

ICSAM Professional Wood Coatings



PRODUCTS & GENERAL INFORMATION

POLYURETHANES Clear and pigmented Sealer, Primer, Top Coat High Gloss and Various Sheen

- Good chemical and physical strength
- Excellent transparency
- High covering power
- Strong adhesion
- Quick drying
- Good surface hardness
- Excellent finish
- Very versatile
- Limited shelf life of polyurethane hardeners
- Limited pot life when products are mixed

ACRYLIC Clear and white Top Coat High Gloss and Various Sheen

- Absolute non yellowing properties
- Maximum light and dark fastness (both in light and in the absence of light)
- Excellent transparency
- Ideal for light covered woods
- Ideal for bleached woods
- Good chemical and physical strength
- Very good exterior resistance
- Excellent adhesion on various substrates
- Very versatile
- Somewhat costly

POLYESTERS Clear and pigmented Sealer, Primer, Top Coat High Gloss and Matte

- Excellent body and high solid contents
- High coverage
- Optimum chemical and physical strength
- Excellent transparency
- No shrinkage over long time
- Low emission of solvents
- Sensitive to temperature changes
- Limited pot life
- Limited shelf life

GENERAL PRODUCT PREPARATION OF ICSAM PRODUCTS

UNIVERSAL STAINS 99U/Series
BARRIER COAT - UNIVERSAL
BARRIER COAT - EXOTIC WOODS
CLEAR POLYURETHANE SEALER – FOR OPEN PORE
CLEAR POLYURETHANE SEALER – FOR CLOSE PORE
CLEAR POLYESTER SEALER
CLEAR POLYESTER SELF SEALER
WATER CLEAR ACRYLIC POLYURETHANE SEALER
WHITE POLYURETHANE PRIMER
WHITE POLYESTER SEALER
BLACK POLYURETHANE SEALER
BLACK POLYESTER SEALER

CLEAR POLYURETHANE TOP COAT - VARIOUS SHEENS
CLEAR POLYURETHANE TOP COAT HIGH GLOSS
CLEAR POLYESTER HIGH GLOSS
WHITE POLYURETHANE TOP COAT - VARIOUS SHEENS
WHITE POLYURETHANE TOP COAT HIGH GLOSS
BLACK POLYURETHANE TOP COAT - VARIOUS SHEENS
BLACK POLYURETHANE TOP COAT HIGH GLOSS
WATER CLEAR ACRYLIC PU - VARIOUS SHEENS
WATER CLEAR ACRYLIC PU HIGH GLOSS
WHITE POLYESTER H.GLOSS
BLACK POLYESTER HIGH GLOSS
ACRYWAX (WAX EFFECT)

THINNERS
POLYURETHANE HARDENER CHART
ADDITIVES CHART

POLYURETHANE PIGMENTED PASTES
POLYESTER PIGMENTED PASTES

UNIVERSAL STAINS 99U/Series

Apply stain to the substrate with ICSAM 99U/Series Universal Stains concentrate or other approved and compatible stains system.

99U/Series stains are concentrates with which you can mix your choice of water or solvents, depending on the depth of finish you require.

If you spray the stains, use a fast thinner blend and apply a uniform coat of stain throughout the substrate.

If you wipe the stains, use a slow thinner blend, then wipe clean in a final wipe with the grain of the substrate.

Depending which application method was selected, please allow proper time for drying before applying the first coat of sealer.

In order to uniform the stains during the application, we recommend using these products:
780184 for solvent born systems
99W911 for water born systems

AVAILABLE COLORS

99U004 - Stain Concentrate Lemon Yellow
99U005 - Stain Concentrate Chrome Yellow
99U007 - Stain Concentrate Bordeaux
99U008 - Stain Concentrate Red
99U011 - Stain Concentrate Blue
99U012 - Stain Concentrate Brown Med.
99U022 - Stain Concentrate Brown
99U040 - Stain Concentrate Walnut Light
99U041 - Stain Concentrate Walnut Antique
99U042 - Stain Concentrate Walnut
99U043 - Stain Concentrate Cherry
99U044 - Stain Concentrate Oak
99U045 - Stain Concentrate Honey
99U049 - Stain Concentrate Mahogany
99U050 - Stain Concentrate Dark Walnut
99U055 - Stain Concentrate Black
99U152 - Stain Concentrate Orange
993A01 - Stain Concentrate White (Water)
99S001 - Stain Concentrate White (Solvent)
99U048 - Stain Concentrate Rosewood
99U051 - Stain Concentrate Green

You can also mix small quantity of 99U/Series concentrate stains with polyurethane or acrylic top coats to blend and/or shade the finishing.

BARRIER COAT - Universal

Code	Description	Parts/Weight	Parts/Vol.
710001	Barrier Coat	100	128
CT7104	Hardener	100	128
DL0230	Thinner Blend	30	32

Application: Apply a thin wash coat of the barrier coat, wait minimum 30 minutes and maximum 1 hours before spraying the sealer (polyester or polyurethane).

If the sealer is not applied within 2 hours, than wait 6 hours, sand the barrier coat with 320 sand paper, air blow the residual from the panel and spray the sealer coat.

If a second coat of barrier coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	30-60 minutes
<u>Dry to Handle:</u>	20-30 minutes
<u>Dry to Stack:</u>	2 hours minimum
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lb

BARRIER COAT - Exotic Woods

Code	Description	Parts/Weight	Parts/Vol.
710070	Barrier Coat	100	128
CT0107	Hardener	100	128
DL0230	Thinner Blend	50	32

Application: Apply a thin wash coat of the barrier coat, wait minimum 1 hour and maximum 3 hours before spraying the sealer (polyester or polyurethane).

If the sealer is not applied within 3 hours, than wait 6 hours, sand the barrier coat with 320 sand paper, air blow the residual from the panel and spray the sealer coat.

If a second coat of barrier coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	1-2 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Stack:</u>	3 hours minimum
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

CLEAR POLYURETHANE SEALER

<u>Code</u>	<u>Description</u>	<u>Parts/Weight</u>	<u>Parts/Vol.</u>
FT5231	Polyurethane Sealer	100	128
CT9916	Hardener	50	64
DL0230	Thinner Blend	15	20

Application: Spray one coat of sealer. If a second coat is required, it can be applied after 1 hour up to 3 hours without sanding. If it is not applied within 3 hours, wait 4 to 6 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of sealer.

<u>Pot Life:</u>	3 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Sand:</u>	3 to 5 hours
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

CLEAR POLYURETHANE SEALER - OPEN PORE

<u>Code</u>	<u>Description</u>	<u>Parts/Weight</u>	<u>Parts/Vol.</u>
FT9916	Polyurethane Sealer	100	128
CT9946	Hardener	50	64
DL0230	Thinner Blend	15	20

Application: Spray one coat of sealer. If a second coat is required, it can be applied after 1 hour up to 3 hours without sanding. If it is not applied within 3 hours, wait 4 to 6 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of sealer.

<u>Pot Life:</u>	3 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Sand:</u>	3 to 5 hours
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

CLEAR POLYURETHANE SEALER - HIGH BUILD

Code	Description	Parts/Weight	Parts/Vol.
FT0210	Polyurethane Sealer	100	128
CT7419	Hardener	50	64
DL0230	Thinner Blend	15	20

Application: Spray one coat of sealer. If a second coat is required, it can be applied after 1 hour up to 3 hours without sanding. If it is not applied within 3 hours, wait 4 to 6 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of sealer.

