING

SPEEDMASK® light-curable masking resins provide reliable surface protection of intricate and complex configurations during the acid-stripping process to remove coatings in the overhaul and repair of turbine components.

SpeedMask resins have been formulated to withstand soaking in hot acid without permeation or seepage under the mask. When cured, the resins provide superior surface protection from chemical processing of nickel super alloys, steel, and titanium.

The temporary maskants will hold up to the surface preparation of grit blasting, which may be required prior to or in combination with the hot-acid soak.

SpeedMask resins can tolerate most acid soaks such as Hydrochloric (HCl), Nitric (HNO₃), Acetic (CH₃COOH), Phosphoric (H₃PO₄), Hydrofluoric (HF), or various combinations of the acids.

- Resins cure in seconds enabling faster processing, greater output, and lower processing costs
- Residue-free removal
- Applied by spraying, dipping, or coating



SPEEDMASK® Light-Curable Temporary Masking Resins for ACID STRIPPING Processes

Product	Features and Benefits	Nominal Viscosity, cP (20 rpm)	Shore Hardness	24-Hour Water Absorption	Modulus of Elasticity MPa [psi]	Cure Time *
Burn-Off						
729	Next generation formulation; UV/Visible light curing; high adhesion to nickel super alloys; resists acids and alkalis; hard and durable	20,000	D70	0.4%	240 [35,000]	30 seconds
Peelable						
728-G	Next generation formulation; UV/Visible light curing; high adhesion; easy removal after hot-water soak; superior product with excellent surface protection to aggressive chemical processes; high-visibility green color	25,000	D55	2.1%	83 [12,000]	10 seconds

*Cure time based upon Dymax 5000-EC Light-Curing Flood Lamp System (200 mW/cm²)

Chemical Processes – ANODIZING

S*PEEDMASK*[®] light-curable masking resins provide superior surface protection during the anodizing of turbine and other metal components.

SpeedMask resins have been formulated with more chemical resistance for better surface protection from the strong acids used in the anodizing process. The cured maskant protects the substrate surface while the oxide layer of coating (which is designed to change the microscopic texture of the component surface) is being applied.

SpeedMask resins can tolerate most Type I (Chromic Acid), Type II (Sulfuric Acid), or Type III (Hardcoat) anodizing processes.

- Resins cure in seconds enabling faster processing, greater output, and lower processing costs
- Residue-free removal
- Applied by spraying, dipping, or coating



SpeedMask[®] Light-Curable Temporary Masking Resins for ANODIZING Processes

Product	Features and Benefits	Nominal Viscosity, cP (20 rpm)	Shore Hardness	24-Hour Water Absorption	Modulus of Elasticity MPa [psi]	Cure Time *
Peelable						
726-SC	Next generation formulation; UV/Visible light curing; moderate adhesion; easy to remove; excellent protection during moderate-pressure blasting; See-Cure technology resin transitions from blue to pink upon sufficient exposure to light energy	45,000	D40	20%	3.9 [560]	8 seconds
728-G	Next generation formulation; UV/Visible light curing; high adhesion; easy removal after hot-water soak; superior product with excellent surface protection to aggressive chemical processes; high-visibility green color	25,000	D55	2.1%	83 [12,000]	10 seconds
730-BT	UV/Visible light curing; moderate adhesion; easy to remove; excellent surface protection and chemical resistance; trimmable after cure; high-visibility blue color	20,000	D35	0.3%	16 [2,444]	4 seconds

*Cure time based upon Dymax 5000-EC Light-Curing Flood Lamp System (200 mW/cm²)

Chemical Processes – PLATING

SPEEDMASK® light-curable masking resins provide superior surface protection of turbine and other metal components during various plating processes.

SpeedMask resins have been formulated with chemical and heat resistance to protect masked areas during plating processes where particles are deposited onto conductive surfaces. These resins are able to withstand the most common plating processes such as Electroless Nickel (Ni), Platinum (Pt), Chrome (Cr), Gold (Au), Silver (Ag), and Copper (Cu).

SpeedMask temporary masking resins are available in low, moderate, and high levels of adhesion to accommodate the various operating temperatures of plating baths. The higher the temperature of a plating process, the higher the maskant adhesion will need to be. The higher the pH of a plating bath, the greater the need for a chemical-resistant maskant.

