

LOW VOC GLASURIT CERTIFICATION

STUDENT WORKBOOK



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SAFETY

GLASURIT LVOC CERTIFICATION



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WHAT YOU'LL LEARN:

- Safety and Health Precautions 2
- Personal Protective Equipment 3
- Simple Tips to Remember 4
- 18 Point Checklist 6
- Student Expectations 7
- The Glasurit Promise 7
- Introduction 8
- Indemnity Clause 9

NOTICE:

All vehicles, persons and items are subject to search upon entry to any BASF Corporation facility. The possession of firearms, alcoholic beverages, illegal substances or objects is strictly prohibited on these premises.

SURFACE PREPARATION

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WHAT YOU'LL LEARN:
















• Introduction	2	• Metallic Substrates - Body Fillers	18
• Module Objectives	2	• Coating of plastics - Undercoats	18
• Enabling Tasks	2	• Featheredging	19
• Poor Preparation Poor Performance	3	• Back Sanding.	19
• Surface Washing	3	• Hand sanding Rules	20
• Chemical Cleaning	6	• Film Build	20
• Sanding	8	• Pre-Treatment Primers	22
• Recommended Sanding Grits	9	• Technical Information - Primers	23
• Cleaning Matrices	10	• Metallic Substrates - Undercoats	25
• Refinishing Primed Plastic Parts	11	• Technical Information - Adhesion Promoters	26
• Cleaning Matrices	11	• Coating of Plastics - Undercoats.	29
• Technical Information Body Fillers	13	• Meaning of Technical Pictograms	30

SURFACE PREPARATION

Cleaning Matrices B1

Surface Preparation of Substrates and Old Paintwork













Metallic Substrates

Bare Metal	360-4 Metal Cleaner				360-4 Metal Cleaner		
		1x	Wipe Dry	80-150		1x	Wipe Dry
Galvanized Steel	360-4 Metal Cleaner				360-4 Metal Cleaner		
		1x	Wipe Dry	Sanding Pad		1x	Wipe Dry
Aluminum	360-4 Metal Cleaner				360-4 Metal Cleaner		
		1x	Wipe Dry	80-150		1x	Wipe Dry

Cleaning Matrices B1

Surface Preparation of Substrates and Old Paintwork

Raw Plastics

Flexible Plastics	 Plastic parts must be washed with soap & water, rinsed then dried.	541-30				541-30		
		Universal Cleaner for Plastics	1x	Wipe Dry	Gray Scuff Pad	Universal Cleaner for Plastics	1x	Wipe Dry
Rigid Plastics	 Plastic parts must be washed with soap & water, rinsed then dried.	541-30				541-30		
		Universal Cleaner for Plastics	1x	Wipe Dry	Gray Scuff Pad	Universal Cleaner for Plastics	1x	Wipe Dry

Note: product must be used in a pump spray bottle for low VOC compliancy

SURFACE PREPARATION

Refinishing Primed Plastic Parts

Solvent-test all OE and aftermarket primer coats for solubility with Glasurit 541-30 Plastic Cleaner or Glasurit 352-25 or 352-45 Reducer by wiping the substrate with a rag. If using a strong solvent such as 352-25 or 352-45, caution must be used to prevent the potential of a static charge build-up.

If the primer softens or dissolves during wiping, it is absolutely necessary to completely remove the factory primer and treat the bumper cover as an unprimed cover. We also suggest a tape test to verify the adhesion integrity of the primer. If the primer resists softening, it can be finished by thoroughly cleaning, scuffing and re-cleaning the bumper primer. Then apply either a flexed Glasurit primer/sealer, if required, or topcoat, which may be applied directly (per Glasurit technical recommendations). It is not necessary to apply a plastic adhesion promoter unless the bumper primer is "cut through".



Cleaning Matrices B1

Surface Preparation of Substrates and Old Paintwork

Metallic Substrates

**New Panels
factory-
primed**

541-5
Siicone and
Tar Remover



1x



Wipe Dry



Sanding Pad
or
150-240

541-5
Siicone and
Tar Remover



1x



Wipe Dry

**Well-cured
Old paint
work**

541-5
Siicone and
Tar Remover



1x



Wipe Dry



Sanding Pad
or
150-240

541-5
Siicone and
Tar Remover



1x


















Wipe Dry

Note: product must be used in a pump spray bottle for low VOC compliancy

SURFACE PREPARATION

Cleaning Matrices B1a













Low VOC Surface Preparation of Substrates: Metallic Substrates

Bare Metal	700-10 Waterborne Degreaser				700-1 Waterborne Cleaner		
		1x	Wipe Dry	80-150		1x	Wipe Dry
Galvanized Steel	700-10 Waterborne Degreaser				700-1 Waterborne Cleaner		
		1x	Wipe Dry	Sanding Pad		1x	Wipe Dry
Aluminum	700-10 Waterborne Degreaser				700-1 Waterborne Cleaner		
		1x	Wipe Dry	80-150		1x	Wipe Dry

Note: Aerosol versions of the products on B1 may be used in low voc areas.