<u>Pot Life:</u>	3 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Sand:</u>	4 to 6 hours minimum
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

CLEAR POLYESTER SEALER

<u>Code</u>	<u>Description</u>	<u>Parts/Weight</u>	<u>Parts/Vol.</u>
840549	Polyester Sealer	100	128
720500	Accelerator (*)	2	3
DL0010	Thinner	10	15-20
720506	Catalyst (**)	2	3

(*) Use 1 part of 720500 (accelerator) in hot temperatures (it slows the cure)

(**) Use 720516 for extended pot life (always use 2 parts of catalyst)

Application: Spray one coat of polyester sealer. Wait for at least 1 hour and spray a second coat of the sealer. If a third coat is required, it can be applied after 1 hour without sanding. If this wet on wet application exceed the 1 hour interval, wait minimum 12 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of the sealer.

<u>Pot Life:</u>	25-45 minutes
<u>Dry to Handle:</u>	2-3 hours
<u>Dry to Sand:</u>	12 hours minimum
<u>Suggested tip size:</u>	3 mm
<u>Suggested air pressure:</u>	35 lbs

WATER CLEAR ACRYLIC POLYURETHANE SEALER

<u>Code</u>	<u>Description</u>	<u>Parts/Weight</u>	<u>Parts/Vol.</u>
FTA066	Acrylic PU Sealer	100	128
CT0A67	Hardener	10 (*)	13 (*)
DL0020	Thinner Blend	20-30	24-40

(*) Double amount to increase filling properties and hardness.
Maximum 20% or 26 oz. each Gallon

Application: Spray one light coat of sealer. If a second coat is required, it can be applied after 1 hour up to 3 hours without sanding. If it is not applied within 3 hours, wait 4 to 6 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of sealer.

<u>Pot Life:</u>	6-8 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Sand:</u>	6 to 8 hours minimum
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

WHITE POLYURETHANE PRIMER

<u>Code</u>	<u>Description</u>	<u>Parts/Weight</u>	<u>Parts/Vol.</u>
FB1090	White Polyurethane Primer	100	128
CT0916	Hardener	50	100
DL0230	Thinner Blend	10	22

Application: Spray one coat of primer. Apply a second coat of primer after 30-60 minutes up to 3 hours without sanding. If it is not applied within 3 hours, wait 4 to 6 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of primer.

<u>Pot Life:</u>	3-4 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Sand:</u>	3 hours minimum
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

WHITE POLYESTER SEALER

Code	Description	Parts/Weight	Parts/Vol.
FPB600	White Polyester Sealer	100	128
720500	Accelerator (*)	2	4
DL0010	Thinner	10	15-20
720506	Catalyst (**)	2	3

(*) Use 1 part of 720500 accelerator in hot temperatures (it slows the cure)

(**) Use 720516 for extended pot life (always use 2 parts of catalyst)

Application: Spray one coat of polyester sealer. Wait for at least 1 hour and spray a second coat of the sealer. If a third coat is required, it can be applied after 1 hour without sanding. If this wet on wet application exceed the 1 hour interval, wait minimum 12 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of the sealer.

<u>Pot Life:</u>	25-45 minutes
<u>Dry to Handle:</u>	2-3 hours
<u>Dry to Sand:</u>	12 hours minimum
<u>Suggested tip size:</u>	3 mm
<u>Suggested air pressure:</u>	35 lbs

BLACK POLYURETHANE SEALER

<u>Code</u>	<u>Description</u>	<u>Parts/Weight</u>	<u>Parts/Vol.</u>
731017	Black Polyurethane Sealer	100	128
CT0689	Hardener	50	80
DL0230	Thinner Blend	10	17

Application: Spray one coat of sealer. Apply a second coat of primer after 30-60 minutes up to 3 hours without sanding. If it is not applied within 3 hours, wait 4 to 6 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of primer.

<u>Pot Life:</u>	3-4 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Sand:</u>	4 to 6 hours minimum
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

BLACK POLYESTER SEALER

Code	Description	Parts/Weight	Parts/Vol.
FPN817	Black Polyester Sealer	100	128
720500	Accelerator ()	2	4
DL0010	Thinner	10	15-20
720506	Catalyst (*)	2	3

(*) Use 720516 for extended pot life (always use 2 parts of catalyst)

Application: Spray one coat of polyester sealer. Wait for at least 1 hour and spray a second coat of the sealer. If a third coat is required, it can be applied after 1 hour without sanding. If this wet on wet application exceed the 1 hour interval, wait minimum 12 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of the sealer.

<u>Pot Life:</u>	40-60 minutes
<u>Dry to Handle:</u>	2-3 hours
<u>Dry to Sand:</u>	12 hours minimum
<u>Suggested tip size:</u>	3mm
<u>Suggested air pressure:</u>	35 lbs

CLEAR POLYURETHANE TOP COAT - VARIOUS SHEENS

Code	Description	Parts/Weight	Parts/Vol.
OT15xx	Polyurethane Top Coat	100	128
CT9916	Hardener (*)	50	64
DL0230	Thinner Blend	15	20

(*) CT0618 Anti-Yellowing

Application: When sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	5-6 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Stack:</u>	6 hours minimum
<u>Suggested tip size:</u>	1,6 mm
<u>Suggested air pressure:</u>	35 lbs

CLEAR POLYURETHANE TOP COAT – NO SCRATCH

Code	Description	Parts/Weight	Parts/Vol.
OT994x	Polyurethane Top Coat	100	128
CT9946	Hardener (*)	50	64
DL0230	Thinner Blend	15	20

(*) CT0618 Anti-Yellowing

Application: When sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	5-6 hours
<u>Dry to Handle:</u>	25-30 minutes
<u>Dry to Stack:</u>	6 hours minimum

Suggested tip size: 1,6 mm
Suggested air pressure: 35 lbs

HIGH GLOSS POLYURETHANE TOP COAT

<u>Code</u>	<u>Description</u>	<u>Parts/Weight</u>	<u>Parts/Vol.</u>
75R010	Polyurethane Top Coat	100	128
CT0530	Hardener	50	72
DL0100	Thinner Blend	40	63

It's possible to increase the hardener ratio till 100% in order to obtain higher hardness.

Application: When sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

Pot Life: 4 hours
Dry to Handle: 30-40 minutes
Dry to Stack: 36 hours minimum
Suggested tip size: 1,6mm
Suggested air pressure: 35 lbs

HIGH GLOSS POLYESTER TOP COAT

<u>Code</u>	<u>Description</u>	<u>Parts/Weight</u>	<u>Parts/Vol.</u>
840903	Polyester Top Coat	100	128
720500	Accelerator (*)	2	3
DL0010	Thinner	10	15-20
720506	Catalyst (**)	2	3

(*) Use 1 part of 720500 (accelerator) in hot temperatures (it slows the cure)

(**) Use 720516 for extended pot life (always use 2 parts of catalyst)

Application: Spray one coat of polyester finish. Wait for at least 1 hour and spray a second coat.

<u>Pot Life:</u>	30-50 minutes
<u>Dry to Handle:</u>	2-3 hours
<u>Dry to Sand:</u>	12 hours minimum
<u>Suggested tip size:</u>	2.5 mm
<u>Suggested air pressure:</u>	35 lbs

WHITE POLYURETHANE TOP COAT HIGH GLOSS

Code	Description	Parts/Weight	Parts/Vol.
751060	White PU Top Coat Matte	100	128
CT0530	Hardener	50 (*)	94 (*)
DL0100	Thinner Blend	15-20	20-25

Application: When sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

(*) Double amount to increase mechanical and chemical resistance.
Maximum 1:1 by weight or 128 oz to 188 oz of catalyst

<u>Pot Life:</u>	5-6 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Stack:</u>	24 hours minimum
<u>Suggested tip size:</u>	1,6 mm
<u>Suggested air pressure:</u>	35 lbs

FAST DRY WHITE POLYURETHANE TOP COAT HIGH GLOSS

Code	Description	Parts/Weight	Parts/Vol.
75C036	White PU Top Coat H.Gloss	100	128
CT0618	Hardener	50 (*)	94 (*)
DL0100	Thinner Blend	40	50

Application: When sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

(*) Double amount to increase mechanical and chemical resistance.

