Chemical Processes – ANODIZING

SpeedMask® light-curable masking resins provide superior surface protection during the anodizing of orthopaedic implants, surgical instruments, and other medical devices.

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.

- Cures 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 [mPa] (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/cm^2)
**Mercury-vapor bulb, Dymax part number 36970

Chemical Processes – PLATING

SpeedMask® light-curable masking resins provide superior surface protection of orthopaedic implants, surgical instruments, and other medical devices 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 mask, the greater the need for a chemical-resistant maskant.

- Cures 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 [mPa] (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/cm^2)
**Mercury-vapor bulb, Dymax part number 36970

Chemical Processes – CHEMICAL MILLING

SpeedMask® resins provide superior surface protection during the chemical milling of orthopaedic implants, surgical instruments, and medical devices.

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.

- Cures 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 [mPa] (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/cm^2)
**Mercury-vapor bulb, Dymax part number 36970

Easily apply, cure, and remove *SpeedMask* resins from orthopaedic implants!

Spray resin onto knee implant

Cure masked knee implants in seconds in Dymax conveyor

Remove cured mask by peeling

Coatings – AIR PLASMA SPRAY – THERMAL BARRIER COATINGS

SpeedMask® light-curable masking resins provide superior surface protection of orthopaedic implants, surgical instruments, and other medical devices 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 masked surface underneath.

The aggressiveness of the flame-spray process, and the adhesion needed to protect a substrate surface, must be considered when choosing a masking resin.

- Cures 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 [mPa] (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
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/cm^2)

Coatings – PAINTING and POWDER COATINGS

SpeedMask® light-curable masking resins provide superior surface protection of surgical instruments and medical devices 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.

- Cures 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 [mPa] (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/cm^2)

Media Finishing – GRIT BLASTING

SpeedMask® light-curable masking resins provide superior surface protection of orthopaedic implants, surgical instruments, and medical devices 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 and protects the surface 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.

- Cures 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 GRIT BLASTING

Product	Features and Benefits	Nominal Viscosity, cP [mPa] (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%	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/cm^2)
**Mercury-vapor bulb, Dymax part number 36970

Media Finishing – SHOT PEENING

SpeedMask® light-curable masking resins provide superior surface protection of orthopaedic implants, surgical instruments, and medical devices 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. 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.

- Cures 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 [mPa] (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%	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/cm^2)
**Mercury-vapor bulb, Dymax part number 36970

Media Finishing – VIBRATORY FINISHING

SpeedMask® 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.

- Cured 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 [mPa] (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%	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/cm^2)
**Mercury-vapor bulb, Dymax part number 36970

Parts Handling – GENERAL MASKING

SpeedMask® light-curable masking resins provide superior surface protection of orthopaedic implants, surgical instruments, and medical components from FOD (foreign object damage) during the manufacturing process, handling, and transportation.

- Cures 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 [mPa] (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/cm^2)
**Mercury-vapor bulb, Dymax part number 36970

Manufacturing Aids – MACHINING

SpeedMask® light-curable masking resins provide excellent protection during machining (milling, grinding, turning) orthopaedic implants, surgical instruments, and medical devices.

The durability of the cured resins allows 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.

- Cures 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 [mPa] (20 rpm)	Shore Hardness	24-Hour Water Absorption	Modulus of Elasticity MPa [psi]	Cure Time *
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/cm^2)