Cleaning Matrices B1a

Surface Preparation of Substrates and Old Paintwork: Plastics

Flexible Plastics		700-10 Waterborne Degreaser				700-10 Waterborne Degreaser		
	Plastic parts must be washed with soap & water, rinsed then dried.		1x	Wipe Dry	Gray Scuff Pad		1x	Wipe Dry
Rigid Plastics		700-10 Waterborne Degreaser				700-10 Waterborne Degreaser		
	Plastic parts must be washed with soap & water, rinsed then dried.		1x	Wipe Dry	Gray Scuff Pad		1x	Wipe Dry

Note: Aerosol versions of the products on B1 may be used in low voc areas.

SURFACE PREPARATION

Cleaning Matrices B1

Surface Preparation of Substrates and Old Paintwork: Old Paintwork / New Panels





New Panels factory- primed	700-10 Waterborne Degreaser				700-1 Waterborne Cleaner		
		1x	Wipe Dry	Sanding Pad or 150-240		1x	Wipe Dry
Well-cured Old paint work	700-10 Waterborne Degreaser				700-1 Waterborne Cleaner		
		1x	Wipe Dry	150-240		1x	Wipe Dry

Note: Aerosol versions of the products on B1 may be used in low voc areas.



839-20 Multi-Purpose Body Filler

839-20 is a two-component, high-solid, fine/coarse body filler for use directly over a variety of automotive substrates, including aluminum, sheet metal, and zinc-plated panels. The filler should be applied over bare substrates (without primer). The 839-20 offers fast ambient cure times of 20-30 minutes at 68°F/20°C. It may also be cured in 3 minutes using an infrared short wave lamp. You must prime or seal 839-20 prior to topcoat application.

	Application	Course and fine putty
	Paint System	B1,B2,B6,B8,C1,C2,C3,D.S1,D.S2,D.S4
	VOC Ready for Use	0.5lbs/gal;60gms/liter
	Mixing Ratio	100% b yweight 839-20
	Hardener	2-3% by weight 948-36
	Pot life at 68°F/20°C	4-5mins.
	Drying at 68°F/20°C	20-30 mins.
	Infrared Short Wave	3 mins.
	Dry Sanding: Machine	80-150, guide coat then finish with 240-320







SURFACE PREPARATION



839-90 Plastic Body Filler

839-90 is a flexible, two-component, fine body filler for plastic materials that allows shops to repair damaged plastic parts by leveling off scratches. This body filler can be used universally on all paintable plastics after application of Glasurit 934-40 1K Adhesion Promoter. Pure polypropylene and polyethylene plastics cannot be painted or repaired with this product. The maximum film thickness of this product should not exceed 4 mils; exceeding this thickness will decrease the flexibility of the paint film. 839-90 can be cured using a medium- or short- wave infrared lamp, or in ambient conditions.

NOTES:

	Application	839-90 flexible fine body filler	
	Paint System	B1, B2, B4, B6, B8, C1, C2, C3, D.S3, D.S3a	
	VOC Ready for Use	3.4 lbs/gal; 410 gms/liter	
	Mixing Ratio	100% by weight 839-90	
	Hardener	2-3% by weight 948-36	
	Pot life at 68°F/20°C	4-5 mins.	
	Drying at 68°F/20°C	25-35 mins.	
	Drying at 140°F/60°C	15 mins.	
	Infrared Short Wave	8 mins.	
	Infrared Med. Wave	5-10 mins.	
	Dry Sanding: Machine	80-150, guide coat then finish with 240-320	

UNDERCOATS

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WHAT YOU'LL LEARN:

• Introduction	2	• Meaning of Technical Pictograms	7
• Module Objectives	2	• Metallic Substrates	9
• Enabling Tasks	2	• Sanding of Undercoats	10
• Key Application Tips	3	• Technical Information – Primer Filler	11
• General Recommendations	6	• Primer Guide Coats	17
• High Build Primer Fillers	6	• Technical Information – Sealers	18
• Surface Preparation	6		

TOPCOATS

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WHAT YOU'LL LEARN:

• Introduction	2	• 22-Line Urethane Acrylic	6
• Module Objectives	2	• 90-Line Basecoat Metallics/Solids	8
• Enabling Tasks	3	• 90-Line Basecoat Metallic/Solid, Peel and Multi-Effect	9
• Meaning of Technical Pictograms	4		

TOPCOATS



22-Line Urethane Acrylic

22-Line color is an acrylic urethane enamel to be applied as a single stage finish over well cured old paintwork and primers. 22-Line colors meet the low VOC system requirements when mixed with the appropriate hardener, reducer and Low VOC mixing clear.

