

Chemglaze® A-Line Polyurethane Coatings

Description

Chemglaze® A-line coatings are moisture-curing, aliphatic polyurethane coatings designed for product finishing applications on many metal and rigid or semi-rigid plastic substrates. Chemglaze A-Line coatings are ASTM D-16 Type II oil-free products, and are available in clear, black and white.

Features and Benefits

Versatile – perform well in many metal and plastic product finishing applications. Durable high gloss finish can be adjusted to semigloss or lusterless by adding Chemglaze A170 flattening concentrate.

Durable – provide excellent resistance to impact and abrasion; exhibit low Taber weight loss values.

Environmentally Resistant – provide long-term weathering resistance properties.

Chemically Resistant – cure to a hard surface that is resistant to many acids, alkalines, detergents, lubricating oils, solvents and chemicals.

Color Retention – provide excellent colorfast, high gloss finish.

Application

Surface Preparation – Thoroughly clean surfaces to remove all dust, oil and grease. Before coating surfaces, apply test patches of Chemglaze A-Line coating to determine if adhesion is adequate, or scuff sanding or using a primer will be required. Contact your **SOCOMORE** representative for recommended primer required for your application.

Typical Properties*

	A074	A080	A246	A382	A170**
Appearance	Clear Liquid	Clear Liquid	White Liquid	Black Liquid	Clear Liquid
Viscosity, cps ASTM D 2196, Brookfield LVT Spindle 2, 30 rpm	75	450-925	100-400	85-400	40-800
Density ASTM D 1475					
kg/L	0.92-0.96	0.99-1.02	1.12-1.17	0.96-1.01	0.95-0.99
(lb/gal)	(7.65-8.05)	(8.27-8.54)	(9.37-9.77)	(8.0-8.4)	(7.93-8.33)
Solids Content by Weight, % ASTM D 2369 modified	35-38	58.8-63.2	54-58	43.4-47.4	24.6-28.6
Flash Point (Seta), °C (°F) ASTM D 3278, Closed Cup	26 (80)	28 (83)	19 (67)	27 (81)	31 (88)
Volatile Organic Content (VOC) ASTM D 3960					
g/L	600	407	510	537	709
(lb/gal)	(5.01)	(3.40)	(4.25)	(4.48)	(5.92)

*Data is typical and not to be used for specification purposes.

** Chemglaze A170 flattening concentrate must be mixed with Chemglaze A074, A080, A246 or A382 coating before use.

SOCOMORE TECHNICAL DATA

Mixing – Before mixing Chemglaze A246 or A382 coating or A170 concentrate, scrape the container bottoms to loosen and remove settled pigments. Mechanically stir or agitate containers until uniform in consistency. Catalyze, thin, or adjust gloss (if desired) of Chemglaze A-Line coating.

- **Catalyst**

With adequate relative humidity, Chemglaze A-Line coatings will cure at room temperature without adding a catalyst. For faster tack-free time without affecting working life, add 1-2% Chemglaze 9986 catalyst for room temperature cure, or 1-3% Chemglaze 9988 catalyst when curing above 93°C (200°F). In low relative humidity conditions, or for faster cure at room temperature, add 1-5% Chemglaze 9995 co-reactant catalyst. Thoroughly mix coating after addition of catalyst.

Working life of coating mixed with Chemglaze 9995 catalyst will be a maximum of 8 hours.

- **Thinner/Additive**

Depending on application method, Chemglaze 9951 thinner or Chemglaze 9974 roller additive can be added to Chemglaze A-Line coating. Do not use solvents containing alcohol or glycol ether. Thoroughly mix coating after addition of thinner or additive.

- **Gloss Adjustment**

Chemglaze A074, A080, A246 and A382 coatings will dry to a high gloss finish without coating modification. The gloss can be adjusted to a semigloss or lusterless finish by adding Chemglaze A170 flattening concentrate. To adjust the gloss to semigloss, add 30-50 parts Chemglaze A170 concentrate, by volume, to 100 parts high gloss coating. To adjust the gloss to lusterless, add equal parts, by volume, of Chemglaze A170 concentrate to the high gloss coating.

The resulting gloss appearance is affected by application method, drying conditions, and the amount of Chemglaze A170 concentrate used. Do not exceed 100 parts Chemglaze A170 concentrate to 100 parts high gloss coating, as coating performance will be impaired.

When Chemglaze A170 concentrate is added to the high gloss coating, the flattening concentrate must be catalyzed for proper cure. Select the Chemglaze catalyst which will best match curing conditions.

Thoroughly stir Chemglaze A170 concentrate before use and mechanically mix after adding to the high gloss coating. Failure to thoroughly mix will result in non-uniform gloss or film whitening.

Applying – Apply coating by spray, brush, dip or roller application methods. Chemglaze A-Line coatings are best applied at 13-35°C (55-95°F), with substrate temperatures at least 2.8°C (5°F) above the dew point.

