

KemThane 411 Aliphatic PU Coating

PRODUCT DESCRIPTION

KemThane 411 is a two pack glossy aliphatic polyurethane top coat with outstanding weather resistance, excellent colour and gloss retention. It is hard flexible and abrasion resistant. It cures through a wide temperature range. When it fully cured it forms an extremely tough and abrasion resistant finish. It is recommended for use in new construction and maintenance services over primed surface.

INTENDED USES

- As a finish coat where attractive appearance and a wide range of corrosive resistance is required.
- It can be used in a wide variety of environments including offshore structures, petrochemical & chemical complexes, storage tanks & pipelines, fertilizers industries, bridges, pulp and paper mills and in the power Industry.

PRODUCT FEATURES

- Excellent corrosion protection.
- Very good impact & abrasion resistance
- Designed as a finish coat in epoxy and PU systems
- Finish does not support mold, fungi growth.
- Excellent gloss and colour retention characteristics
- Excellent weather resistance in coastal & industrially polluted atmosphere
- Good weather resistance.

SPECIFICATION DATA

Colour : As per ISC
 Finish : Glossy
 Flash Point : Above 20°C
 Reduction Solvent: T- 4
 Clean –up solvent: T- 4
 Volume Solids %: Approx. 39%
 Recommended DFT/Coat: 40-50 microns
 Theoretical Covering Capacity (TCC):
 : 10.00m²/litre @ 40 microns DFT
 : 7.80 m²/litre @ 50 microns DFT
 No of coats : 2
 Drying time at 30 °C:
 • Surface Dry :1-2 hrs
 • Hard Dry : 16 hrs
 • To recoat : min. overnight – max. 7days
 • To full cure : 6-7 days
 • Over Coating Interval : Overnight
 Pot life : 4-6 hrs depending on an ambient temperature
 Mixing Ratio: Part A : Part B
 4 : 1 by volume
 Packing : 1 litre, 4 litre, 20 litre
 Shelf Life : upto 12 months as long as the sealed containers are kept under cover in a dry place under normal temperature conditions.

◆ PERFORMANCE DATA:

Abrasion resistance: Excellent Adhesion: Excellent
 Flexibility: Excellent Impact resistance: Excellent
 Humidity Resistance:Excellent
 Chemical Resistance:
 Water: Excellent Alkalies : Excellent
 Inorganic Acids: Good Organic Acids : Good
 Organic Solvents: Good

SURFACE PREPARATION

Previously Painted or Primed Surfaces:

The surface to be coated must be dimensionally stable, dry, clean and free of oil, grease, release agents, curing compounds and other foreign materials. All bare areas must be primed with suitable primer i.e. **KemOxy 301**. New steel must be grit blasted & glossy surfaces should be roughened before recoating. If any old paint that is peeling, flaking, cracking, blistering or lifting must be removed. Scuff sand glossy areas and aged epoxy coatings. All edges of the old coating must be feathered down to remove sharp edge.

Bare Steel

All surfaces shall be free of loose rust, millscale and contaminants such as oil, grease, dirt and salts. Before any surface preparation is attempted, oil and grease must be removed by employing SSPC-SP1 solvent cleaning. Use commercial Blast cleaning to SSPC-SP6 to remove millscale, rust and other contaminants and leave a roughened surface.

Concrete and Masonry

Remove all loose particles, oil, grease, form release agents and any other contaminants. New concrete and masonry must be allowed to cure for a minimum of 30days. Before painting, roughen the surface by abrasive blasting, acid etching or scarifying.

Wood

Ensure the wood is clean and dry. Sand all rough areas to a smooth appearance.

WARNING! If you scrape sand or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE.

SPECIAL NOTES

- Thinner consumption may vary depending upon site conditions.
- Practical covering capacity depends on application techniques, ambient conditions, wastage, surface conditions etc.

DIRECTION FOR USE

Mixing Instructions:

This two component product is mixed as a 4 to 1 ratio by volume of Part A to Part B. First, mix each Part A & Part B separately until uniform, then combine Part A & Part B and mix thoroughly till homogenous mixing. If the settling is observed in the base, loosen the settled material with help of hand stirrer followed by power driven stirrer. For best results, use a spiral mixing blade at a variable speed (400-600 rpm). Place the spiral mixing blade at the bottom of the container before turning on the mixer. This will help to avoid inducting air into the material. Inducted air will cause "bubbles" in the coating when applied. Gently move the mixer head up to the surface while running. Do not remove the head while it is still spinning. Allow the combined material to sit for an induction time of 30 minutes, and then lightly stir again to ensure uniformity. This product has workable pot life 4-6 hours at ambient temperature. Applying the material immediately after the 30minutes induction time will provide best results.