- Resins cure in seconds enabling faster processing, greater output, and lower processing costs
- Residue-free removal
- Applied by spraying, dipping, or coating



SPEEDMASK® Light-Curable Temporary Masking Resins for PLATING Processes

Product	Features and Benefits	Nominal Viscosity, cP (20 rpm)	Shore Hardness	24-Hour Water Absorption	Modulus of Elasticity MPa [psi]	Cure Time *
Peelable						
726-SC	Next generation formulation; UV/Visible light curing; moderate adhesion; easy to remove; excellent protection during moderate-pressure blasting; See-Cure technology resin transitions from blue to pink upon sufficient exposure to light energy	45,000	D40	20%	3.9 [560]	8 seconds
728-G	Next generation formulation; UV/Visible light curing; high adhesion; easy removal after hot-water soak; superior product with excellent surface protection to aggressive chemical processes; high-visibility green color	25,000	D55	2.1%	83 [12,000]	10 seconds
730-BT	UV/Visible light curing; moderate adhesion; easy to remove; excellent surface protection and chemical resistance; trimmable after cure; high-visibility blue color	20,000	D35	0.3%	16 [2,444]	4 seconds
731	UV/Visible light curing; high adhesion; easy removal after hot-water soak; excellent surface protection to aggressive chemical processes; sprayable; high-visibility yellow color	18,000	D50	2.0%	86 [12,600]	15 seconds
733	UV/Visible light curing; easy removal after hot-water soak; excellent surface protection to aggressive chemical processes; sprayable	25,000	D50	2.7%	9 [1,320]	1 second

*Cure time based upon Dymax 5000-EC Light-Curing Flood Lamp System (200 mW/cm²)

Chemical Processes – CHEMICAL MILLING

SPEEDMASK® resins provide superior surface protection during the chemical milling of turbine and other metal components.

SpeedMask resins have been formulated with enhanced chemical resistance for reliable protection from strong acids and alkalis used in dissolving metal substrates during chemical milling. **SpeedMask** 730-BT can be trimmed to provide defined edge boundaries and accommodate the most complex and intricate components while still providing excellent protection with no leakage.

These resins were developed to withstand the typical 200°F+ Nitric Acid (HNO₃) and Hydrofluoric Acid (HF) solutions used for the chemical milling of titanium components.

SpeedMask resins were also developed to withstand typical Sodium Hydroxide (NaOH) and Potassium Hydroxide (KOH) solutions used for the chemical milling of aluminum components.

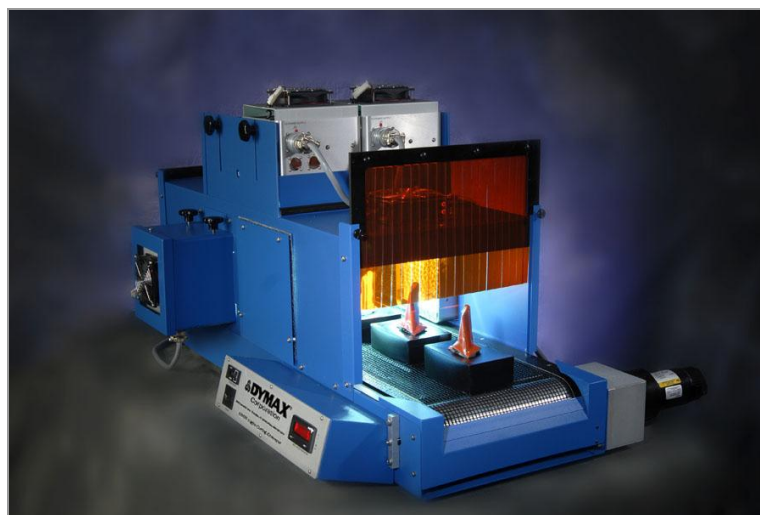
- Resins cure in seconds enabling faster processing, greater output, and lower processing costs
- Residue-free removal
- Applied by spraying, dipping, or coating



SPEEDMASK® Light-Curable Temporary Masking Resins for CHEMICAL MILLING Processes

Product	Features and Benefits	Nominal Viscosity, cP (20 rpm)	Shore Hardness	24-Hour Water Absorption	Modulus of Elasticity MPa [psi]	Cure Time *
Peelable						
730-BT	UV/Visible light curing; moderate adhesion; easy to remove; excellent surface protection and chemical resistance; trimmable after cure; high-visibility blue color	20,000	D35	0.3%	16 [2,444]	4 seconds

*Cure time based upon Dymax 5000-EC Light-Curing Flood Lamp System (200 mW/cm²)



Cure masked turbine blades in seconds in Dymax conveyor

Coatings – AIR PLASMA SPRAY - THERMAL BARRIER COATINGS

S**PEEDMASK**[®] light-curable masking resins provide superior surface protection of turbine engine and structural components during thermal barrier coating processes, such as air plasma sprays.