Final Sanding Recommendations for Solid Colors and Single Stage Finishes



P600 grit or finer



P400 grit or finer



P500 grit or finer

	Application	Single Stage Topcoat	Single Stage Topcoat
	Paint System	B7, B9, C3, D.S1, D.S3, D.S3a, D.S4, D.S4a, D.S7	B7, B9, C3, D.S1, D.S3, D.S3a, D.S4, D.S4a, D.S7
	VOC Ready for Use	Refer to mixed color formula to calculate applied VOC.	Refer to mixed color formula to calculate applied VOC for specific color. 3.5 lbs/gal (420 gms/liter) VOC is the maximum.
	Mixing Ratio	2:1+10%: 100 parts by volume 22-Line	2:1+10%: 100 parts by volume 22-Line
	Hardener	50 parts by volume 929-100, -105, -110, -115, -120, or -130	50 parts by volume 929-100, -105, -110, -115, -120, or -130
	Reducer	10 parts by volume 352-25 or -45	10 parts by volume 352-50, -91 or -216
	Spray Viscosity DIN 4 at 68°F/20°C	20 – 24 s	20 – 24 s
	Potlife at 68°F / 20°C	90 mins	90 mins
	Gravity Cup / Spraying Pressure	HVLP 1.3 mm/ 10 psi at air cap (max)	HVLP 1.3 mm/ 10 psi at air cap (max)
	Number of Spray Coats	2	2
	Film Thickness	2.2 - 3.0 mils	2.2 - 3.0 mils
	Flash-off at 68°F/20°C	5 mins. between coats	5 mins. between coats
	Drying at 68°F / 20°C Drying at 140°F / 60°C	Tack free in 8 hrs 30 mins.	Tack free in 8 hrs 30 mins.
	Infrared short wave Infrared medium wave	7 mins. 10 mins.	7 mins. 10 mins.

Important Remarks

- Be sure to observe flash-off times between spray coats.
- Choose hardener and reducer according to temperature and size of object to be painted

TOPCOATS



Glasurit 90-Line Basecoat Metallic / Solid, Pearl and Multi-effect

The standard for technological excellence of Glasurit is upheld in the waterborne arena by the 90-Line waterborne basecoat system. 90-Line has some distinct advantages over conventional solvent borne systems. In addition to better hiding and easier blending, 90-Line saves time. And less time means increased productivity. Also, unlike other waterborne systems, with 90-Line bases you don't have to worry about shelf life or special shipping to prevent freezing. And, add to this the fact that waterborne technology is not only environmentally more responsible, but also much safer for your employees.

Final Sanding Recommendations for Solid, Medium Light Metallic Basecoat



P600 grit or finer



P400 grit or finer



P500 grit or finer

Final Sanding Recommendations for Light Metallic Basecoat











P600 grit or finer



P500 grit or finer



P600 grit or finer

Application	Basecoat	Basecoat with Hardener (OEM Recommendation)
 Paint System	B7, B9, B10, C1, C1a, D.S1, D.S3, D.S3a, D.S9, D.S9.1, D.S9.2	B7, B9, B10, C1, C1a, D.S1, D.S3, D.S3a, D.S9, D.S9.1, D.S9.2
VOC Ready for Use	3.5 lbs/gal; 420 gms/liter or less	3.3 lbs/gal; 371 gms/liter or less
 Mixing Ratio	2:1 100 parts by volume 90-Line (Stir intermix formula well prior to addition of any 93-E3 or 93-E3S)	10:0.5:4 100 parts by volume 90-Line (Stir intermix formula well prior to addition of any 93-E3 or 93-E3S)
 Hardener		5 parts by volume 590-100
 Reducer	50 – 80 parts by volume 93-E3 or E3S (Stir well IMMEDIATELY after addition)	40 – 80 parts by volume 93-E3 or E3S (Mix well IMMEDIATELY after addition)
 Spray Viscosity DIN 4 at 68°F/20°C	18 – 24 s	23 – 31 s
Potlife at 68°F / 20°C	Mixed according to formula stored in plastic or lined cans – 6 month	24 hrs.
 Gravity Cup / HVLP Spraying Pressure Conventional	HVLP: 1.2-1.5 mm/10 psi at air cap (max.)	HVLP: 1.2-1.5 mm/10 psi at air cap (max.)
 Number of Spray Coats	2 plus 1/2 to harmonize the effect (appearance)	2 plus 1/2 to harmonize the effect (appearance)
Film Thickness	0.4 – 1.0 mil	0.4 – 1.0 mil
 Flash-off at 68°F/20°C	Until matte after each coat 2 – 3 mins. or until matte before next step	Until matte after each coat 2 – 3 mins. or until matte before next step
Sanding	Dirt nibs can be removed with a fine sanding pad, then blend in the area.	Dirt nibs can be removed with a fine sanding pad, then blend in the area.