- **Spraying**

Apply coating using siphon, HVLP, pressure pot or airless spray equipment. For application with siphon, HVLP or pressure pot, dilute Chemglaze A-Line coating 5-25% by volume with Chemglaze 9951 thinner. For airless spray application, dilute coating up to 10% with Chemglaze 9951 thinner.

- **Brushing/Dipping/Rolling**

For improved flow and air release, add Chemglaze 9974 additive to one gallon Chemglaze A074, A080 and A246 coatings as indicated.

Chemglaze A074	15-30 ml (0.5-1.0 fl oz)
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Chemglaze A080 & A246	44-60 ml (1.5-2.0 fl oz)
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Do not add Chemglaze 9974 additive to Chemglaze A382 coating as it is already contained in this coating.

Depending on surface characteristics, optimum dry film thickness of coating should be 38.1-50.8 micron (1.5-2.0 mil). Wet film thicknesses above 127 micron (5 mil) can cause bubbling and sagging. Coverage rate is 7.4-9.8 m²/L (300-400 ft²/gal).

SOCOMORE TECHNICAL DATA

Curing – Chemglaze A-Line coatings cure by reacting with moisture in the air. Cure rate is dependent on the temperature, relative humidity and amount of air circulation needed to remove the solvent.

Under the acceptable curing conditions (see Temperature/Relative Humidity Graph), the coating will develop its ultimate properties in approximately 14 days. Lower temperatures and humidities will retard cure, while higher temperatures and humidities may cause bubbling.

Chemglaze A-Line coatings may be recoated after the first application within 4 hours minimum and 24 hours maximum at room temperature [25°C (77°F)] and 50% relative humidity. Recoat time is dependent on temperature and humidity. High temperature and humidity promote fast cure while low temperature and humidity slow down the cure. For maximum intercoat adhesion, recoat within 24 hours.

If maximum recoat time is exceeded, the surface must be roughened by sanding with fine sandpaper before recoating.

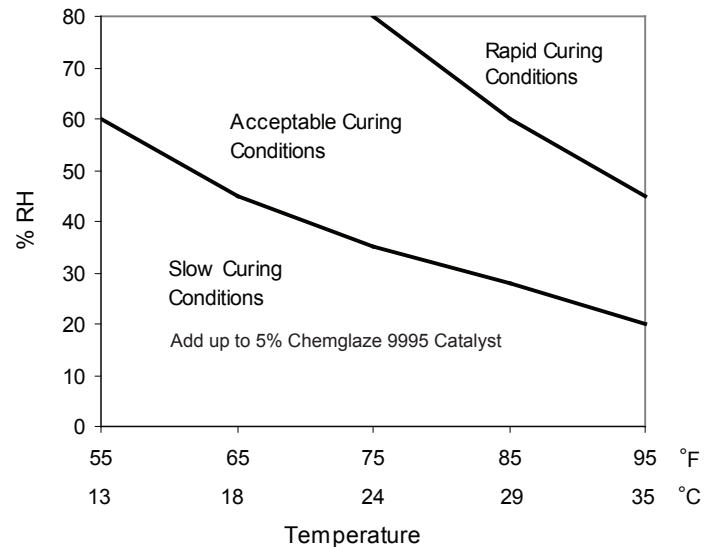
Cleanup – Use Chemglaze 9951 thinner, xylene, methyl ethyl ketone (MEK) or methyl isobutyl ketone (MIBK) to clean equipment before coating dries. Do not use lacquer thinners, water or solvents containing alcohols.

Typical Cured Properties*

	A074	A246
Tensile Strength, MPa	42.6	29.98
Elongation at Break, %	98	82

*Data is typical and not to be used for specification purposes.

Temperature/Relative Humidity Graph



SOCOMORE TECHNICAL DATA

Shelf Life/Storage

Shelf life is one year from date of shipment when stored at 10-32°C (50-90°F) in original, unopened container. Store indoors away from heat, sparks and open flames.

Cautionary Information

Before using this or any SOCOMORE product, refer to the Safety Data Sheet (SDS) and label for safe use and handling instructions.

For industrial/commercial use only. Must be applied by trained personnel only. Not to be used in household applications. Not for consumer use.

Limitations

- Not for immersion service. Do not apply to wet or damp substrates.
- Chemglaze A-Line coatings contain aliphatic isocyanate monomer. Spray only in properly ventilated areas with specified respiratory protection.
- Chemglaze A-Line coatings contain strong solvent and isocyanate or epoxy resins. Avoid breathing vapors and spray mists. Good ventilation is extremely important while using these products. Workers must be protected from inhalation of vapors/mists by using an air-supplied or chemical cartridge respirator or other engineering controls.

Values stated in this technical data sheet represent typical values as not all tests are run on each lot of material produced. For formalized product specifications for specific product end uses, contact SOCOMORE.

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Manufactured for SOCOMORE by:
LORD Corporation, Saegertown, PA

For more information contact:
SOCOMORE
791 Westport Pkwy
Fort Worth, TX 76177
Phone: 1-817-335-1826
csr-na@socomore.com
www.socomore.com

The logo for SOCOMORE, featuring the word "soco" in blue and "more" in orange, with a stylized vertical line separating the two parts.