SpeedMask resins have been formulated to be resistant to the aggressive force and heat of flame-spray processes. The cured maskant absorbs the energy from the force of plasma spray materials such as zirconium, molybdenum (used for thermal protection), tungsten carbide, or ceramics used for wear-resistant coatings. As the melted particles from the flame spray are deposited onto the substrate, the cured resin protects the surface underneath the protected area.

The aggressiveness of the flame-spray process and the adhesion needed to protect a substrate surface must be considered when choosing a masking resin. If a component substrate can accommodate incineration removal, a burn-off grade of **SpeedMask** resin would be appropriate for the process. If a substrate cannot withstand incineration, then a peelable mask would be a better choice.

- Resins cure in seconds enabling faster processing, greater output, and lower processing costs
- Residue-free removal
- Applied by spraying, dipping, or coating

 **SPEEDMASK**[®] Light-Curable Temporary Masking Resins for
AIR PLASMA SPRAY - THERMAL BARRIER COATINGS

Product	Features and Benefits	Nominal Viscosity, cP (20 rpm)	Shore Hardness	24-Hour Water Absorption	Modulus of Elasticity MPa [psi]	Cure Time *
Burn-Off						
706	UV light curing; high adhesion; superior protection to air plasma spray	43,000	D75	0.3%	830 [120,000]	20 seconds
718	UV/Visible light curing; high adhesion; resists flame spray processes; excellent surface and cavity protection during APS and HVOF; white in appearance	50,000	D80	3.9%	1,056 [153,278]	20 seconds
Peelable						
726-SC	Next generation formulation; UV/Visible light curing; moderate adhesion; easy to remove; excellent protection during moderate-pressure blasting; See-Cure technology resin transitions from blue to pink upon sufficient exposure to light energy	45,000	D40	20%	3.9 [560]	8 seconds
728-G	Next generation formulation; UV/Visible light curing; high adhesion; easy removal after hot-water soak; superior product with excellent surface protection to aggressive chemical processes; high-visibility green color	25,000	D55	2.1%	83 [12,000]	10 seconds
731	UV/Visible light curing; high adhesion; easy removal after hot-water soak; excellent surface protection to aggressive chemical processes; sprayable; high-visibility yellow color	18,000	D50	2.0%	86 [12,600]	15 seconds
733	UV/Visible light curing; easy removal after hot-water soak; excellent surface protection to aggressive chemical processes; sprayable	25,000	D50	2.7%	9 [1,320]	1 second

*Cure time based upon Dymax 5000-EC Light-Curing Flood Lamp System (200 mW/cm²)

Coatings – PAINTING and POWDER COATINGS

S**PEEDMASK**[®] light-curable masking resins provide superior surface protection of metal and plastic turbine engine and structural components during paint- and powder-coating processes.

SpeedMask resins have been formulated to be resistant to the heat and chemical exposure during paint- and powder-coating processes.

Cured maskants are easily removed from the substrate following the completion of the process, leaving a residue-free surface.

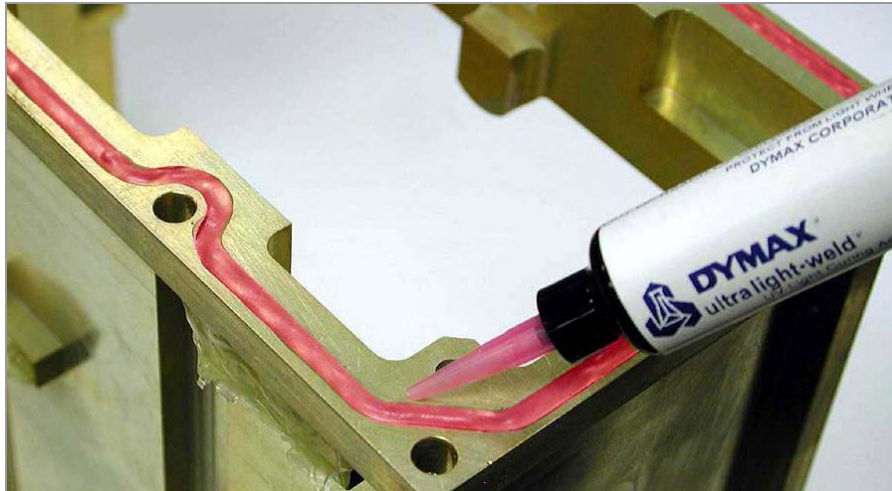
- Resins cure in seconds enabling faster processing, greater output, and lower processing costs
- Applied by spraying, dipping, or coating



