



SILCOTE-HYBRID®

FOR WATERPROOFING SYSTEM

CONCEPT / DESCRIPTION

SILCOTE-HYBRID® is a spray-applied, two-component (Part A ISO and Part B AMINE), rapid curing polyurethane system, designed as a waterproofing and protective coating which is modified by especial polyacetal resin to upgrade abrasion resistance. It combines the advantages of seamless coating with very long-life cycles and high durability.

The system offers excellent surface properties and overall physical properties. It is highly reactive and can only be applied by special, two component spray equipment.

High pressure two-component spray machines equipped with impingement mixing have proven efficient and entirely adequate for sufficient blending and rapid dispensing of the polyurethane raw materials. The catalyst-free isocyanate/amine reaction is normally rapid, proceeding to completion within a few seconds. Working times ("gel times") generally fall within the sub-five-second range, thus requiring specialized mixing and application equipment. It is for machine hot spray application only. Suitable for use in hot and tropical climatic conditions.

USES

Using the SILCOTE EP1&EP2(primer), **SILCOTE-HYBRID®** can be applied to most substrates including concrete, galvanised steel, aluminium, UPVC, glass reinforced polyester timber etc.

- ◆ **Construction** : Bridge deck construction and repair, Flooring, Park decks, Roof coating
- ◆ **Industrial applications** : Molded parts, Industrial and manufacturing facilities, Power plants,
- ◆ **Transportation** : Truck bed liners, Railcar lining and track containment, Conveyor belt lining

FEATURES AND BENEFITS

The following list highlights a number of polyurea's advantages.

- ◆ **Fast cure** : tack-free within minutes (almost immediate return-to-service time)
- ◆ **Water insensitivity** : little effect on adhesion or coating performance due to weather variations
- ◆ **Excellent physical properties** : high chemical resistance, good adhesion to many substrates
- ◆ Applicable in temperatures from -15°C to +70°C
- ◆ **100% solids with zero VOC** : eliminates the need for multi-coat applications
- ◆ **Thermal stability** : performs in constant temperatures from -30°C to +100°C
- ◆ **etc** : low yellowing, formulation flexibility, relatively unlimited application thickness

TECHNICAL DATA

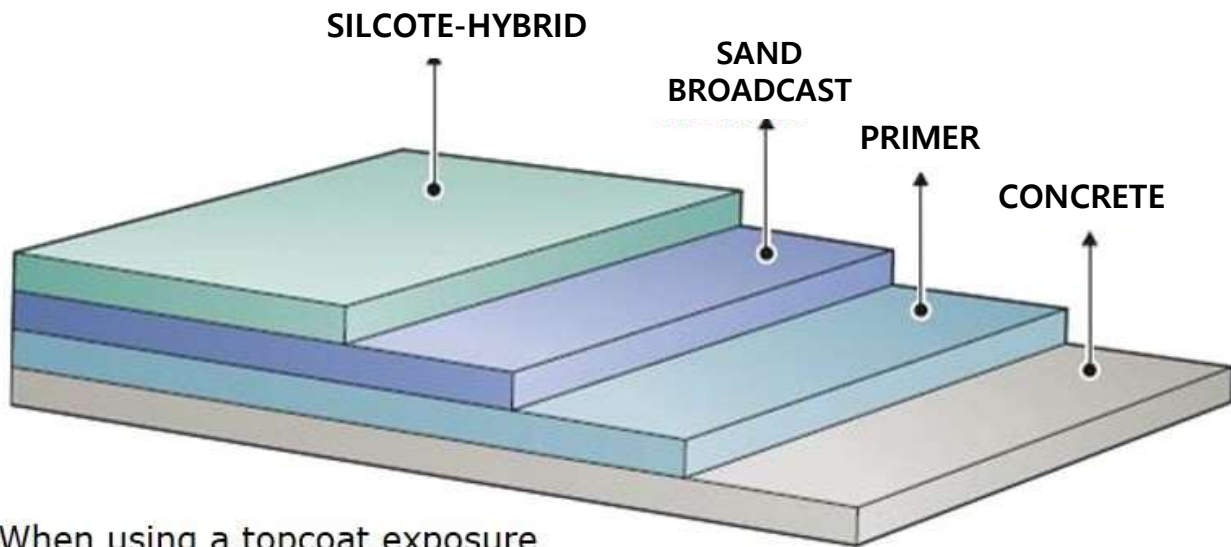
Test Item	HY-80	HY-90	HY-95
Density(g/ml at 20°C)	1.1±0.02 (Part A)	1.04±0.2 (Part B)	
Viscosity(cps at 20°C)	500±100 (Part A)	600±200 (Part B)	
Flash point(°C)	over 237 (Part A)	over 130 (Part B)	
Shore A hardness(sprayed)	>88	>92	>95
Tensile strength(N/mm ²)	>15	>16	>19
Elongation(%)	>580	>550	>500
Water tightness	Pass		
Bond strength(MPa) *SILPRIME spec	3.5±0.5		
Taber Abrasion Resistance	0.4mg (1kg, CS10 wheels, 1000 cycles) 36mg (1kg, H22 wheels, 1000 cycles)		
Volume-Mixing ratio	1:1 base		
Application temperature	70-75 °C		
Gel time(sec)	5-15		
Tack free time(min)	1-2		
Post cure time(hours)	24		

INSTRUCTION FOR USE

◆ Surface Preparation

The preparation of the substrate and the use of the appropriate primer are of paramount importance. All substrates should be sound, clean and dry and free from oil or grease, loose particles and any other substances which may impair adhesion.

