PROGRAMMED SYSTEM TECHNIQUE
NORTH AMERICA

LESONAL®

Multi-Substrate Epoxy LV

Programmed System Technique (PST)
Primer
08/16/2024

DESCRIPTION

Multi-Substrate Epoxy LV is a grey, high-solids, heavy-metal-free epoxy primer. It provides excellent corrosion resistance for various grades of aluminum and steel utilizing state-of-the-art corrosion inhibitive pigments. This primer when ready-to-spray has less than 2.1 lbs./gal VOC.

Safety Considerations

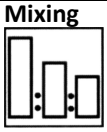
- Use suitable personal protection
- When exposed to paint or solvents AkzoNobel recommends the use of a fresh air supply respirator

Surface Preparation

• Existing Finishes	– #P320 to #P400 grit dry, then cleaned.
• Steel	– #P80 then #P120 dry, then cleaned.
• Galvanized Steel	– #P180 grit or red scuff pad, then cleaned.
• Aluminum	– #P180 grit dry, then cleaned.

*Reference complete TDS for additional substrate information.

Mixing



STICK # 7

Mixing	By Volume (as a sealer)
3	Parts Multi-Substrate Epoxy LV
1	Parts Multi-Substrate Epoxy LV Hardener
1	Parts Multi-Substrate Epoxy LV Reducer

Equipment

Spray-Gun Set-Up

- 1.2 – 1.4 mm HVLP Gravity
- 1.2 – 1.4 mm Compliant Gravity

Application Air Pressure

- HVLP-10 psi (<0.7 bar) at cap maximum.
- Consult manufacturer specifications.

Application

Application at 60-95°F (15-35°C)

- Apply 1 single wet coat (1 x 1)

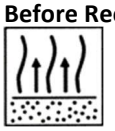
Air Drying

Air Drying at 70°F (21°C)

- Dust Free in 20 – 25 minutes
- Dry to Handle in 3 – 3½ hours

Dependent on film weight and air flow.

Flash Before Recoat



Flash at 70°F (21°F) Before Recoat

• Lesonal Primer Pro Surfacer or Sealer	– 20 minutes
• Lesonal Primer Pro LV Surfacer or Sealer	– 20 minutes
• Lesonal Basecoat WB	– 20 minutes
• Lesonal Basecoat SB	– 20 minutes
• Lesonal UV Filler	– 30 minutes
• Multi-Substrate Epoxy LV	– 45 minutes
• Polyester body filler (see TDS)	– 1 hour

Multi-Substrate Epoxy LV

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Multi-Substrate Epoxy LV is a grey, high-solids, heavy-metal-free epoxy primer. It provides excellent corrosion resistance for various grades of aluminum and steel utilizing state-of-the-art corrosion inhibitive pigments. This primer when ready-to-spray has less than 2.1 lbs./gal VOC.

PRODUCT AND ADDITIVES

Product	• Multi-Substrate Epoxy LV	– Item #579672
Hardeners	• Multi-Substrate Epoxy LV Hardener	– Item #579185
Activators / Reducers	• Multi-Substrate Epoxy LV Reducer	– Item #579567

SDS and TDS for products available online at – http://my.anaac.net/

METHOD OF USE

Suitable Substrates	**Substrate**	**Surface Preparation**
☑	• Existing finishes	– #P320 to #P400 grit dry
	• Steel	– #P80 to #P180 grit dry
	• Galvanized steel	– Red scuff pad or #P180
	• Galvanneal steel	– Red scuff pad
	• Stainless steel	– #P180 grit dry
	• Blasted steel (hot and cold rolled)	– Blasted to a white appearance
	• Aluminum (2024, 5052, 6022, 6061, 6111)	– #P180 grit dry
	• AutoPrep Pretreatment Wipes	– Following product TDS
	• Henkel Alodine 5700	– Following product TDS
	• Glass reinforced polyester laminates	– #P400 grit dry
	• Polyester body filler	– #P180 to #P220 grit dry
	• OEM e-coat	– Sanding not required
	• Primer Surfacers: Primer Pro, Primer Pro LV, or Multi-Substrate Epoxy LV	– Completely cured or minimum 24 hours at ≥70°F (21°C), then sanded #P320 - #P400 dry.
	• TPO plastic	– Properly prepared, then treated with Primer PO or Primer PO LV.