Maximum 1:1 by weight or 128 oz to 188 oz of catalyst

<u>Pot Life:</u>	4 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Stack:</u>	12 hours minimum
<u>Suggested tip size:</u>	1,6mm
<u>Suggested air pressure:</u>	35 lbs

WHITE, MATT POLYURETHANE TOP COAT

Code	Description	Parts/Weight	Parts/Vol.
37C034	White PU Top Coat Matte	100	128
CT0618	Hardener	50	78
DL0230	Thinner Blend	15-20	20-25

Application: When sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	4-5 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Stack:</u>	18 hours minimum
<u>Suggested tip size:</u>	1,6 mm
<u>Suggested air pressure:</u>	35 lbs

BLACK, MATT POLYURETHANE TOP COAT

Code	Description	Parts/Weight	Parts/Vol.
772F50	Black PU Top Coat Matte	100	128
CT0520	Hardener	50	78
DL0230	Thinner Blend	15-20	20-25

Application: When sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	4-5 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Stack:</u>	18 hours minimum
<u>Suggested tip size:</u>	1,6 mm
<u>Suggested air pressure:</u>	35 lbs

BLACK POLYURETHANE TOP COAT HIGH GLOSS

Code	Description	Parts/Weight	Parts/Vol.
752F50	Black PU Top Coat H.Gloss	100	128
CT0530	Hardener	100	147
DL0100	Thinner Blend	30	40

Application: When sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	4-5 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Stack:</u>	18 hours minimum
<u>Suggested tip size:</u>	1,6 mm
<u>Suggested air pressure:</u>	35 lbs

FAST BLACK POLYURETHANE TOP COAT GLOSSY

Code	Description	Parts/Weight	Parts/Vol.
OTL093	Black PU Top Coat Glossy	100	128
CT0107	Hardener	100	147
DL0100	Thinner Blend	30	40

Application: When sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	4-5 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Stack:</u>	18 hours minimum
<u>Suggested tip size:</u>	1,6 mm
<u>Suggested air pressure:</u>	35 lbs

WATER CLEAR ACRYLIC POLYURETHANE TOP COAT - VARIOUS SHEENS

Code	Description	Parts/Weight	Parts/Vol.
OA1005	Acrylic PU Top Coat	100	128
CT0A67	Hardener (*)	10 (*)	12 (*)
DL0020	Thinner Blend	20-30	24-40

(*) Double the amount to increase filling and hardness. Maximum 20% or 24 oz.

Application: When sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	6-8 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Stack:</u>	6 hours minimum
<u>Suggested tip size:</u>	1,6 mm
<u>Suggested air pressure:</u>	35 lbs

WATER CLEAR ACRYLIC POLYURETHANE TOP COAT - GLOSSY

Code	Description	Parts/Weight	Parts/Vol.
OA0100	Acrylic PU Top Coat H. Gloss	100	128
CT0A67	Hardener (*)	10 (*)	13 (*)
DL0020	Thinner Blend	20-30	24-40

(*) Double the amount to increase filling and hardness. Maximum 20% or 26 oz.

Application: When the sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	6-8 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Stack:</u>	6 hours minimum
<u>Suggested tip size:</u>	1,6 mm
<u>Suggested air pressure:</u>	35 lbs

WHITE POLYESTER HIGH GLOSS

Code	Description	Parts/Weight	Parts/Vol.
841001	White Polyester Gloss	100	128
720500	Accelerator (*)	2	4
DL0010	Thinner	10	15-20
720506	Catalyst (**)	2	3

(*) Use 1 part of 720500 accelerator in hot temperatures (it slows the cure)

(**) Use 720516 for extended pot life (always use 2 parts of catalyst)

Application: Spray one coat of polyester top coat. Wait for at least 1 hour and spray a second coat of the finish. If a third coat is required, it can be applied after 1 hour without sanding. If this wet on wet application exceed the 1 hour interval, wait minimum 12 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of the finish.

<u>Pot Life:</u>	25-45 minutes
<u>Dry to Handle:</u>	2-3 hours
<u>Dry to Sand:</u>	12 hours minimum
<u>Suggested tip size:</u>	2.5 mm
<u>Suggested air pressure:</u>	35 lbs

BLACK POLYESTER HIGH GLOSS

Code	Description	Parts/Weight	Parts/Vol.
842050	Black Polyester Gloss	100	128
720500	Accelerator (*)	2	4
DL0010	Thinner	10	15-20
720506	Catalyst(**)	2	3

(*) Use 1 part of 720500 accelerator in hot temperatures (it slows the cure)

(**) Use 720516 for extended pot life (always use 2 parts of catalyst)

Application: Spray one coat of polyester top coat. Wait for at least 1 hour and spray a second coat of the finish. If a third coat is required, it can be applied after 1 hour without sanding. If this wet on wet application exceed the 1 hour interval, wait minimum 12 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of the finish.

<u>Pot Life:</u>	25-45 minutes
<u>Dry to Handle:</u>	2-3 hours
<u>Dry to Sand:</u>	12 hours minimum
<u>Suggested tip size:</u>	2.5mm
<u>Suggested air pressure:</u>	35 lbs

ACRYWAX

<u>Code</u>	<u>Description</u>	<u>Parts/Weight</u>	<u>Parts/Vol.</u>
OAB005	AcryWax	100	128
CT0A67	Hardener	10	13

Application: Suitable for every type of wood to show a natural "WOOD EFFECT". The product contains a mix a natural and synthetic wax that offers a soft wax touch. Can be applied directly to the wood or to the sanded polyurethane sealer. Must be applied by spray with a quantity of 100/150 g/m² and after drying should be polished with a rag or fine steel wool or nylon pad..

<u>Pot Life:</u>	2 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Stack:</u>	8 hours minimum
<u>Suggested tip size:</u>	1,6 mm
<u>Suggested air pressure:</u>	35 lbs

THINNERS CHART

<i>CODE</i>	<i>TO USE WITH</i>	<i>EVAPORATION</i>
DL0007	Polyester	Medium Slow
DL0010	Polyester / Equipment Cleaning	Very Fast (*)
DL0114	Polyurethane (Paraffin Polyester)	Fast
DL0020	Polyurethane	Medium Fast (*)
DL0100	Polyurethane	Medium Slow
DL0103	Polyurethane (To Mix With Other)	Very Slow Retarder (*)
DL0230	Polyurethane	Medium
DL0370	Polyurethane (Extend Pot Life)	Very Slow / Retarder / H.Gloss

(*) HAPS Free Product

THINNERS

- DL0007** *Polyester Thinner - Medium Slow*
Reactive solvent, one of the components of polyester resins. Used to lower viscosity of paraffinated polyesters (4 to 6% max). Also suitable to increase the saturation and filling properties and slow down the cure on polyester sealers and/or top coats.
- DL0010** *Polyester Thinner - Very Fast*
Used to dilute paraffin free polyester sealers and top coats. Can be used together with DL0007 (5 to 6% max) to reduce pinholes during summer time or hot temperatures, or when a heavy coat(s) is applied. If used together with other solvent blends, may increase distension, and saturation in top coats. Recommended solvent to clean equipment and machinery. HAPS Free Solvent.
- DL0114** *Polyester and Polyurethane Thinner - Fast*
Very fast solvent but also hygroscopic. Used to speed cure or to modify standard solvents. Can be used with paraffin polyesters (3/4% max) to reduce pinholes. Can also be used instead of acetone to slow cure and to extend the pot life of polyurethane finishes.
- DL0020** *Polyurethane Thinner - Medium Fast*
Good all year round, all temperature general thinner. Excellent thinning strength. Helps to eliminate waves in polyurethane top coats. Generally compatible with all the products. HAPS Free Solvent.
- DL0100** *Polyurethane Thinner - Medium Slow*
Medium slow thinner suitable for glossy polyurethane top coats.