SPEEDMASK[®] Light-Curable Temporary Masking Resins for PAINTING and POWDER COATINGS

Product	Features and Benefits	Nominal Viscosity, cP (20 rpm)	Shore Hardness	24-Hour Water Absorption	Modulus of Elasticity MPa [psi]	Cure Time *
Peelable						
726-SC	Next generation formulation; UV/Visible light curing; moderate adhesion; easy to remove; excellent protection during moderate-pressure blasting; See-Cure technology resin transitions from blue to pink upon sufficient exposure to light energy	45,000	D40	20%	3.9 [560]	8 seconds

*Cure time based upon Dymax 5000-EC Light-Curing Flood Lamp System (200 mW/cm²)



SPEEDMASK[®] resins provide excellent surface protection

Media Finishing – GRIT-BLASTING

S**PEEDMASK**[®] light-curable masking resins provide superior surface protection of turbine and metal components during grit-blasting surface treatment.

SpeedMask resins have been developed to be resilient to sharp particles and the pressure used in blasting applications. The cured maskant provides reliable protection from sharp particles such as aluminum oxide, garnet, plastics, and organic media. The cured resin absorbs the energy from the air stream blast, while the media bounces off the masked surface, protecting the area underneath.

Selection of the best **SpeedMask** resin to use depends on the blast velocity (psi or bars), as well as the media particle size (grit). Another factor to consider is the surface texture of the component. Smooth surfaces require high-adhesion masks, while rough surfaces require lower adhesion masks.

- Cure in seconds enables faster processing, greater output, and lower processing costs
- Residue-free removal
- Applied by spraying, dipping, or coating



SPEEDMASK[®] Light-Curable Temporary Masking Resins for GRIT BLASTING

Product	Features and Benefits	Nominal Viscosity, cP (20 rpm)	Shore Hardness	24-Hour Water Absorption	Modulus of Elasticity MPa [psi]	Cure Time *
Peelable						
724	Next generation formulation; UV/Visible light curing; low adhesion; good protection during low-pressure blasting; easy removal; clear in appearance	70,000	D40	24.0%	2.7 [390]	15 seconds
726-SC	Next generation formulation; UV/Visible light curing; moderate adhesion; easy to remove; excellent protection during moderate-pressure blasting; See-Cure technology resin transitions from blue to pink upon sufficient exposure to light energy	45,000	D40	20%	3.9 [560]	8 seconds
728-G	Next generation formulation; UV/Visible light curing; high adhesion; easy removal after hot-water soak; superior product with excellent surface protection to aggressive chemical processes; high-visibility green color	25,000	D55	2.1%	83 [12,000]	10 seconds
730-BT	UV/Visible light curing; moderate adhesion; easy to remove; excellent surface protection and chemical resistance; trimmable after cure; high-visibility blue color	20,000	D35	0.3%	16 [2,444]	4 seconds
731	UV/Visible light curing; high adhesion; easy removal after hot-water soak; excellent surface protection to aggressive chemical processes; sprayable; high-visibility yellow color	18,000	D50	2.0%	86 [12,600]	15 seconds
733	UV/Visible light curing; easy removal after hot-water soak; excellent surface protection to aggressive chemical processes; sprayable	25,000	D50	2.7%	9 [1,320]	1 second

*Cure time based upon Dymax 5000-EC Light-Curing Flood Lamp System (200 mW/cm²)

Media Finishing – SHOT PEENING

S**PEEDMASK**[®] light-curable masking resins provide superior surface protection of turbine and metal components during the shot-peening, plastic-deformation surface treatment process.

SpeedMask resins have been developed to be resistant to various peening media and the pressures used in peening applications. The cured maskant provides reliable protection from peening media particles, such as cut wire, round metal or ceramic particles, and glass beads. The cured resin absorbs the energy from the ball-peen hammer effect of the media blast, while the media bounces off the masked surface, protecting the area underneath.

Selection of the best **SpeedMask** masking resin to use depends on the shot velocity (psi or bars), as well as the media type and particle size. Another factor to consider is the surface texture of the component. Smooth surfaces require high-adhesion masks, while rough surfaces require lower-adhesion masks.

