

Technical Data Sheet

MIL-PRF-24635E SILICONE ALKYD ENAMEL



Product description

MIL-PRF-24635 is a high solids, low VOC (340 g/L), air drying, silicone alkyd enamel. Formulated for use on primed metal, GRP, wood, and plastic/composite surfaces.

- Complies with Military Specification MIL-PRF-24635 Type II, Class 1, 2, 3, Grade A,B,C
- Type II, Class 2, Grade B, color 26270 Haze Gray, has a Low Solar Absorption (LSA) package

Typical use

For use on primed substrates in industrial and marine environments.

- Marine vessels
- Interior and exterior
- Steel
- Galvanized
- Aluminum
- Masonry
- Complies with Military Specification MIL-PRF-24635 Type II, Class 1, 2, 3, Grade A,B,C

Performance Colours

Various Federal 595B colors

- Type II, Class 2, Grade B, color 26270 Haze Gray, meets the Low Solar Absorption (LSA) requirements. Low Solar Absorption (LSA) Coating minimizes sun Heat Efficiency Transfer (HET). It was developed for marine vessels and/or other structures where a durable Haze Gray, Semi-Gloss, Silicone Alkyd is required that will minimize HET into the interior of ships and/or structures.
- Type II, Class 2, Grade C, color 26270 Haze Gray, meets the Low Solar Absorption (LSA) and Rust Stain Resistance (RSR) requirements on the outboard discharge areas.

Product data

Finish: Low Gloss, Semi Gloss, or High Gloss LSA only

Color: Various Fed. 595B colors available

Volume Solids: 60.0% ± 2% minimum

Weight Solids: 73.0% ± 2% minimum

Film thickness per coat

Typical recommended specification range

Dry film thickness	40 - 63 microns
Wet Film Thickness	63 - 100 microns
Theoretical Speeding Rate	15.00 -9,52 m ² /l

Surface preparation

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Minimum recommended surface preparation:

- * Iron & Steel: SSPC-SP2
 - * Aluminum: SSPC-SP1
 - * Galvanizing: SSPC-SP1
 - * Concrete & Masonry: SSPC-SP13/NACE 6
- Wood, interior: Clean, smooth, dust free
- * Requires primer

Surface Preparation Standards

	Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal		Sa 3	Sa 3	SP 5	1
Near White Metal		Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast		Sa 2	Sa 2	SP 6	3
Brush-Off Blast		Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	- Rusted	C St 2	C St 2	SP 2	
	- Pitted & Rusted	D St 2	D St 2	SP 2	
Power Tool Cleaning	- Rusted	C St 3	C St 3	SP 3	
	- Pitted & Rusted	D St 3	D St 3	SP 3	

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Iron & Steel

Minimum surface preparation is Hand Tool Clean per SSPC-SP2. Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. For better performance, use Commercial Blast Cleaning per SSPC-SP6/NACE 3, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Prime any bare steel within 8 hours or before flash rusting occurs.

Aluminum

Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1.

Galvanized Steel

Allow to weather a minimum of six months prior to coating. Solvent Clean per SSPC-SP1. When weathering is not possible, or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a test patch. Allow paint to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2, prime the area the same day as cleaned.

Previously Painted Surfaces

If in sound condition, clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, or if this product attacks the previous finish, removal of the previous coating may be necessary. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.

RECOMMENDED SYSTEMS

Dry Film Thickness / ct. Mils (Microns)

Steel, alkyd primer:

1 ct. TT-P-645 Primer	1.75-3.5 (45-88)
1-2 cts. MIL-PRF-24635	1.5-2.5 (40-63)

Steel, epoxy : primer:

2 cts. MIL-DTL-24441 Epoxy Primer	3.0-4.0 (75-100)
1-2 cts. MIL-PRF-24635	1.5-2.5 (40-63)

Aluminium:

1 ct. DTM Wash Primer	0.7-1.3 (18-32)
1-2 cts. MIL-PRF-24635	1.5-2.5 (40-63)

Galvanized Metal:

1 ct. ALC HS alkyd modified acrylic	1.5-2.5 3.0-4.5
1-2 cts. MIL-PRF-24635	(75-112) (40-63)

Previously Painted:

1-2 cts. MIL-PRF-24635	1.5-2.5 (40-63)
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The systems listed above are representative of the product's use, other systems may be appropriate.