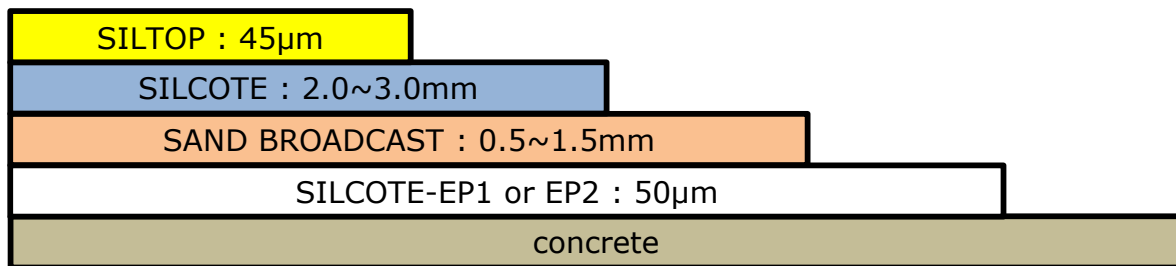
- All surfaces must be clean, dry and free from contamination
- The substrate must be clean, dry and free from all contaminants such as dirt, oil, grease, coating etc.



※When using a topcoat exposure

1. Plywood
All joints should be flush and taped prior to application of the primer.
2. Iron / steel
Should be sand blasted to an Sa 2 ½ finish prior to application of the primer.
3. Concrete
Concrete and other cementitious substrates must have a minimum pull off strength of 1.5 N/mm². Any laitance present on the surface must be removed mechanically. Shot blasting is the preferred method. Release oil and other contaminants which may impair adhesion must be removed prior to the application of the primer.
4. Asphalt
In roofing applications, the asphalt should be cleaned by high pressure water jetting. In mechanically stressed applications the load bearing capacity of the asphalt should be suitable for the intended use and should be shot blasted so that at least 60 % of the surface aggregate is exposed. Blisters should be warmed, redressed and a de-bond tape applied over.

- ◆ **Waterproofing/anti corrosion of Concrete Structures : PURE&HYBRID(2.0~3.0mm)**
Concrete structures, bridges, piers, iron, water structures, railway structures, underground structures, chemical plants, etc.



PROCEDURE

◆ FLOOR



Surface treatment



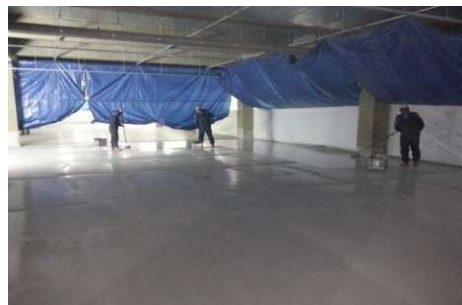
SILCOTE-EP1 or EP2



Surface reinforcement



SILCOTE-PURE or HYBRID



SILTOP



Completed construction

◆ WALL



Surface treatment



Surface treatment



SILCOTE-EP1 or EP2



surface reinforcement



SILCOTE-PURE or HYBRID



Completed construction

PROCEDURE etc

◆ Top coats

SILCOTE-HYBRID® does not have sufficient UV and weather resistance to be used in exposed applications without protection. A number of top coats are available including **SILTOP**® for normal applications to provide a hard wearing, non-slip surface. Other top coats may be more suitable for specific applications.

◆ Consumption

SILCOTE-HYBRID® is normally applied at 1.65 – 2.2 kg/m². This corresponds to a thickness of approx. 1.5 – 2.0 mm.

◆ Packaging

- 200L Drum Set : 220KGS(PART A)+200KGS(PART B) # 40Sets/20Pallets/20Ft con
- 20L Pail Set : 18KGS(PART A)+16KGS(PART B) # 30Sets/Pallet
- 2L Can Set : 2KGS(PART A)+2KGS(PART B)

◆ Colors

Please consult with your region office to check color book for perfect appearance.

STORAGE AND PRECAUTIONS

SILCOTE-HYBRID® has a shelf life of 12 months if kept in a dry, air-conditioned place between +5°C and +35°C in the original unopened containers.

Store in original containers under dry conditions at a temperature between 15-25° C.

Do not expose to direct sunlight.

Be noted precautions as follows:

- ◆ Please don't mix with other materials.
- ◆ Need to check moisture condition, liquid color before use it.
- ◆ When applying the material, it is recommended to wear gloves and goggles.
- ◆ Slashes of the polyol and setting agent component onto the skin shall immediately be washed off with water and soap.

Customer Service

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Technical Service

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