Note: Higher air & mixture temperatures will decrease the pot life and working time.

Application Information :

Generally this paint is best applied by spray. Due to the rapid dry of this coating, only small areas may be coated by brush, applicator pad, or roller. Care must be taken to achieve the specified wet and dry film thicknesses. Uniform, even coats must be obtained. Large horizontal surfaces should be spray applied, however roller application can be performed.

Application Methodes :

- **Spray**– Use airless spray or conventional spray.
- **Brush**- Recommended for stripe coating and small areas, care must be taken to achieve the specified DFT.
- **Roller** – May be used for small areas but not recommended for first primer coat, however when using roller application care must be taken to apply sufficient material in order to achieve the specified dry film thickness.

DIRECTION FOR USE

Application Equipment:

Conventional or airless spray, brush or roller. Certain colors may require two coats depending on method of application and colour of the primer or intermediate coat.

Conventional Spray: Equipment Recommendations: Binks Model 62 Spray Gun or Equivalent

Fluid Nozzle	Air Nozzle	Atomizing Air Pressure	Fluid Pressure
0.040"	0.40"	45 psi	25 psi

Low temperature or longer hoses require higher pot pressure. Proper atomization is necessary to obtain smooth finish.

Airless Spray: Equipment Recommendations: Binks Model Spray Gun or Equivalent

Airless Tip Orifice	Fluid Pressure	Binks Tip No
0.015"-0.021"	2000-2500 psi	9-1560 / 9-2150

CAUTION! Use 100 mesh manifold filter and gun with 100 mesh tip strainer. Use appropriate tip and atomizing pressure for equipment, applicator technique and weather conditions.

Roller: Use a 1/4" nap synthetic cover. Do not use medium or long nap roller covers.

Clean Up Instruction:

Clean all equipment immediately after use with thinner T-3. At the same time, flush out all fluid lines and carefully clean pressure pots. Use clean solvent only. It is also good practice to periodically clean the spray tip or the fluid tip / air cap combination during the course of the working day or shift.

PERFORMANCE STANDARDS

Description	Test	Results
Adhesion	ASTM D 3359 Cross Cut Tape test	Excellent
Abrasion Resistance	ASTM D 4060 C 17 Wheels, 1000 gm load, 1000 cycles	50mg
Impact Resistance	ASTM D 2794 Gardiner Impact, 7 Day Air Dry at 25°C	Excellent
Flexibility	ASTM D 522 Conical Mandrel Apparatus	Excellent
Chemical Resistance	5% NaOH	No Effect
24hr Covered Watch	5% H ₂ SO ₄	No Effect
Glass Spot Test	100 % Xylene	No Effect
	100% Mineral Spirits	No Effect
Hardness	ASTM D 3363 Pencil 7 Day Cure	6H
Exterior Durability	ASTM G 53 Accelerated aging via exposure to Fluorescent, Ultraviolet and Condensation	Excellent
Salt Fog Resistance	ASTM B 117 Salt Spray Test	400hrs -No Effect
Immersion	Ambient	1500hrs-No Effect
Graffiti Resistance	Crayon, Ink Pen, Marker, Shoe Polish	Excellent
Hot Water Immersion	80°C	800hrs-No Effect

ENVIRONMENTAL, HEALTH & SAFETY INFORMATION

DANGER! Flammable Liquid and Vapor. Harmful if Inhaled or Swallowed. **Contains: Xylene, Polyurethane Resin and Glycol Ethers.** May affect the brain or nervous system causing dizziness, headache or nausea. Causes Eye, Skin, Nose and Throat irritation. May cause allergic skin reaction.

IMPORTANT: Designed to be mixed with other component. Mixture will have hazards of both components. Before opening packages read all warning labels. Follow all precautions.

NOTICE: Repeated and prolonged exposure to solvents may lead to permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are signs that solvents levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. To avoid breathing vapors or spray mist, open window and doors or use other means to ensure fresh air entry during application & drying.

Keep away from heat, sparks and flame. Vapors may cause flash fire. **Use only with adequate ventilation.** Do not breathe vapors, spray mist or sanding dust. Do not get in eyes or on skin.

FIRST AID: If affected by inhalation of vapors or spray mist, remove to fresh air. In case of eye contact, flush immediately with plenty of water at least for 15 minutes and call a physician for skin, wash thoroughly with soap and water. In case of ingestion – Do Not Induce Vomiting, get medical help immediately.



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