- Resins cure in seconds enabling faster processing, greater output, and lower processing costs
- Residue-free removal
- Applied by spraying, dipping, or coating



SPEEDMASK[®] Light-Curable Temporary Masking Resins for SHOT PEENING

Product	Features and Benefits	Nominal Viscosity, cP (20 rpm)	Shore Hardness	24-Hour Water Absorption	Modulus of Elasticity MPa [psi]	Cure Time *
Peelable						
724	Next generation formulation; UV/Visible light curing; low adhesion; good protection during low-pressure blasting; easy removal; clear in appearance	70,000	D40	24.0%	2.7 [390]	15 seconds
726-SC	Next generation formulation; UV/Visible light curing; moderate adhesion; easy to remove; excellent protection during moderate-pressure blasting; See-Cure technology resin transitions from blue to pink upon sufficient exposure to light energy	45,000	D40	20%	3.9 [560]	8 seconds
728-G	Next generation formulation; UV/Visible light curing; high adhesion; easy removal after hot-water soak; superior product with excellent surface protection to aggressive chemical processes; high-visibility green color	25,000	D55	2.1%	83 [12,000]	10 seconds
730-BT	UV/Visible light curing; moderate adhesion; easy to remove; excellent surface protection and chemical resistance; trimmable after cure; high-visibility blue color	20,000	D35	0.3%	16 [2,444]	4 seconds
731	UV/Visible light curing; high adhesion; easy removal after hot-water soak; excellent surface protection to aggressive chemical processes; sprayable; high-visibility yellow color	28,000	D50	5.0%	86 [12,600]	15 seconds
733	UV/Visible light curing; easy removal after hot-water soak; excellent surface protection to aggressive chemical processes; sprayable	25,000	D50	2.7	9 [1,320]	1 second

*Cure time based upon Dymax 5000-EC Light-Curing Flood Lamp System (200 mW/cm²)

Media Finishing – VIBRATORY FINISHING

S**PEEDMASK**[®] light-curable masking resins provide reliable surface protection of intricate and complex configurations during vibratory finishing operations such as slurry, tumbling, or deburring.

SpeedMask resins have been formulated to withstand the compound solution (soap, water, or alternative cleaning/polishing agents) and abrasion from ceramic, plastic, or steel media while vibrating during the finishing process.

Selecting the best **SpeedMask** masking resin to use depends on the amount of adhesion needed to protect the surface underneath the mask during the process. The stronger the vibration or abrasion is, the higher the adhesion of the maskant needs to be for reliable protection.

- Resins cure in seconds enabling faster processing, greater output, and lower processing costs
- Residue-free removal
- Applied by spraying, dipping, or coating



SPEEDMASK[®] Light-Curable Temporary Masking Resins for VIBRATORY FINISHING

Product	Features and Benefits	Nominal Viscosity, cP (20 rpm)	Shore Hardness	24-Hour Water Absorption	Modulus of Elasticity MPa [psi]	Cure Time *
Peelable						
724	Next generation formulation; UV/Visible light curing; low adhesion; good protection during low-pressure blasting; easy removal; clear in appearance	70,000	D40	24.0%	2.7 [390]	15 seconds
726-SC	Next generation formulation; UV/Visible light curing; moderate adhesion; easy to remove; excellent protection during moderate-pressure blasting; See-Cure technology resin transitions from blue to pink upon sufficient exposure to light energy	45,000	D40	20%	3.9 [560]	8 seconds
728-G	Next generation formulation; UV/Visible light curing; high adhesion; easy removal after hot-water soak; superior product with excellent surface protection to aggressive chemical processes; high-visibility green color	25,000	D55	2.1%	83 [12,000]	10 seconds
730-BT	UV/Visible light curing; moderate adhesion; easy to remove; excellent surface protection and chemical resistance; trimmable after cure; high-visibility blue color	20,000	D35	0.3%	16 [2,444]	4 seconds

*Cure time based upon Dymax 5000-EC Light-Curing Flood Lamp System (200 mW/cm²)

Parts Handling – GENERAL MASKING

SPEEDMASK® light-curable masking resins provide superior surface protection of turbine and metal components from FOD (foreign object damage) during the manufacturing process, handling, and transportation.

