



# TBS SYSTEM DATA SHEET

## TECHNICAL BARRIER SYSTEMS INC.



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## KELMAR<sup>®</sup> FWC III

### Flexible Wear Course traffic deck system

#### Description

Kelmar<sup>®</sup> FWC III is a solvent free, rapid curing, 100% solids flexible epoxy protective coating system. The Kelmar<sup>®</sup> FWC III waterproofing system consists of a prime coat, NEO V II C, and an abrasion resistant traffic bearing top coat which is seeded with aggregate for skid resistance. An optional topcoat is also available.

#### Typical Uses

- As a waterproofing system for parking structures
- Pedestrian walkways
- Balconies

#### Advantages

- Odorless
- Provides a seamless, wear course over waterproofing membrane
- Remains flexible over a wide range of temperatures
- Provides an excellent slip-resistant surface
- Resistant to most automotive chemicals
- Proven history of performance
- A-1 Fire rating (ASTM E 84)
- Available in wide range of colors

#### Features

The Kelmar<sup>®</sup> FWC III system wear course is an epoxy sand matrix which gives long service life, and maintains skid resistance throughout it's service life. The thickness of the Kelmar<sup>®</sup> FWC III system can be adjusted to accommodate varying degrees of traffic exposure

#### *Exposure 1: Light Duty*

- For parking stalls, pedestrian walkways, balconies, mechanical rooms or other areas exposed to light traffic

#### *Exposure 2: Medium Duty*

- For level traffic lanes and gradually sloping ramps, and for parking stalls in high traffic areas

#### *Exposure 3: Heavy Duty*

- For steep and / or helix ramps, high torque turning areas, and areas adjacent to ticket cashiers, drive lanes of commercial garages etc

#### *Exposure 4: Extra Heavy Duty*

- For heavy traffic in shipping and receiving areas, truck traffic etc.

#### Limitations

- Do not use in areas subjected to thermal shock
- Not recommended for light weight concrete
- Substrate temperature at the time of application must be between 50<sup>0</sup> F (10<sup>0</sup> C) and 90<sup>0</sup> F (32<sup>0</sup> C)

#### Application

- Surface must be checked for soundness and any hollow areas must be removed. All depressions and spalled areas and cracks must be pre-filled with a product approved by TBS.
- Concrete substrate must have the laitance removed preferably by a shot blast method

- Detailing work such as injections and treatment of control and expansion joints shall be according to specification recommendation
- Must be installed by a TBS Approved Applicator

### Physical Properties

<b>Tensile Strength</b>	
ASTM D 638	2000 psi 14 Mpa
<b>Tensile Elongation</b>	
(membrane) ASTM D 412	600%
<b>Impact Resistance</b>	
Gardner- Direct	160 in/lb
<b>Adhesion to Concrete</b>	
Elcometer	300 – 350 psi
<b>Hardness, Shore D</b>	
ASTM D 2240	71
<b>Taber Abrasion</b>	
ASTM D 4060	0.5-gram weight loss @ room temp
CS-17 wheels	0.3-gram weight loss @ 150°F
5000 cycles	
<b>Gel Time</b>	15-20 minutes
<b>Test for Surface Burning Characteristics</b>	
ASTM E 84	
Flame Spread	14
Fuel Contribution	0
Class	1 or A

### Chemical Resistance

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

<b>Automotive Fluids</b>
Grease
Motor Oil
Transmission Oil
Anti-Freeze
Gasoline
Heptane
Hexane

<b>Solvents</b>
Acetone
Methalethol Ketone
Alcohol (Denatured)

Butyl Alcohol
Butyl Acetate
Carbon Tetrachloride
Trichloroethylene
Cellosolve Solvent
Toluene
Xylene
Mineral Spirits

<b>Organic Acids</b>
Acetic 10%
Citric 20%
Lactic 40%
Gluconic 40%
Tartaric 40%

<b>Inorganic Acids</b>
Chromic 20%
Hydrochloric 30%
Nitric 40%
Hydrofluoric Acid 20%
Phosphoric Acid 50%

<b>Inorganic Salts</b>
Calcium Chloride 20%
Ammonium Chloride 20%
Sodium Chloride 20%
Sodium Carbonate 20%
Sodium Phosphate 20%
Sodium Sulfate 20%
Magnesium Sulfate 20%

<b>ALKALIS</b>
Ammonium Hydroxide (Conc)
Potassium Hydroxide 30%
Sodium Hydroxide 30%
Sodium Silicate 20%
Lime Water – Saturated Calcium Hydroxide Solution

### Thickness (Excluding aggregate)

Light duty	43 mils
Medium duty	48 mils
Heavy duty	71 mils
Extra Heavy Duty	94 mils

### Safety Precautions

Please refer to product MSDS Sheet.