Multi-Substrate Epoxy LV

- Surfaces should be clean and free of contamination.
- Existing finishes should be fully cured or have a minimum aging of 24 hours at ≥ 70º F (21° C) before applying Multi-Substrate Epoxy LV.
- Aluminum and steel grades other than listed, should be tested prior to product use.
- Performance on steel substrates can be optimized by applying Multi-Substrate Epoxy LV over Autoprep Pretreatment Wipes or Henkel 1455.
- Aluminum performance can be enhanced by pretreating with Autoprep Pretreatment Wipes or Henkel Alodine 5700. Carefully follow the instructions for the pretreatment product used.
- Polyester body fillers tested include Evercoat - Quantum 1, Z Grip, Rage, Slick Sand, Super Build 4:1; 3M Platinum Plus and Duratec Vinyl Ester Primer.

- Do not apply directly over Sikkens Washprimer 1K CF.
- Do not apply to soft, deformable plastics.

Basic Raw Materials

- Multi-Substrate Epoxy LV – Epoxy resins
- Multi-Substrate Epoxy LV Hardener – Polyamine resins
- Multi-Substrate Epoxy LV Reducer – Special solvent blend

Product Agitation

Stirring

- Multi-Substrate Epoxy LV needs to be thoroughly agitated before use.
- Machine shake or stir vigorously before each use.

Mixing Sealer

STICK #7

Mix

3	Parts Multi-Substrate Epoxy LV
1	Part Multi-Substrate Epoxy LV Hardener
1	Part Multi-Substrate Epoxy LV Reducer

Mixing Surfacer

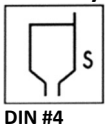
STICK #7

Mix

3	Parts Multi-Substrate Epoxy LV
1	Part Multi-Substrate Epoxy LV Hardener
10%	Parts Multi-Substrate Epoxy LV Reducer

Note: Reducer amount is 10% of the "A" component, by volume.

Viscosity



DIN #4

Ready to Spray at 70°F (21°C)

Surfacer	**Sealer**	– Measured using DIN #4 cup
18 – 20 Seconds	13 – 16 Seconds	

Multi-Substrate Epoxy LV

Pot-Life When Mixed

Product Mix	At 70°F (21°C)
• Multi-Substrate Epoxy LV ○ Pot life will be influenced by mixing ratio and temperature	– 5 hours

Equipment Surfacer

Spray-Gun Set-Up - SURFACER

- 1.7 – 2.0 mm HVLP Gravity
- 1.7 – 2.0 mm Compliant Gravity

Application Air Pressure

- ○ HVLP-10 psi (<0.7 bar) at cap maximum.
- ○ Consult manufacturer specifications.

Equipment Sealer

Spray-Gun Set-Up - SEALER

- 1.2 – 1.4 mm HVLP Gravity
- 1.2 – 1.4 mm Compliant Gravity

Application Air Pressure

- ○ HVLP-10 psi (<0.7 bar) at cap maximum.
- ○ Consult manufacturer specifications.

Application Surfacer

Application at 60-95°F (15-35°C)

- Apply 2-3 single flowing coats.
  - ○ Allow for proper flash between coats.
    - ▪ Flash time will be dependent on ambient temperature, applied paint wetness/thickness, and available airflow.

Application Sealer

Application at 60-95°F (15-35°C)

- Apply 1 single wet coat (1 x 1)
  - ○ Allow for proper flash before topcoat.
    - ▪ Flash time will be dependent on ambient temperature, applied paint wetness/thickness, and available airflow.

Multi-Substrate Epoxy LV

Flash Drying

Flash at 70°F (21°C) Between Coats (Surfacer) – 10 minutes

Flash at 70°F (21°C) Before Recoat (Sealer)

- Lesonal Primer Pro Surfacer or Sealer – 20 minutes
- Lesonal Primer Pro LV Surfacer or Sealer – 20 minutes
- Lesonal Basecoat WB – 20 minutes
- Lesonal Basecoat SB – 20 minutes
- Lesonal UV Filler – 30 minutes
- Polyester Body Filler – 1 hour
- Lesonal Multi-Substrate Epoxy LV – 45 minutes

Maximum Recoat (must be sanded after maximum)

- Lesonal Primer Pro Surfacer or Sealer – 30 days
- Lesonal Primer Pro LV Surfacer or Sealer – 30 days
- Lesonal Basecoat WB – 30 days
- Lesonal Basecoat SB – 7 days
- Lesonal UV FIller – 7 days
- Polyester body filler – 7 days
- Lesonal Multi-Substrate Epoxy LV – 30 days

- Flash time will be dependent on ambient temperature, applied paint wetness/thickness and available air-flow.
- Maximum recoat times are based on the object maintaining an ambient temperature status and preventing extended exposure to the outside elements.