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TOPCOATS

Important Remarks

- 90-Line Basecoat Metallic / Solid, Pearl and Multi – effect
- Use Glasurit 700-1 to clean tools. Paint residue dried to the tools can be removed with 700-1.
- Collect and dispose all paint-related waste, including water used to clean tools, in accordance with local, state and federal regulations. Refer to Glasurit 700-7 Coagulating Powder technical data sheet for more information.
- Use of an air jet will significantly reduce the flash-of time of 90-Line.
- Tinting bases must be shaken for 10 – 15 minutes, and then stirred with a metal or plastic stir stick before using or placing on a mixing rack.
- To ensure good color match, agitate tinting bases on a mixing rack 15 minutes before use and every 4 hours during the work day.
- The following 90-Line materials have reduced shelf lives and must be protected from freezing: 90-M4, 90-M4EDT and 90-M4S (12 months from date of manufacture); 93-E3 and 93-E3S (12 months from date of manufacture); 90-M5 (12 months from the date of manufacture).
- Use metal or plastic sticks to stir 90-Line colors; do not use wood.

CLEARCOATS

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WHAT YOU'LL LEARN:

• Introduction	2	• Technical Information	4
• Module Objective	2	• Blending Best Practices	6
• Enabling Tasks	2	• Clearcoat Matrices	7
• Equipment	2	• Technical Information	8
• Applying Decals or Stripes	3	• Booth Air Flow	19
• Catalysts	3	• Paint Defects, Causes and Remedies	20

CLEARCOATS







522-20 Universal Rapid Additive

Application: Drying accelerator for clearcoats for blending. Drying accelerator for Glasurit HS Urethane Topcoat 22-Line.

Properties: Fast through dry, dust free and polishability. Used at low temperatures (60°-65°F/15°-18°C) or when fast curing, polishing and masking tape resistance is required. Used with sign writing and multi-color finishes.

Remarks:

- Use only for blending.
- Measure amount of 522-20 carefully!
- In 923- Clearcoats, use 2% max. Add up to 0.65 oz / 17 gms per quart of ready-to-spray material.
- In 22-Line, use 4% max. Add up to 1.25 oz / 33 gms per quart of ready-to-spray material.

Application	Drying accelerator for 22-Line	Drying accelerator for 923- clearcoats
 Paint System	C3	—
VOC Ready for Use	VOC as packaged: 4.2 lbs/gal; 497 gms/liter VOC as applied: Varies depending on mixed formula or clearcoat	
 Mixing Ratio	100 parts by volume 22-Line	100 parts by volume 923-
 Hardener	50 parts by volume 929- up to 4 parts by volume 522-20	50 parts by volume 929- up to 2 parts by volume 522-20
 Reducer	10 parts by volume 352-	10 parts by volume 352-

For additional technical information, refer to specific 923- clearcoat or 22-Line technical data sheets.

Limitations of adding more than the suggested levels are:

- Increased tendency for solvent popping
- Lower tolerable bake temperature before solvent popping
- Increased chance of trapping solvent in film
- Fine wrinkled appearance, known as pinching, evident in clearcoat film. This same appearance is seen when clearcoat is applied extremely thick with very little flash time and cured.

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CLEARCOATS

Clearcoat Matrices

		Hardener	Reducer	Mix Ratio	Pot Life (Hrs.)	Flash (Mins.)	Baking (Mins.)	Polish After (Hrs.)	VOC (lbs./gal.) (Gm/ltr)	Ideally Suited For
Low VOC										
Low VOC Matte	923-52	929-100, -105, -110, -115, -120, or -130	-45	2:1+30%	3	●	30 @ 60°C/140°F	■	2.0/250	Fascia, Cladding, custom (suede) flat
Low VOC Klarlack	923-209	929-100, -105, -110, -115, -120, or -130	352-25 or -45	2:1+10%	2-3	1	30@ 60°C/140°F	After cool down	2.0/242	2-3 Panels, overalls (preflexed)
Low VOC Ultimate Clear	923-210	2:1 929-100, -110, -120 or -130 3:1 929-240 or 929-250	352-25, -45, -720 or -740 (2:1) 352-720 or -740 (3:1)	2:1 or 3:1	1-2	10	30@ 60°C/140°F	n/a	2.1/250	Completes
Low VOC Multi-Purpose Gloss Clear	923-220	929-100, -105, -110, -115, -120, or -130	352-25 or 45	2:1	3-4	5	30 mins. @ 60°C/140°F	After cool down	2.1/250	Spot repair to completes
Fast Repair Low VOC	923-222	929-100, -105, -110, -115, -120, or -130	352-25 or -45	2:1+10%	1	4	15@ 60°C/140°F	After cool down	1.5/182	1-2 panels, spot repair
Low VOC Multi-Purpose Gloss Clear	923-230	2:1 929-100, -105, -110, -115, -120, or -130 3:1 929-245 or -250	2:1 352-25, -45, 720 or 740 3:1 352-720 or -740	2:1 or 3:1	2-4	5	30@ 60°C/140°F	After cool down	2.1/250	Spot repair to completes
Low VOC Rapid Repair Clear	923-240	929-100, -105, -110, -115, or -120	352-25 or -45	2:1+10%	1	2	15@ 50°C/120°F	After 30 min air dry	2.0/240	1 panel spot repair
Anti-scratch 2.1 VOC HS Clear	923-345	929-346	352-25 or -45	1:1+10%	2	5	35@ 60°C/140°F	After cool down	2.1/250	Repair of Scratch Resistant Finishes
Glamour Production Clear	923-365	929-100, -105, -110, -115, -120, or -130	352-45, -720, or -740*	2:1+20%	1	5	15-20@ 60°C/140°F	2.5	2.1/250	1-4 panel repair