- DL0103** *Polyurethane Thinner - Retarder*
Very slow solvent, used to modify standard thinner and to slow the cure. HAPS Free Solvent.
- DL0230** *Polyurethane Thinner - Medium*
Standard thinner, more suitable for polyurethane cycles than for acrylic polyurethanes. This solvent has a very balanced evaporation curve that makes it suitable all year around. In hot temperatures can be used together with other solvents and retarders.
- DL0370** *Polyurethane Thinner - Very Slow*
Very slow thinner. Used when high saturation and expansion is required. This solvent extends the polyurethane pot life. Very good for electrostatic application (since it increases the conductivity of the system).
- DL0401** *Thinner - Slow*
Slow thinner suitable for synthetic products (pre-catalyzed lacquers, conversion varnish...). Can be used in small quantities (1 to 3% max) with polyurethane top coats to reduce the superficial cure and to eliminate the bubbles, very common in extremely hot temperatures and with forced air curing. To be used with 63S/Series Pigmented Stains.

HARDENERS CHART

<i>CODE</i>	<i>DESCRIPTION</i>	<i>USE %</i>	<i>NOTE(S)</i>
CT9916	Hardener PU	50 %	Standard - High solids
CT7419	Hardener PU	50 %	Standard use
CT0689	Hardener PU	50 %	Standard - High solids, elastic
CT0916	Hardener PU	50 %	Standard- High solids, elastic
CT9946	Hardener PU	50%	Fast
CT0A67	Hardener Acrylic	10%	Acrylic Polyurethane Only
CT7104	Hardener PU	100 %	Barrier Coat Only
CT0618	Hardener PU	50-100 %	Anti - Yellowing - Strong
CT0107	Hardener	100 %	Anti- Yellowing- high solid
CT0520	Hardener	50 %	OTL Series Top Coats – Anti-Yellowing
CT0530	Hardener PU	50-100 %	No –Yellowing only for high gloss
720500	Accelerator	1-2 %	Polyester Only
720506	Catalyst	2 %	Polyester Only - Normal
720516	Catalyst	2 %	Polyester Only - Extended Pot Life

HARDENERS & CATALYSTS

- CT9916** Medium hardener, suitable with all polyurethanes. Solid contents +/- 32/33%. Good for polyurethane top coat if high filling is required.
- CT7419** Fast hardener, suitable for all transparent polyurethane products.
- CT9946** Very fast hardener, suitable for all transparent polyurethane products. Electrostatic.
- CT0A67** Hardener for Acrylic Polyurethane only.
- CT0689** Medium- slow hardener, suitable with all polyurethanes. Solid contents +/- 30-31%. Good for polyurethane sealer if high filling is required. It could be use also for withe PU sealers.
- CT0916** Medium- slow hardener, suitable with all polyurethanes. Solid contents +/- 35-36%. Good for polyurethane sealer if high filling is required. It could be use also for withe PU sealers
- CT0530** Slow hardener specific for white polyurethane primers. Offers high elasticity, flexibility and extended pot life. Can be used to cut other hardeners in order to achieve greater filling capacities. Solid contents +/- 34%
- CT0618** Anti- yellowing hardener with high solid contents (+/- 37%). Suitable for high gloss polyurethane top coats. Cam be used 2:1 or 1:1 to increase hardness, chemical and mechanical resistance. Long pot life and optimum saturation.
- CT0520** Fast Anti- yellowing hardener with solid contents +/- 27%. To be used when a maximum non yellowing is required. If used 1:1 with polyurethane top coats, will accelerate cure. Hardens especially with scratch resistant polyurethane top coat OTL/series .
- CT0107** Anti- yellowing hardener, suitable for high gloss top coats. Content solid: 37-39%. Can be used also for barrier coat 710070.

ADDITIVES CHART

<u>CODE</u>	<u>DESCRIPTION</u>
780A26	Polyurethane Fish Eye Killer
780181	Polyurethane and Polyester Anti-Bubble
780187	Polyurethane Leveler
780202	Polyurethane Leveler
780116	Polyester Paraffin Solution Winter
780147	Polyester Paraffin Solution Summer

POLYURETHANE PIGMENTED PASTES

09010000	Polyurethane Paste White
09040000	Polyurethane Paste Organic Orange
09060000	Polyurethane Paste Organic Middle Yellow
09090000	Polyurethane Paste Yellow Oxide Hot
09100000	Polyurethane Paste Yellow Oxide
09170000	Polyurethane Paste Organic Lemon Yellow
09200000	Polyurethane Paste Red Oxide
09210000	Polyurethane Paste Solid Bordeaux
09250000	Polyurethane Paste Scarlet Red
09270000	Polyurethane Paste solid Red
09280000	Polyurethane Paste Red
09290000	Polyurethane Paste Violet
09410000	Polyurethane Paste Phthalo Green
09440000	Polyurethane Paste Phthalo Blue
09470000	Polyurethane Paste Phthalo Blue Greenish
09500000	Polyurethane Paste Black Intense
09520000	Polyurethane Paste Black Smoke

POLYESTER PIGMENTED PASTES

78U001	Polyester Paste White
78U118	Polyester Paste Black
78U023	Polyester Paste Phthalo Blue
78U010	Polyester Paste Prussian Blue
78U031	Polyester Paste Yellow Chrome
78U033	Polyester Paste Yellow
78U009	Polyester Paste Odra
78U008	Polyester Paste Red
78U107	Polyester Paste Bordeaux
78U064	Polyester Paste Orange
78U081	Polyester Paste Violet
78U096	Polyester Paste Phthalo Green
78U950	Polyester Paste Black Concentrate

RECCOMANDED FINISHING SYSTEMS

CLEAR POLYURETHANE OPEN PORE SYSTEM

CLEAR POLYURETHANE HIGH BUILD SYSTEM

WATER CLEAR ACRYLIC POLYURETHANE OPEN PORE SYSTEM

WATER CLEAR ACRYLIC POLYURETHANE OPEN PORE SYSTEM 3' FLAT FINISH

CLEAR POLYURETHANE CLOSE PORE WET LOOK SYSTEM

CLEAR POLYESTER WET LOOK SYSTEM

WHITE SEMI-GLOSS POLYURETHANE OPEN PORE SYSTEM

WHITE MATTE POLYURETHANE OPEN PORE SYSTEM

WHITE GLOSS POLYURETHANE CLOSE PORE SYSTEM

BLACK GLOSS & VARIOUS SHEEN POLYURETHANE CLOSE PORE SYSTEM

BLACK HIGH GLOSS POLYESTER CLOSE PORE SYSTEM

CLEAR POLYURETHANE OPEN PORE SYSTEM

STEP 1 Stain

Apply stain to the substrate with ICSAM 99U/Series Universal Stains concentrate or other approved and compatible stains system. 99U/Series stains are concentrates with which you can mix your choice of water or solvents, depending on the depth of finish you require.

Spray (use a fast thinner blend) or apply a uniform coat of stain throughout the substrate and if you decide to wipe the stain (use a slow thinner blend), then wipe clean in a final wipe with the grain of the substrate.

STEP 2 Polyurethane Sealer

Code	Description	Parts/Weight	Parts/Vol.
FT9916	Polyurethane Sealer	100	128
CT9946*	Hardener	50	64
DL0230	Thinner Blend	15	20

(*) CT0618 Anti - Yellowing

Application: Spray one coat of sealer. If a second coat is required, it can be applied after 1 hour up to 3 hours without sanding. If it is not applied within 3 hours, wait 4 to 6 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of sealer.