DRYING / CURING TIME

Drying / Curing Time – Primer Surfacer

Primer Surfacer Air Dry

- 24 hours at 70°F (21°C)

Primer Surfacer Force Dry Bake

- 3 Hours at 140°F (60°C)

Primer Sealer Air Dry

- Multi-Substrate Epoxy LV (sealer mix): 3 – 4 hours at 70°F (21°C) dry to handle.
  - Drying times are stated at recommended application method, film thickness, and object temperature.

Drying / Curing Time – Short-wave Infrared

Product Mixture	Ramp Time to ≈220°F (104°C)	Cure Time at ≈220°F (104°C)
Multi-Substrate Epoxy LV (surfacer mix)	≈ 2 minutes	≈ 4 minutes
Multi-Substrate Epoxy LV (sealer mix)	≈ 2 minutes	≈ 3 minutes

Multi-Substrate Epoxy LV

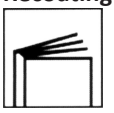
Notes

- Panel temperature is not to exceed 250°F (121° C).
- Due to variations in equipment, cure times are approximate. Refer to equipment manufacturer for specific drying guidelines.
- Allow surface to return to ambient temperature prior to sanding or topcoating (5-10 minutes).

Drying times are stated at recommended application method, film thickness and object temperature.

POST-APPLICATION

Recoating



After the stated dry time, Multi-Substrate Epoxy LV may be recoated with the following materials:

- Primer Pro Surfacer or Sealer
- Primer Pro LV Surfacer or Sealer
- Basecoat WB (with 5% Hardener WB)
- Basecoat SB (with 10% Clear Hardener)
- Polyester Body Filler
- Autosurfacer UV
- Multi-Substrate Epoxy LV

    - Basecoat hardener addition is by volume.
    - Polyester body fillers tested include Evercoat - Quantum 1, Z Grip, Rage, Slick Sand, Super Build 4:1; 3M Platinum Plus and Duratec Vinyl Ester Primer.

ADDITIONAL INFORMATION

Cleaning of Equipment

- Clean equipment and dispose of waste following local and federal regulations. In compliant localities, use a VOC compliant high-quality solvent borne gun cleaner. For national rule regions, a use high quality lacquer thinner.
- For efficient cleaning and less evaporated cleaning solvents, an enclosed automatic gun cleaning machine is suggested.

Film Thickness **– Using Suitable Application**

- Multi-Substrate Epoxy LV **(surfacer mix)**: 1 coat will achieve a thickness of 1.7 – 2.0 mils (43.2 – 50.8 µm) dry.
- Multi-Substrate Epoxy LV **(sealer mix)**: 1 coat will achieve a thickness of 0.8– 1.4 mils (20.3 – 35.6 µm) dry.

Theoretical Coverage

- With the recommended application the theoretical material usage is ±658 feet^2/gallon (16.2 m^2/liter) at a 1 mil thickness (25.4µm) and 100% transfer efficiency.
- Actual coverage is dependent on many factors which may include the shape of the object, surface smoothness, application technique, and other application variables which could affect actual coverage.

Multi-Substrate Epoxy LV

VOC / Regulatory Information	**Product (Ready to Spray)**	**VOC Pounds per Gallon**	**VOC Grams per Liter**
	• Multi-Substrate Epoxy LV (sealer or surfacer mix ratio)	– <2.1	– 250

- Do not handle until the Safety Data Sheets have been read and understood. Regulations require that all employees be trained on Safety Data Sheets for all chemicals with which they come in contact. The manufacturer recommends the use of an air-supplied respirator when exposed to vapors or spray mist.

Product Storage

Store items unopened or used products in approved closed containers with proper labeling. Store in moderate temperatures between 40°F - 95°F (5°C – 35°C). Avoid too much temperature fluctuation. Optimum storage temperature is approximately 70°F (21°C)

– Refer to the Lesonal Product Shelf-Life Overview TDS or the current price list for the most up-to-date shelf-life information.

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FOR PROFESSIONAL USE WITH SUITABLE HS&E EQUIPMENT

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