● = Flash off until matte between coats and before baking.

■ = Buffing or polishing will increase the gloss level.

* See technical data sheet for more information.

CLEARCOATS












923-210 Low VOC Ultimate Clear

Application: HS Clear for 2 coat paintwork.

Properties: Excellent resistance to weathering and yellowing. Very good gloss, hardness and hold out. Does not require reactive reducers.

Remarks:

- Choose hardener according to temperature and size of object to be painted. Drying time will vary accordingly.
- When using 923-210 over 55-Line, the use of 355-55 in the basecoat (10:1:4) is optional.
- For flexible part repair, mix 25% Low VOC Elastifier Additive 522-333 with clear before adding hardener.
- NOTE: up to 4% 522-20 may be added to the RFU mix to speed cure.
- 923-210 can be mixed using one of two possible mix ratios as needed depending on your shop or weather conditions.
- 352-720 is recommended for use in normal to high temps and normal to lower humidities.
- 352-740 is recommended for use in normal to high temps and normal to high humidities.
- To polish or remove dust particles: after 24 hrs. air dry, or when cool after force drying, wet sand with 1200 grit or finer sandpaper and then polish with fine polishing compound and/or liquid polish. Two mils of clearcoat (dry film) must remain over basecoat. If extensive color sanding is anticipated, apply an additional coat of clear.

Application	Clearcoat over basecoat	
 Paint System	B9, B10, C1, C2	
VOC Ready for Use	2.1 lbs/gal; 250 gms/liter	
 Gravity Cup / Spraying Pressure	HLVP: 1.3 – 1.5 mm / 10 psi at air cap (max.) Conventional: 1.3 – 1.5 mm / 45 – 55 psi	
 Number of Spray Coats	2 medium wet coats	
Film Thickness	2.0 – 2.5 mils	
 Mixing Ratio	2:1: up to 10% 100 parts by volume 923-210	3:1: up to 20% 300 parts by volume 923-210
 Hardener	50 parts by volume 929-100, -105, -110, -115, -120, or -130	100 parts by volume 929-245 or 929-250
 Reducer	up to 10 parts by volume 352-25, -45, -720, or -740	up to 60 parts by volume 352-720, or -740
Spray Viscosity DIN 4 at 68°F/20°C	15 – 18 s	
Pot life at 68°F/20°C	1 – 2 hrs.	
 Flash-off at 68°F/20°C	10 mins. between coats	
 Drying at 68°F / 20°C Drying at 140°F / 60°C	2 hrs 30 minutes	
 Infrared short wave	7 mins.	
Infrared medium wave	10 mins.	

CLEARCOATS



923-230 Low VOC Multi-purpose Gloss Clear











3:1 Mixing ratio

Application: 2 component clear for topcoating Glasurit basecoat colors.

Properties: Fast drying, excellent hold-out under all environmental conditions.

Remarks:

- Choose hardener according to temperature and size of object to be painted. Drying time will vary accordingly.
- For flexible part repair, mix 25% Low VOC Elastifier Additive 522-333 with clear before adding hardener.
- NOTE: up to 4% 522-20 may be added to the RFU mix to speed cure.
- 923-230 can be mixed using one of two possible mix ratios as needed depending on your shop or weather conditions.
- 352-720 is recommended for use in normal to high temps and normal to lower humidities.
- 352-740 is recommended for use in normal to high temps and normal to high humidities.
- To polish or remove dust particles: after 24 hrs. air dry, or when cool after force drying, wet sand with 1200 grit or finer sandpaper and then polish with fine polishing compound and/or liquid polish. Two mils of clearcoat (dry film) must remain over basecoat. If extensive color sanding is anticipated, apply an additional coat of clear.