<u>Pot Life:</u>	3 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Sand:</u>	3 to 5 hours
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

STEP 3 Polyurethane Top Coat

Code	Description	Parts/Weight	Parts/Vol.
OT994x	Polyurethane Top Coat	100	128
CT9946*	Hardener (*)	50	64
DL0230	Thinner Blend	15	20

(*) CT0618 Anti-Yellowing

Application: When sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	5-6 hours
<u>Dry to Handle:</u>	25-30 minutes
<u>Dry to Stack:</u>	6 hours minimum
<u>Suggested tip size:</u>	1,6 mm
<u>Suggested air pressure:</u>	35 lbs

CLEAR POLYURETHANE HIGH BUILD SYSTEM

STEP 1 Stain

Apply stain to the substrate with ICSAM 99U/Series Universal Stains concentrate or other approved and compatible stains system. 99U/Series stains are concentrates with which you can mix your choice of water or solvents, depending on the depth of finish.

Spray (use a fast thinner blend) or apply a uniform coat of stain throughout the substrate and if you decide to wipe the stain (use a slow thinner blend), then wipe clean in a final wipe with the grain of the substrate.

STEP 2 Polyurethane Sealer

FT0210	Polyurethane Sealer	100	128
CT7419	Hardener	50	64
DL0230	Thinner Blend	15	20

Application: Spray one coat of sealer. If a second coat is required, it can be applied after 1 hour up to 3 hours without sanding. If it is not applied within 3 hours, wait 4 to 6 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of sealer.

<u>Pot Life:</u>	3 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Sand:</u>	4 to 6 hours minimum
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

STEP 3 Polyurethane Top Coat

Code	Description	Parts/Weight	Parts/Vol.
OT15xx	Polyurethane Top Coat	100	128
CT9916	Hardener (*)	50	64
DL0230	Thinner Blend	15	20

(*) CT0618 Anti-Yellowing

Application: When sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	5-6 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Stack:</u>	6 hours minimum
<u>Suggested tip size:</u>	1,6 mm
<u>Suggested air pressure:</u>	35 lbs

WATER CLEAR ACRYLIC POLYURETHANE OPEN PORE SYSTEM

STEP 1 Stain

Apply stain to the substrate with ICSAM 99U/Series Universal Stains concentrate or other approved and compatible stains system. 99U/Series stains are concentrates with which you can mix your choice of water or solvents, depending on the depth of finish you require. Spray (use a fast thinner blend) or apply a uniform coat of stain throughout the substrate and if you decide to wipe the stain (use a slow thinner blend), then wipe clean in a final wipe with the grain of the substrate.

STEP 2 Acrylic Polyurethane Sealer

Code	Description	Parts/Weight	Parts/Vol.
FTA066	Acrylic PU Sealer	100	128
CT0A67	Hardener	10 (*)	13 (*)
DL0020	Thinner Blend	20-30	24-40

(*) Double amount to increase filling properties and hardness.
Maximum 20% or 26 oz. each Gallon

Application: Spray one light coat of sealer. If a second coat is required, it can be applied after 1 hour up to 3 hours without sanding. If it is not applied within 3 hours, wait 4 to 6 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of sealer.

<u>Pot Life:</u>	6-8 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Sand:</u>	6 to 8 hours minimum

Suggested tip size: 1.8 mm
Suggested air pressure: 35 lbs

STEP 3 Acrylic Polyurethane Top Coat

Code	Description	Parts/Weight	Parts/Vol.
OA00xx	Acrylic PU Top Coat	100	128
CT0A67	Hardener (*)	10 (*)	13 (*)
DL0020	Thinner Blend	20-30	24-40

(*) Double the amount to increase filling and hardness. Maximum 20% or 26 oz.

Application: When the sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

Pot Life: 6-8 hours
Dry to Handle: 30-40 minutes
Dry to Stack: 6 hours minimum
Suggested tip size: 1.8 mm
Suggested air pressure: 35 lbs

WATER CLEAR ACRYLIC POLYURETHANE OPEN PORE SYSTEM 3% FLAT FINISH**STEP 1 Stain**

Apply stain to the substrate with ICSAM 99U/Series Universal Stains concentrate or other approved and compatible stains system. 99U/Series stains are concentrates with which you can mix your choice of water or solvents, depending on the depth of finish.

Spray (use a fast thinner blend) or apply a uniform coat of stain throughout the substrate and if you decide to wipe the stain (use a slow thinner blend), then wipe clean in a final wipe with the grain of the substrate.

STEP 2 Acrylic Polyurethane Sealer**WATER CLEAR ACRYLIC POLYURETHANE SEALER**

Code	Description	Parts/Weight	Parts/Vol.
FTA066	Acrylic PU Sealer	100	128
CT0A67	Hardener	10 (*)	13 (*)
DL0020	Thinner Blend	20-30	24-40

(*) Double amount to increase filling properties and hardness.
Maximum 20% or 26 oz. each Gallon

Application: Spray one light coat of sealer. If a second coat is required, it can be applied after 1 hour up to 3 hours without sanding. If it is not applied within 3 hours, wait 4 to 6 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of sealer.

<u>Pot Life:</u>	6-8 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Sand:</u>	6 to 8 hours minimum
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

STEP 3 Acrylic Polyurethane Top Coat

Code	Description	Parts/Weight	Parts/Vol.
OA1005	Acrylic PU Top Coat	100	128
CT0A67	Hardener (*)	10 (*)	13 (*)
DL0020	Thinner Blend	20-30	24-40

(*) Double the amount to increase filling and hardness. Maximum 20% or 26 oz.

Application: When completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	6-8 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Stack:</u>	6 hours minimum
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

CLEAR POLYURETHANE CLOSE PORE WET LOOK SYSTEM

STEP 1 Stain

Apply stain to the substrate with ICSAM 99U/Series Universal Stains concentrate or other approved and compatible stains system. 99U/Series stains are concentrates with which you can mix your choice of water or solvents, depending on the depth of finish.

Spray (use a fast thinner blend) or apply a uniform coat of stain throughout the substrate and if you decide to wipe the stain (use a slow thinner blend), then wipe clean in a final wipe with the grain of the substrate.

STEP 2 Barrier coat

Code	Description	Parts/Weight	Parts/Vol.
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710001	Barrier Coat	100	128
CT7104	Hardener	100	128
DL0230	Thinner Blend	30	32

Application: Apply a thin wash coat of the barrier coat, wait minimum 30 minutes and maximum 1 hours before spraying the sealer (polyester or polyurethane).

If the sealer is not applied within 2 hours, than wait 6 hours, sand the barrier coat with 320 sand paper, air blow the residual from the panel and spray the sealer coat.

If a second coat of barrier coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	30-60 minutes
<u>Dry to Handle:</u>	20-30 minutes
<u>Dry to Stack:</u>	2 hours minimum
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

STEP 3 Polyester Sealer

Code	Description	Parts/Weight	Parts/Vol.
840549	Polyester Sealer	100	128
720500	Accelerator (*)	2	3
DL0020	Thinner	10	15-20
720506	Catalyst (**)	2	3

(*) Use 1 part of 720500 accelerator in hot temperatures (it slows the cure)

(**) Use 72516 for extended pot life (always use 2 parts of catalyst)

Application: Spray one coat of polyester sealer. Wait for at least 1 hour and spray a second coat of the sealer. If a third coat is required, it can be applied after 1 hour without sanding. If this wet on wet application exceed the 1 hour interval, wait minimum 12 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of the sealer.