- Resins cure in seconds enabling faster processing, greater output, and lower processing costs
- Residue-free removal
- Applied by spraying, dipping, or coating



SPEEDMASK® Light-Curable Temporary Masking Resins for GENERAL MASKING

Product	Features and Benefits	Nominal Viscosity, cP (20 rpm)	Shore Hardness	24-Hour Water Absorption	Modulus of Elasticity MPa [psi]	Cure Time *
Peelable						
726-SC	Next generation formulation; UV/Visible light curing; moderate adhesion; easy to remove; excellent protection during moderate-pressure blasting; See-Cure technology resin transitions from blue to pink upon sufficient exposure to light energy	45,000	D40	20%	3.9 [560]	8 seconds
728-G	Next generation formulation; UV/Visible light curing; high adhesion; easy removal after hot-water soak; superior product with excellent surface protection to aggressive chemical processes; high-visibility green color	25,000	D55	2.1%	83 [12,000]	10 seconds
730-BT	UV/Visible light curing; moderate adhesion; easy to remove; excellent surface protection and chemical resistance; trimmable after cure; high-visibility blue color	20,000	D35	0.3%	16 [2,444]	4 seconds

*Cure time based upon Dymax 5000-EC Light-Curing Flood Lamp System (200 mW/cm²)

Manufacturing Aids – MACHINING

SpeedMask® light-curable masking resins provide excellent protection during machining (milling, grinding, turning) of turbine and metal components.

The durability of the cured resins allow the maskants to be machined through, without any lifting of the remaining masks, while continuing to provide reliable protection of the masked surfaces.

SpeedMask temporary masking resins can withstand various water-soluble and oil-based coolants used in machining.

- Resins cure in seconds enabling faster processing, greater output, and lower processing costs
- Residue-free removal
- Applied by spraying, dipping, or coating



SPEEDMASK® Light-Curable Temporary Masking Resins for MACHINING

Product	Features and Benefits	Nominal Viscosity, cP (20 rpm)	Shore Hardness	24-Hour Water Absorption	Modulus of Elasticity MPa [psi]	Cure Time *
Burn-Off						
729	Next generation formulation; UV/Visible light curing; high adhesion to nickel super alloys; resists acids and alkalis; hard/durable	20,000	D70	0.4%	240 [35,000]	30 seconds
Peelable						
733	UV/Visible light curing; easy removal after hot-water soak; excellent surface protection to aggressive chemical processes; sprayable	25,000	D50	2.7%	9 [1,320]	1 second

*Cure time based upon Dymax 5000-EC Light-Curing Flood Lamp System (200 mW/cm²)

Manufacturing Aids – AIRFLOW TESTING

S*PEEDMASK*[®] light-curable masking resins provide excellent sealing of cooling holes and cavities during cold airflow testing of coated and uncoated turbine components.

The durability, flexibility, and adhesion of cured **SpeedMask** temporary masking resins allows for complete sealing of the cooling holes and core cavities, for either row-by-row or mass airflow testing.

The cured maskants also provide complete sealing, preventing air leaks during pressurized flow, leak, and duration testing.

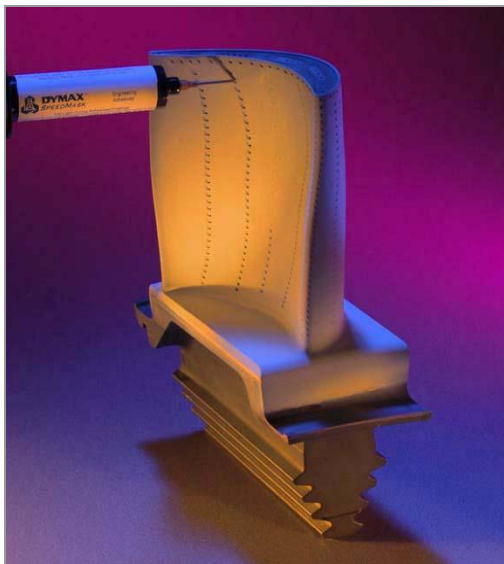
- Resins cure in seconds enabling faster processing, greater output, and lower processing costs
- Residue-free removal
- Applied by spraying, dipping, or coating



SPEEDMASK[®] Light-Curable Temporary Masking Resins for AIRFLOW TESTING

Product	Features and Benefits	Nominal Viscosity, cP (20 rpm)	Shore Hardness	24-Hour Water Absorption	Modulus of Elasticity MPa [psi]	Cure Time *
Peelable						
724	Next generation formulation; UV/Visible light curing; low adhesion; good protection during low-pressure blasting; easy removal; clear in appearance	70,000	D40	24.0%	2.7 [390]	15 seconds

*Cure time based upon Dymax 5000-EC Light-Curing Flood Lamp System (200 mW/cm²)



Apply resin to cooling holes



Remove cured resin by peeling