KELMAR® MERDEK

Flexible Epoxy/Urethane Hybrid Traffic Deck System

Description

The KELMAR® MERDEK Traffic Deck System is a rapid curing, odor free, high-solids epoxy/sand matrix which provides long service life with maintained skid resistance. The KELMAR® MERDEK Traffic Deck System consists of a waterproofing membrane, an abrasion-resistant traffic-bearing wear course - seeded with aggregate for durability and skid resistance - and a top coat.

Components

PRIMER: KELMAR® MONOBOND Epoxy Primer Resin and Hardener (Mix 1:1)

OR

KELMAR® DUALOX Water Based Epoxy Primer Resin and Hardener (Mix 1:1:1water)

MEMBRANE: KELMAR® MERDEK Membrane urethane/epoxy hybrid Resin and Hardener (Mix 2:1)

WEAR COURSE: KELMAR® CWC Epoxy Wear Course Resin and Hardener (Mix 2:1)

TOP COAT: KELMAR® 1910 UV Resistant Acrylic Top Coat (Single Component)

OR

KELMAR® 1920 UV Resistant Epoxy Top Coat Resin and Hardener (Mix 2:1)

AGGREGATE: Flint Silica Sand or equivalent

Typical Uses

- As a waterproofing system for parking structures
- Mechanical equipment rooms
- Pedestrian walkways
- Balconies and terraces
- Plaza and rooftop decks
- Stadiums and arenas
- Wherever a waterproof floor is required

Features

- UV resistant
- No odor
- Provides a seamless wear course over waterproofing membrane
- Remains flexible over a wide range of temperatures
- Provides an excellent slip-resistant surface
- Wear course thickness can be adjusted for varying degrees of traffic exposure
- Resistant to automotive fluids and salts
- Available in a range of colors

Limitations

- MUST be installed by an Approved Applicator
- DO NOT USE in areas subjected to thermal shock
- NOT recommended for light weight concrete
- Surface and air temperatures MUST be at least 10°C (50°F) during entire application and cure time.

Application

- Surface must be checked for soundness and any hollow areas must be removed; All depressions, spalled areas and cracks must be pre-filled with approved products
- Concrete substrate must have laitance removed by shot blast method or diamond grinding
- Detailing work such as injection and treatment of control and expansion joints shall be according to specification recommendation
- Store material in a dry area 10°C to 27°C (50°F – 80°F)
- DO NOT FREEZE

Flexible Epoxy/Urethane Hybrid Traffic Deck System

Theoretical Coverage

PRIMER -

KELMAR® MONOBOND - 401 ft^2/gal @ 4 wet mils
KELMAR® DUALOX - 267 ft^2/gal @ 6 wet mils

MEMBRANE -

KELMAR® MERDEK - 80 ft^2/gal @ 20 wet mils

WEAR COURSE –

KELMAR® CWC – 160 ft^2/gal @ 10 wet mils
115 ft^2/gal @ 14 wet mils
80 ft^2/gal @ 20 wet mils

Exposure 1 - Light Duty: 10 wet mils
-For pedestrian areas

Exposure 2 – Medium Duty: 14 wet mils
-For parking stalls and light to medium traffic

Exposure 3 - Heavy Duty: 14 + 14 wet mils
-For all driving lanes, ramps, high torque turning areas, entrance/exit areas and all exposed top deck areas that will be subject to snow plowing

Exposure 4 - Extra Heavy Duty: 20 + 20 wet mils
-For extra heavy traffic, shipping & receiving areas and areas of heavy truck/bus traffic, etc.

***Industrial areas may require thicker wearcourse layers – Consult a Kelmar representative to be sure that the correct traffic requirements are being met**

TOP COAT –

KELMAR® 1910 - 160 ft^2/gal @ 10 wet mils
KELMAR® 1920 - 160 ft^2/gal @ 10 wet mils

- **COVERAGE WILL VARY DEPENDING ON AGGREGATE SIZE**

Physical Properties

Crack Bridging	
ASTM C957	Passes
Tensile Strength	
ASTM D638	2000 psi 14 Mpa
Tensile Elongation	
ASTM D412	300% (membrane)
Impact Resistance	
Gardner- Direct	160 in/lb
Adhesion to Concrete	
Elcometer	300 – 350 psi
Hardness, Shore A	
ASTM D2240	71
Hardness, Shore D	
ASTM D2240	18
Taber Abrasion	
ASTM D4060 (CS-17 wheels) (5000 cycles)	0.5-gram weight loss @ room temp 0.3-gram weight loss @ 150°F
Gel Time	15-20 minutes
Test for Surface Burning Characteristics	
ASTM E84	
Flame Spread	14
Fuel Contribution	0
Class	1 or A

Flexible Epoxy/Urethane Hybrid Traffic Deck System

Chemical Resistance

Testing in accordance with ASTM-D-1308 spot test procedure indicates that the Kelmar® Merdek System is unaffected by the following reagents.

Automotive Fluids
Grease
Motor Oil
Transmission Oil
Anti-Freeze
Gasoline
Heptane
Hexane

Solvents
Acetone
Methyl Ethyl Ketone
Alcohol (Denatured)
Butyl Alcohol
Butyl Acetate
Carbon Tetrachloride
Trichloroethylene
Cellosolve Solvent
Toluene
Xylene
Mineral Spirits

Organic Acids
Acetic 10%
Citric 20%
Lactic 40%
Gluconic 40%
Tartaric 40%

Inorganic Acids
Chromic 20%
Hydrochloric 30%
Nitric 40%
Hydroflouric Acid 20%
Phosphoric Acid 50%

Inorganic Salts
Calcium Chloride 20%
Ammonium Chloride 20%
Sodium Chloride 20%
Sodium Carbonate 20%
Sodium Phosphate 20%
Sodium Sulfate 20%
Magnesium Sulfate 20%
Ammonium Hydroxide (Conc)
Potassium Hydroxide 30%
Sodium Hydroxide 30%
Sodium Silicate 20%
Lime Water – Saturated Calcium - Hydroxide Solution

Safety Precautions

Please refer to product Safety Data Sheet