<u>Pot Life:</u>	25-45 minutes
<u>Dry to Handle:</u>	2-3 hours
<u>Dry to Sand:</u>	12 hours minimum
<u>Suggested tip size:</u>	2.5 mm
<u>Suggested air pressure:</u>	35 lbs

STEP 4 (High Gloss Polyurethane Top Coat)

Code	Description	Parts/Weight	Parts/Vol.
75R010	Polyurethane Top Coat	100	128
CT0530	Hardener	50	72
DL0100	Thinner Blend	40	63

It's possible to increase the hardener ratio till 100% in order to obtain higher hardness.

Application: When sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	4 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Stack:</u>	36 hours minimum
<u>Suggested tip size:</u>	1,6mm
<u>Suggested air pressure:</u>	35 lbs

CLEAR POLYESTER WET LOOK SYSTEM

STEP 1 Stain

Apply stain to the substrate with ICSAM 99U/Series Universal Stains concentrate or other approved and compatible stains system. 99U/Series stains are concentrates with which you can mix your choice of water or solvents, depending on the depth of finish.

Spray (use a fast thinner blend) or apply a uniform coat of stain throughout the substrate and if you decide to wipe the stain (use a slow thinner blend), then wipe clean in a final wipe with the grain of the substrate.

STEP 2 Barrier Coat

Code	Description	Parts/Weight	Parts/Vol.
710001	Barrier Coat	100	128
CT7104	Hardener	100	128
DL0230	Thinner Blend	30	32

Application: Apply a thin wash coat of the barrier coat, wait minimum 30 minutes and maximum 1 hours before spraying the sealer (polyester or polyurethane).

If the sealer is not applied within 2 hours, than wait 6 hours, sand the barrier coat with 320 sand paper, air blow the residual from the panel and spray the sealer coat.

If a second coat of barrier coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	30-60 minutes
<u>Dry to Handle:</u>	20-30 minutes
<u>Dry to Stack:</u>	2 hours minimum
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

STEP 3 Polyester Sealer

Code	Description	Parts/Weight	Parts/Vol.
840549	Polyester Sealer	100	128
720500	Accelerator (*)	2	3
DL0020	Thinner	10	15-20
720506	Catalyst (**)	2	3

(*) Use 1 part of 720500 accelerator in hot temperatures (it slows the cure)

(**) Use 72516 for extended pot life. (always use 2 parts of catalyst)

Application: Spray one coat of polyester sealer. Wait for at least 1 hour and spray a second coat of the sealer. If a third coat is required, it can be applied after 1 hour without sanding. If this wet on wet application exceed the 1 hour interval, wait minimum 12 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of the sealer.

<u>Pot Life:</u>	25-45 minutes
<u>Dry to Handle:</u>	2-3 hours
<u>Dry to Sand:</u>	12 hours minimum
<u>Suggested tip size:</u>	2.5 mm
<u>Suggested air pressure:</u>	35 lbs

STEP 4 High Gloss Polyester Top Coat

Code	Description	Parts/Weight	Parts/Vol.
840903	Polyester Top Coat	100	128
720500	Accelerator (*)	2	3
DL0010	Thinner	10	15-20
720506	Catalyst (**)	2	3

(*) Use 1 part of 720500 accelerator in hot temperatures (it slows the cure)

(**) Use 720516 for extended pot life (always use 2 parts of catalyst)

Application: Spray one coat of polyester finish. Wait for at least 1 hour and spray a second coat of the sealer. If a third coat is required, it can be applied after 1 hour without sanding. If this wet on wet application exceed the 1 hour interval, wait minimum 12 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of the sealer.

<u>Pot Life:</u>	30-40 minutes
<u>Dry to Handle:</u>	2-3 hours
<u>Dry to Sand:</u>	12 hours minimum
<u>Suggested tip size:</u>	2.5 – 3 mm
<u>Suggested air pressure:</u>	35 lbs

WHITE SEMI-GLOSS POLYURETHANE OPEN PORE SYSTEM

STEP 1 Polyurethane Sealer

Code	Description	Parts/Weight	Parts/Vol.
FB1090	White Polyurethane Primer	100	128
CT0916	Hardener	50	100
DL0230	Thinner Blend	10	22

Application: Spray one coat of primer. Apply a second coat of primer after 30-60 minutes up to 3 hours without sanding. If it is not applied within 3 hours, wait 4 to 6 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of primer.

<u>Pot Life:</u>	3-4 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Sand:</u>	3 hours minimum
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

STEP 2 White Polyurethane Top Coat

Code	Description	Parts/Weight	Parts/Vol.
37C034	White PU Top Coat Matte	100	128
CT0618	Hardener	50	78
DL0230	Thinner Blend	15-20	20-25

Application: When sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	4-5 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Stack:</u>	18 hours minimum
<u>Suggested tip size:</u>	1,6 mm
<u>Suggested air pressure:</u>	35 lbs
<u>Suggested air pressure:</u>	35 lbs

WHITE MATTE POLYURETHANE OPEN PORE SYSTEM

STEP 1 Polyurethane Sealer

Code	Description	Parts/Weight	Parts/Vol.
FB0561	White Polyurethane Primer	100	128
CT0720	Hardener	30	57
DL0230	Thinner Blend	15	20

Application: Spray one coat of primer. Apply a second coat of primer after 30-60 minutes up to 3 hours without sanding. If it is not applied within 3 hours, wait 4 to 6 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of primer.

<u>Pot Life:</u>	3-4 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Sand:</u>	4 to 6 hours minimum
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

STEP 2 White Polyurethane Top Coat Matte

Code	Description	Parts/Weight	Parts/Vol.
791F20	White PU Top Coat Matte	100	128
CT0618	Hardener	50	85
DL0100	Thinner Blend	40	50

Application: When sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	4 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Stack:</u>	18 hours minimum
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

WHITE GLOSS POLYURETHANE CLOSE PORE SYSTEM

STEP 1 Barrier Coat

Code	Description	Parts/Weight	Parts/Vol.
710070	Barrier Coat	100	128
CT0107	Hardener	100	128
DL0230	Thinner Blend	50	32

Application: Apply a thin wash coat of the barrier coat, wait minimum 1 hour and maximum 3 hours before spraying the sealer (polyester or polyurethane).

If the sealer is not applied within 3 hours, than wait 6 hours, sand the barrier coat with 320 sand paper, air blow the residual from the panel and spray the sealer coat.

If a second coat of barrier coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	1-2 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Stack:</u>	3 hours minimum
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

STEP 2 White Polyester Sealer

Code	Description	Parts/Weight	Parts/Vol.
FPB600	White Polyester Sealer	100	128
720500	Accelerator (*)	2	4
DL0020	Thinner	10	15-20
720506	Catalyst (**)	2	3

(*) Use 1 part of 720500 accelerator in hot temperatures (it slows the cure)

(**) Use 72516 for extended pot life (always use 2 parts of catalyst)

Application: Spray one coat of polyester sealer. Wait for at least 1 hour and spray a second coat of the sealer. If a third coat is required, it can be applied after 1 hour without sanding. If this wet on wet application exceed the 1 hour interval, wait minimum 12 hours,

sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of the sealer.

<u>Pot Life:</u>	25-45 minutes
<u>Dry to Handle:</u>	2-3 hours
<u>Dry to Sand:</u>	12 hours minimum
<u>Suggested tip size:</u>	2.5 mm
<u>Suggested air pressure:</u>	35 lbs

STEP 3 White Polyurethane Top Coat

Code	Description	Parts/Weight	Parts/Vol.
75C036	White PU Top Coat H.Gloss	100	128
CT0618	Hardener	50 (*)	94 (*)
DL0100	Thinner Blend	40	50

Application: When sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

(*) Double amount to increase mechanical and chemical resistance.
Maximum 1:1 by weight or 128 oz to 188 oz of catalyst

<u>Pot Life:</u>	4 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Stack:</u>	12 hours minimum
<u>Suggested tip size:</u>	1,6mm
<u>Suggested air pressure:</u>	35 lbs

BLACK GLOSS & VARIOUS SHEEN POLYURETHANE CLOSE PORE SYSTEM

STEP 1 Barrier coat

Code	Description	Parts/Weight	Parts/Vol.
710070	Barrier Coat	100	128
CT0107	Hardener	100	128
DL0230	Thinner Blend	50	32

Application: Apply a thin wash coat of the barrier coat, wait minimum 1 hour and maximum 3 hours before spraying the sealer (polyester or polyurethane).