	Application	Clearcoat over basecoat
	Paint System	B9, B10, C1, C2
	VOC Ready for Use	2.1 lbs/gal; 250 gms/liter
	Gravity Cup / Spraying Pressure	HLVP: 1.3 – 1.5 mm / 9 - 10 psi at air cap
	Number of Spray Coats	2 medium wet coats
	Film Thickness	2.0 – 2.5 mils
	Mixing Ratio	3:1: + 20% 300 parts by volume 923-230
	Hardener	100 parts by volume 929-245 or -250
	Reducer	60 parts by volume 352-720, or -740
	Spray Viscosity DIN 4 at 68°F/20°C	14 – 16 s
	Pot life at 68°F/20°C	1 – 3 hrs.
	Flash-off at 68°F/20°C	5 mins. between coats
	Drying at 68°F / 20°C	2 - 4 hrs
	Drying at 140°F / 60°C	30 mins.

CLEARCOATS



923-365 Glamour Production Clear Clear (Low VOC)

Application: 923-365 Glamour Production Clear is a 2 component clearcoat that is compliant in both Low VOC and National Rule markets for topcoat of Glasurit basecoats. 923-365 is designed to meet high throughput demands of shops.

Properties: This clear exhibits the appearance of a glamour clear while reducing “bake cycle time” of the shop. It is ideal for 1-4 panel repairs, very easy application, with a recommended baking condition of at least 15 minutes at 140°F/60°C. Fast drying when baked with excellent hold-out under all environmental conditions.

Remarks:

- Choose hardener and reducer according to temperature and size of object to be painted. Drying time will vary accordingly.
- NOTE: Up to 2% 522-20 may be added to the RFU mix to speed cure.
- For flexible part repair, mix 25% by weight Low VOC Elastifier Additive 522-333 with clear before adding hardener and reducer.
- Vehicle can be immediately recoated, sanded and compounded 2 hours after recommended bake or air-dry times.
- To polish or remove dust particles: when cool after force drying, wet/dry sand with 1500 grit or finer sandpaper and then polish with fine polishing compound and/or liquid polish. Two mils of clearcoat (dry film) must remain over basecoat. If extensive color sanding is anticipated, apply an additional coat of clear.

	Application	Clearcoat over basecoat
	Paint System	B9, B10, C1, C2
	VOC Ready for Use	2.1 lbs/gal; 250 gms/liter
	Gravity Cup / Spraying Pressure	HVLP: 1.2-1.4 mm / 9 - 10 psi at air cap High Efficiency: 20 - 29 inlet
	Number of Spray Coats	2 med coats
	Film Thickness	2.0 - 2.5 mils DFT/Coverage @ 1 mil=590 - 620 (mils* ft ² /gal)
	Mixing Ratio	2:1+20% 100 parts by volume of 923-365
	Hardener	50 parts by volume of 929-100, -105, -110, -115, -120, or -130
	Reducer	20 parts by volume of 352-45, -720, or -740* * If 352-740 is used, reduction should be 10%. Additional 352-45 can be added.
	Pot life at 68°F/20°C	60 mins average - sprayable pot life
	Flash-off at 68°F/20°C	5 mins between coats
	Drying at 68°F / 20°C Drying at 140°F / 60°C	1.5 - 2.0 hrs 15 - 20 mins. After 2.5 hours air dry or after cool down after bake cycle
	Sanding/polishing Infrared short wave	REVO RAPID MC2 program: Flash-Off at 140°F/60°C-3 mins Drying @ 180°F/82°C -6 mins

CLEARCOATS

NOTES:

Booth Air Flow

This is one of the largest variables determining a painter's productivity. Most painters consistently deal with a booth that does not circulate enough air for optimal productivity. A suggest range is 80-100 ft/min (0.3 m/sec). Most booths are rated in the total volume of air they are capable of moving.

To get an estimated value for the velocity use the following equation:

For downdraft: use the rated volume of air and divide by inside height x inside width.

For example if you have a 26' long booth that is 12' wide and the advertised volume is 24,000 cfm. 24000 divided by (26X12) = 77 ft/min.

For cross draft: use the rated volume of air and divide by inside depth x inside width.

For example if you have a cross flow booth that is 28' deep and 12' wide and the rated volume is 36000 cfm. 36000 divided by (28X12) = 107 ft/min.

These values would represent the maximum velocity of air a booth may move. This is often less than what can be expected. The only way to accurately determine booth velocity is to have it measured (with a velometer or anemometer) in a variety of locations accurately identifying dead spots where air velocity is lacking. The easiest way to maintain airflow is to routinely change pit and intake filters in booth. Depending on production, changing pit filters should be carried out roughly every two weeks if not more routinely.

What does this mean to a Painter?