Application

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

ReducerNot recommended
Clean UpMineral Spirits,
Airless Spray Pressure.....2700-3000 psi
Hose.....3/8" ID
Tip015"
Filter100 mesh
Reduction.....Not recommended

Conventional Spray

Fluid TipE Fluid
NozzleE Atomization
Pressure.....50 psi
Fluid Pressure.....15-20 psi
Reduction.....not recommended

Brush

Brush.....Natural Bristle
Reduction.....Not recommended

Roller

Cover3/8" woven with solvent resistant core
Reduction.....Not recommended

If specific application equipment is not listed above, equivalent equipment may be substituted.

Application conditions

Temperature: 40°F (4.5°C) minimum, 120°F (49°C) maximum (air, surface, and material)

At least 5°F (2.8°C) above dew point

Relative humidity: 85% maximum

Performance tips

Stripe coat crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

No reduction of material is recommended as it can affect film build, appearance, and adhesion.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Mineral Spirits

Drying and Curing time @ 2.5 mils wet (63 microns):

Substrate temperature	10 °C	25 °C	40 °C
Humidity	50% RH		
Surface (touch) dry	4 h	2 h	1 h
Dry hard	12 h	8 h	6 h
Dry to over coat, minimum	12 h	8 h	6 h
Dried/cured for service	7 d	48 h	24 h

Drying and curing times are determined under controlled temperatures and relative humidity below 50 %, and at average of the DFT range for the product. Surface (touch) dry: The state of drying when slight pressure with a finger does not leave an imprint or reveal tackiness. Dry hard: Minimum time before the coating can tolerate normal foot traffic without permanent marks, imprints or other physical damage. Dry to over coat, minimum: The shortest time allowed before the next coat can be applied. Dried/cured for service: Minimum time before the coating can be permanently exposed to the intended environment/medium.

Product compatibility

Depending on the actual exposure of the coating system, various primers and topcoats can be used in combination with this product. Some examples are shown above. Contact Abolin for specific system recommendation.

Primer coat: epoxy, epoxy mastic, alkyd, acrylic

Packaging (typical)

	Volume (litres)	Size of containers (litres)
Comp	20	20

The volume stated is for factory made colours. Note that local variants in pack size and filled volumes can vary due to local regulations.

This Technical Data Sheet supersedes those previously issued.

The Technical Data Sheet (TDS) is recommended to be read in conjunction with the Safety Data Sheet (SDS) and the Application Guide (AG) for this product. ABOLIN CO GREECE: Email: abolin@abolinco.com, web: www.abolinco.com

Date of issue: 11 December 2016

Storage

The product must be stored in accordance with national regulations. Keep the containers in a dry, cool, well ventilated space and away from sources of heat and ignition. Containers must be kept tightly closed. Handle with care.

Shelf life at 23 °C: 24 month(s)

In some markets commercial shelf life can be dictated shorter by local legislation. The above is minimum shelf life, thereafter the paint quality is subject to re-inspection.

Caution

This product is for professional use only. The applicators and operators shall be trained, experienced and have the capability and equipment to mix/stir and apply the coatings correctly and according to Abolin's technical documentation. Applicators and operators shall use appropriate personal protection equipment when using this product. This guideline is given based on the current knowledge of the product. Any suggested deviation to suit the site conditions shall be forwarded to the responsible Abolin representative for approval before commencing the work.

Health and safety

Please observe the precautionary notices displayed on the container. Use under well ventilated conditions. Do not inhale spray mist. Avoid skin contact. Spillage on the skin should immediately be removed with suitable cleanser, soap and water. Eyes should be well flushed with water and medical attention sought immediately.

Colour variation

When applicable, products primarily meant for use as primers may have slight colour variations from batch to batch. Such products may fade and chalk when exposed to sunlight and weathering.

Disclaimer

The information in this document is given to the best of Abolin's knowledge, based on laboratory testing and practical experience. Abolin's products are considered as semi-finished goods and as such, products are often used under conditions beyond Abolin's control. Abolin cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Abolin reserves the right to change the given data without further notice. Users should always consult Abolin for specific guidance on the general suitability of this product for their needs and specific application practices. If there is any inconsistency between different language issues of this document, the English version will prevail.