If the sealer is not applied within 3 hours, than wait 6 hours, sand the barrier coat with 320 sand paper, air blow the residual from the panel and spray the sealer coat.

If a second coat of barrier coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	1-2 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Stack:</u>	3 hours minimum
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

STEP 2 Black Polyurethane Sealer

Code	Description	Parts/Weight	Parts/Vol.
731017	Black Polyurethane Sealer	100	128
CT0689	Hardener	50	80
DL0230	Thinner Blend	10	17

Application: Spray one coat of sealer. Apply a second coat of primer after 30-60 minutes up to 3 hours without sanding. If it is not applied within 3 hours, wait 4 to 6 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of primer.

<u>Pot Life:</u>	3-4 hours
<u>Dry to Handle:</u>	30-40 minutes
<u>Dry to Sand:</u>	4 to 6 hours minimum
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

STEP 3 (a) Black Polyurethane Various Sheen

Code	Description	Parts/Weight	Parts/Vol.
772F50	Black PU Top Coat Matte	100	128
CT0520	Hardener	50	78

DL0230 Thinner Blend 15-20 20-25

Application: When sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

Pot Life: 4-5 hours
Dry to Handle: 30-40 minutes
Dry to Stack: 18 hours minimum
Suggested tip size: 1,6 mm
Suggested air pressure: 35 lbs

STEP 3 (b) Black Polyurethane High Gloss

Code	Description	Parts/Weight	Parts/Vol.
OTL093	Black PU Top Coat Glossy	100	128
CT0107	Hardener	100	147
DL0100	Thinner Blend	30	40

Application: When sealer is completely dry, sand the sealer with 320 sand paper, air blow the residual from the panel and spray one coat of the top coat. If a second coat is required, it can be applied after 1 hour without sanding.

Pot Life: 4-5 hours
Dry to Handle: 30-40 minutes
Dry to Stack: 18 hours minimum
Suggested tip size: 1,6 mm
Suggested air pressure: 35 lbs

BLACK POLYESTER HIGH GLOSS SYSTEM

STEP 1 Barrier coat

Code	Description	Parts/Weight	Parts/Vol.
710001	Barrier Coat	100	128

CT7104	Hardener	100	128
DL0230	Thinner Blend	30	32

Application: Apply a thin wash coat of the barrier coat, wait minimum 30 minutes and maximum 1 hours before spraying the sealer (polyester or polyurethane).

If the sealer is not applied within 2 hours, than wait 6 hours, sand the barrier coat with 320 sand paper, air blow the residual from the panel and spray the sealer coat.

If a second coat of barrier coat is required, it can be applied after 1 hour without sanding.

<u>Pot Life:</u>	30-60 minutes
<u>Dry to Handle:</u>	20-30 minutes
<u>Dry to Stack:</u>	2 hours minimum
<u>Suggested tip size:</u>	1.8 mm
<u>Suggested air pressure:</u>	35 lbs

STEP 2 Black Polyester Sealer

Code	Description	Parts/Weight	Parts/Vol.
FPN817	Black Polyester Sealer	100	128
720500	Accelerator	2	4
DL0010	Thinner	10	15-20
720506	Catalyst (*)	2	3

(*) use 720516 for extended pot life (always use 2 parts of catalyst)

Application: Spray one coat of polyester sealer. Wait for at least 1 hour and spray a second coat of the sealer. If a third coat is required, it can be applied after 1 hour without sanding. If this wet on wet application exceed the 1 hour interval, wait minimum 12 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of the sealer.

<u>Pot Life:</u>	40-60 minutes (**)
<u>Dry to Handle:</u>	2-3 hours
<u>Dry to Sand:</u>	12 hours minimum
<u>Suggested tip size:</u>	2.5 mm
<u>Suggested air pressure:</u>	35 lbs

STEP 3 Black Polyester High Gloss

<u>Code</u>	<u>Description</u>	<u>Parts/Weight</u>	<u>Parts/Vol.</u>
842050	Black Polyester Gloss	100	128
720500	Accelerator (*)	2	4
DL0010	Thinner	10	15-20
720506	Catalyst (**)	2	3

(*) Use 1 part of 720500 accelerator in hot temperatures (it slows the cure)

(**) Use 720516 for extended pot life (always use 2 parts of catalyst)

Application: Spray one coat of polyester top coat. Wait for at least 1 hour and spray a second coat of the finish. If a third coat is required, it can be applied after 1 hour without sanding. If this wet on wet application exceed the 1 hour interval, wait minimum 12 hours, sand the sealer with 320 sand paper, air blow the residual from the panel, then spray the new coat of the finish.

<u>Pot Life:</u>	25-45 minutes
<u>Dry to Handle:</u>	2-3 hours
<u>Dry to Sand:</u>	12 hours minimum
<u>Suggested tip size:</u>	2.5 mm
<u>Suggested air pressure:</u>	35 lbs

POLYURETHANE COATINGS SOLUTION TO MOST COMMON PROBLEMS

BLUSHING

A white or grayish cast may form in a varnish, nitrocellulose lacquer or polyurethane (rarely) film during the curing. Usually caused by partial or total precipitation of solid ingredients as a result of condensed moisture in the film. (Excessive humidity or improper solvent balance). In either case, adding a quantity of slow evaporating active solvent, known as a “blush retarder” our DL0014, normally corrects the problem.

BUBBLING

The formation of bubbles may appear in the film while the material is being applied. Caused by any condition that causes air, vapors, or gases to be trapped in the film, while it is still soft, but after it has hardened sufficiently to prevent the gas from escaping and evaporating.

Common causes may be the following:

- Material drying too fast, which can be corrected by adding a small amount of DL0014 as retarder.
- Material too heavily applied, which can be corrected by reducing viscosity with DL0230.
- Excessive air atomization, which can be corrected by decreasing the air pressure.

BLISTERING

The formation of bubbles or pimples on the finished surface.

Common causes may be the following:

- Exposure to excessive heat.
- Grease or other volatile materials under the finish.
- Moisture in the wood or by too frequent applications of coats.

Remember that anything which causes a gas or vapor to form under the film may cause blistering. To avoid this: try reducing excessive heat room temperature, clean the wood before coating, keep the humidity in the wood so it does not go beyond 6 to 8%, and decrease the frequency of coats.

FLOW AND LEVELING

Flow: the characteristic of a coating which allows it to level or spread into a smooth film of uniform thickness before hardening.

Leveling: Ability of a film to flow out free from ripples, fish-eyes, orange-peel, brush marks, runs, sags or other surface defects after application.

To eliminate problems such as ripples, fish-eyes, brush marks and orange peel use 0,5 - 1% of 780A26 or 780202.

Orange peel can also be caused by the application pressure being too high. The other problems associated with flow and leveling can be corrected by the use of DL0014 to reduce the viscosity and slow the drying time.

CRAWLING

Description of the refusal of a finishing material to remain spread in a continuous uniform coating after it has been applied. The finish crawls or creeps away from certain spots and leaves them uncoated.

This may be due to:

- Excessive viscosity - reduce the viscosity with appropriate thinner DL0010 for sealer or primer, DL0007 for polyester with wax.
- A high surface tension - use 0,5 – 1% Anti Fisheye additive 780A26.
- Low temperatures - you increase the temperature.
- Glossy surface of undercoat - use sanding paper with larger grain.
- Presence of grease, oil or other foreign matter on the undercoat - clean better the undercoat.