Too little air corresponds to:

- Slow flash of and poor curing for remaining solvent



- More dirt in topcoats and clearcoats
- Solvent popping in clearcoats
- Overspray contaminating other arts/adjacent panels
- Too much air velocity corresponds to: Skinning of solvent base clearcoat causing wrinkling, pinch, or solvent pop
- Trapping solvents in undercoats causing mud cracking



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BLEND-IN TECHNIQUES

GLASURIT LVOC CERTIFICATION



WHAT YOU'LL LEARN:

• Introduction	2	• Blend-in Refinishing System	
• Module Objective	2	Glasurit® 90-Line Basecoat	5
• Enabling Tasks	2	• Blend-in Refinishing System	
• 90-Line Two Coat Metallic Systems	3	Glasurit® 90-Line Basecoa	7
• Using 90-M5/90-M50 as a Uniform Finish Blender	4		

BLEND-IN TECHNIQUES

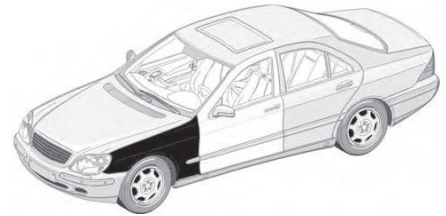
Blend-in Refinishing System Glasurit® 90-Line Basecoat


Properties:

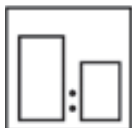


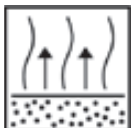
In principle, panel repairs with metallic basecoat/clearcoat systems are possible, and, as a rule, it is not necessary to respray adjacent body parts. When color differences beyond allowable limits are to be expected and when the areas to be resprayed are not limited by trim strips or edges, the more appropriate method to overcome color differences may be to blend in the damaged area and the adjacent part, if required. This procedure can be considerably more efficient and economical than time-consuming color matching.

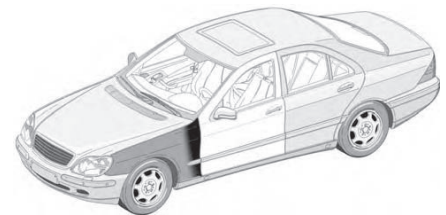
Blending-in on the adjacent panel

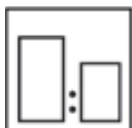


700-10 Waterborne Degreaser	 1x	 Wipe dry	563-808 Sand Fix Paste	 P1000 - P2000
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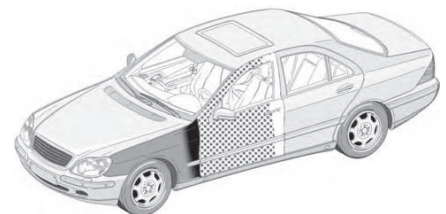


700-1 Waterbased Cleaner	 1x	 Wipe dry
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90-Line Basecoat	 2:1 93-E3 or 93-E3S	 HVLP 1.2-1.5 mm	 1 coat	 flash off until matte
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90-M5/ 90-M50 Blending Clear	 2:1 93-E3 or 93-E3S	 HVLP 1.3 mm	 1 coat
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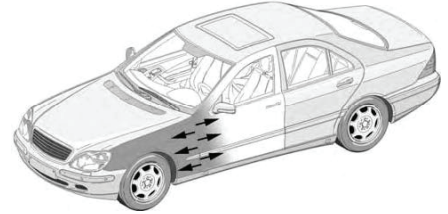


Note: hardener is recommended for OEM specifications.

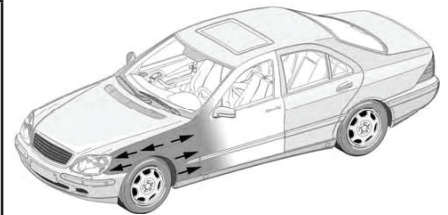
BLEND-IN TECHNIQUES

Blend-in Refinishing System Glasurit® 90-Line Basecoat

90-Line Basecoat			
	2:1 E3/E3S	HVLP 1.2-1.5 mm	1 coat fading out on both panels

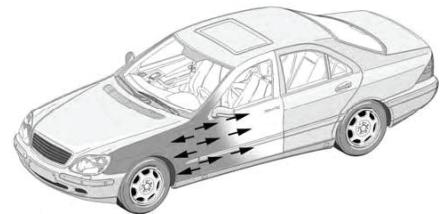


90-Line Basecoat				
	2:1 93-E3 or 93-E3S	HVLP 1.2-1.5 mm	1 coat fading out towards the edges of the panel	flash off until matte



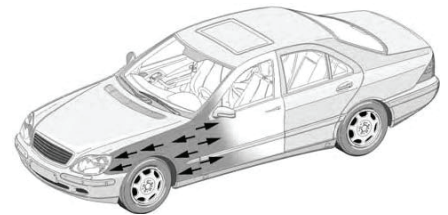
Add 90-M5/90-M50 1:1 to 2:1 with 90-Line Basecoat (optional)

90-Line Basecoat			
	2:1 93-E3 or 93-E3S	HVLP 1.2-1.5 mm	1/2 coat fading out on both panels

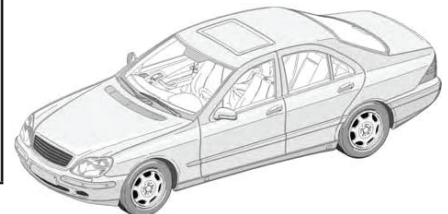


Add 90-M5/90-M50 1:1 to 2:1 with 90-Line Basecoat (optional)

90-Line Basecoat			
	2:1 93-E3 or 93-E3S	HVLP 1.2-1.5 mm	1/2 coat fading out towards the edges of the panel



923-Clearcoat				
	2:1 +10% 929- 352-	HVLP 1.3-1.5 mm	1-2 coats	30 mins. at 140°F/60°C



Note: hardener is recommended for OEM specifications.