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POLYURETHANE THINNERS

Many application problems and poor finish results are due to the use of the wrong polyurethane reducer (thinner). Use recommended thinners only, i.e., DL0020, DL0230, DL0014. We do recommend you only use ICSAM thinner blends and not mix other supplier's products.

Many of the thinners that are available in the market today are intended for machinery and equipment clean-up or automotive refinishing. They are usually very strong solvents and evaporation is too fast to obtain the necessary flow and leveling required for fine polyurethane finishes. Strong solvents will often bleed stains, lift finishes, draw out subsurface contaminants and cause many unnecessary problems with marginal equipment or application technique.

VARIATIONS OF SHEEN

Every batch of ICSAM's polyurethane is checked to be sure the gloss is within our specifications. Variations of sheen are possible when using different thinners, different hardeners and different quantities of both, change of application equipment, or dramatic changes in temperature. Additionally, change of sheen would normally occur when the material is insufficiently agitated. Semi-gloss polyurethanes and those of lower sheens should be stirred, and then agitated a minimum of ten minutes. Most low sheen finishes require 12 - 24 hours air drying to develop their sheen even though the surface may feel dry.

SURFACE PREPARATIONS

Smooth finish on wood starts with a clean, smooth, sanded surface which is free of dirt, oil, grease or any foreign material that would not be compatible with a polyurethane finish. Pre-finish sanding is usually done with 100 -150 grit sand paper. Always sand with the wood grain and remove sanding dust from the surface before finishing.

Contamination in the wood pores or spray equipment, such as silicone or sizing oils, will occasionally cause uneven drying or craters (fisheyes) in stains or finish coats. Anti-cratering additives (Fish Eye Remover) is the usual method for correcting these problems. Use 780A26 up to 1% of total coating to remedy fisheyes.

DRY TIMES

Optimum ambient drying conditions are 68° F - 75° F. The product will not cure properly below 55° F. Improper curing may result in loss of adhesion, flaking, or peeling.

DRY TIME AND USE OF STAINS

It is highly recommended the use of ICSAM stains 99U/Series to insure system compatibility. If not using ICSAM stains, test for compatibility issues.

If not used ICSAM stains, all oil base or synthetic stains should be allowed to dry at least 24 hours before applying a polyurethane product. Solvents such as mineral spirits and naphtha in oil stains are not compatible with polyurethanes and must be completely dried out of the stain before a polyurethane is applied. Solvent type spray stains may be recoated sooner, and testing at your location with your stain is recommended for proper recoat compatibility. For best results Acrylic-Urethane is recommended over white or pastel colored stains.

EQUIPMENT CLEAN UP

Cleaning of spray equipment with DL0010 must be done as soon as possible after application of coating and is the only recommended thinner for cleanup.

PRODUCT DISPOSAL

Unused polyurethane must be disposed of in the proper manner and in accordance with applicable local, state, and federal laws.

POLYESTER COATINGS SOLUTION TO MOST COMMON PROBLEMS

PRECAUTION

The polyester catalyst 720506 or 720516 must never be added directly to undiluted polyester accelerator or promoter 720500. A violent explosion may occur. The best procedure is to first thoroughly mix the accelerator (720500) into the resin and then add the catalyst 720506 or 720516.

BLUSHING

Although it is very difficult to encounter this problem with a polyester finish, it is possible to see this reaction only if excessive quantities of product are applied. Spray lighter coats with correct intervals between coats. Spraying applications of multiple coats (wet-on-wet) of polyester will allow good film build with no sags, using the proper techniques. The use of the *Polyurethane Barrier Coat like 710001 or 710070* is very important to ensure good results.

BUBBLING

The formation of bubbles may appear in the film while a material is being applied. Bubbling is caused by any condition that causes air, vapors, or gases to be trapped in the film while it is soft but after it has hardened sufficiently to prevent the gas from escaping.

Common causes may be the following:

- Material drying too fast – check that you are using the correct amount of the accelerator and the catalyst.
- Material too heavily applied - can be corrected by reducing viscosity with DL0010
- Excessive air atomization - decrease your air pressure
- Insufficient air atomization - increase your air pressure
- In all the other cases - add 0,5 - 1% of 780101 or 780181
- Make sure the material is not expired.

BLISTERING

The formation of bubbles or pimples on the surface of finished work.

Caused by :

- Exposure to excessive heat
- Grease or other volatile material under the finish
- Moisture in the wood
- Too frequent application of coats.
- Anything which causes a gas or vapor to form under the film may cause blistering.

To avoid this: try reducing excessive heat room temperature, clean the wood before coating, keep the humidity in the wood so it does not go beyond 6 to 8%, and decrease the frequency of coats.

The use of the *Polyurethane Barrier Coat* like 710001 or 710070 is very important to ensure good results.

CRAWLING

Description of the refusal of a finishing material to remain spread in a continuous uniform coating after it has been applied. The finish crawls or creeps away from certain spots and leaves them uncoated.

This may be due to:

- Excessive viscosity - reduce the viscosity with appropriate thinner DL0010 for sealer or primer, DL0007 for paraffinated polyester.
- High surface tension - use 0,5 – 1% Anti Fisheye additive 780A26
- Low temperatures - increase the temperature in the finishing room
- Glossy surface of undercoat - use sanding paper with larger grain
- Presence of grease, oil or other foreign matter on the undercoat - clean better the undercoat.

THINNERS

Many application problems and poor finishing results are due to the use of the wrong polyester thinner. Use only DL0010 for thinning and cleanup of the equipment. DL0007 may be used in hot weather. Many of the thinners that are available in the market today are intended for machinery and equipment clean-up or automotive refinishing. They are usually very strong solvents and evaporation is far too fast to obtain the necessary flow and leveling required for fine polyester finishes. Strong solvents will often bleed stains, lift finishes, draw out subsurface contaminants and cause many unnecessary problems with marginal equipment or application technique.

DRY TIMES

Optimum ambient drying conditions are 68°F / 75° F at 30% relative humidity. Product will not cure properly below 60° F. Improper curing may result in loss of adhesion, flaking, or peeling.

SURFACE PREPARATIONS

Smooth finish on wood starts with a clean, smooth, sanded surface free of dirt, oil, grease or any foreign material that would not be compatible with a polyester finish. Pre-finish sanding is usually done with 100 -150 grit sand paper. Always sand with the wood grain and remove sanding dust from the surface before finishing.

Contamination in the wood pores or spray equipment, such as silicone or sizing oils, will occasionally cause uneven drying or craters (fisheyes) in stains or finish coats. Anti-cratering additives (Anti Fisheye additive 780A26) usually correct these problems.

Use 780A26 at 0,5 to 1.0% of total Direct Gloss Polyester Coating to remedy fisheyes. Use 780A26 at 0.2 - 0.3% in 840549 Polyester Sealer.

DRY TIME AND USE OF STAINS

All oil base or synthetic stains should be allowed to dry at least 24 hours before applying the barrier coat (710001 or 710070). Solvents such as mineral spirits and naphtha in oil stains are not compatible with polyesters, and must be completely dried out of the stain before a polyester is applied. Solvent type spray stains may be recoated sooner, and testing at your location with your stain is recommended for proper recoat compatibility. Once again, it is crucial to use the barrier coat 710001, or 710070, before applying the polyester coating. For best results, a water clear Barrier Coat 710018 is recommended over white or pastel colored stains

EQUIPMENT CLEAN UP

The cleaning of the spray equipment with DL0100 must be done as soon as possible after application of coating. The use of DL0010 is the only recommended thinner.

PRODUCT DISPOSAL

Any unused polyester must be disposed of in the proper manner and in accordance with applicable local, state, and federal laws.