GLASURIT LVOC CERTIFICATION

BLEND-IN TECHNIQUES

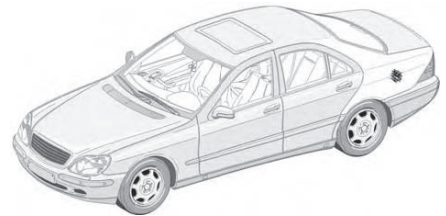
Blend-in Refinishing System Glasurit® 90-Line Basecoat


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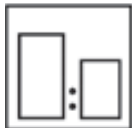


In principle, panel repairs with metallic basecoat/clearcoat systems are possible, and, as a rule, it is not necessary to respray adjacent body parts. When color differences beyond allowable limits are to be expected and when the areas to be resprayed are not limited by trim strips or edges, the more appropriate method to overcome color differences may be to blend in the damaged area and the adjacent part, if required. This procedure can be considerably more efficient and economical than time-consuming color matching.

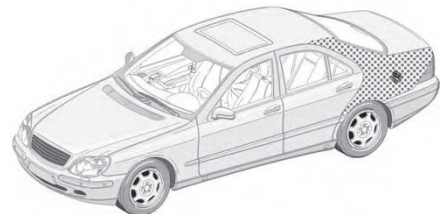
Blending-in on the panel being repaired

700-10 Waterborne Degreaser	 1x	 Wipe dry	563-808 Sand Fix Paste	 P1000 - P2000
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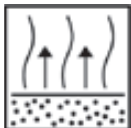


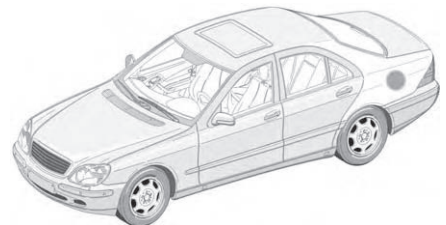
700-1 Waterbased Cleaner	 1x	 Wipe dry
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90-M5/ 90-M50 Blending Clear	 2:1 93-E3 or 93-E3S	 HVLP 1.3 mm	 1 coat
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Not required in case of 90-Line Solid Color Basecoat

90-Line Basecoat	 2:1 93-E3 or 93-E3S	 HVLP 1.2-1.5 mm	 1-2 coats	 flash off until matte
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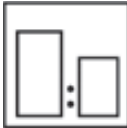


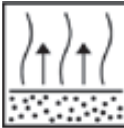
Note: hardener is recommended for OEM specifications.

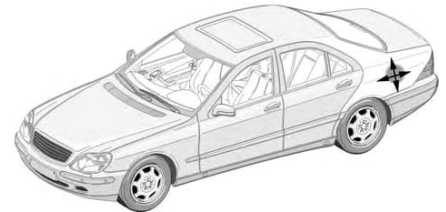
GLASURIT LVOC CERTIFICATION

BLEND-IN TECHNIQUES


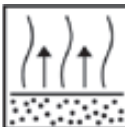
Blend-in Refinishing System Glasurit® 90-Line Basecoat

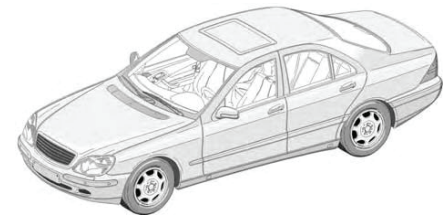
Add 90-M5/90-M50 1:1 to 2:1 with 90-Line Basecoat

<p>90-Line Basecoat</p>	 <p>2:1 93-E3 or 93-E3S</p>	 <p>HVLP 1.2-1.5 mm</p>	 <p>1/2 coat fading out on adja- cent surfaces</p>	 <p>Flash off until matte</p>
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When blending is on fade-out areas / clearcoat transition

<p>90-Line Clearcoat</p>	 <p>2 coats</p>	 <p>30 mins. at 140°F/60°C</p>
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Note: hardener is recommended for OEM specifications.



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BASF Corporation
Automotive Refinish
26701 Telegraph Rd.
Southfield, MI 48033

BASF Canada Inc.
5025 Creekbank Rd, 2nd Floor
Mississauga, Ontario, Canada
L4W 5R2

BASF Mexicana, S.A. de C.V. Division Coatings
Avenida Uno No. 9
Parque Industrial Cartagena
C.P. 54900 Tutitlan, Edo de México

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(800) 825-3000
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