

# Introducing.....



## TUFFSEAL

Polymer modified Cementitious MicroOverlay

An eco-friendly polymer-modified cementitious micro-overlay for asphalt and concrete surfaces

Proud member of

US Green Building Council



Singapore Green Building Council



Visit us @ [www.acrypave.com](http://www.acrypave.com)



# Why TUFFSEAL



**PRESERVE...** your road infrastructure investments by extending their lifecycles

**PROTECT...** your roads from the sun's harmful UV rays, acid tainted rain, destructive nature of motor oils & lubricants and restoring friction standards

**PREVENT...** the cost of tearing out and replacing salvageable road infrastructure, safety & drainage problems and excessive downtime

# What is TUFFSEAL



- Proprietary blend of polymers mixed with portland cement and aggregates
- Applied in average 3mm thick coatings- forms strong bond on existing pavements
- Environmental friendly, water based
- Customizable look and feel
  - Aggregate size and colour can be customised
- Can be applied to vertical surfaces
- With a solar reflective index of 39\*, TuffSeal in eco-gray is considered a cool pavement
- Obtained Singapore Green Building Council's Green Mark

\* PRI Construction Materials Technology Laboratory Test Results – February 2013

# Benefits



- Prevents structural issues such as rutting and cracking
- Reduces exposure to oxidation, sunlight and moisture
- Impervious to salt & other de-icing products, motor fuels, oils, and other hazardous materials
- Increases lifecycle of pavements

# What road owners want



All road owners , both public and private, have always been on a constant lookout for good resurfacing materials that should have the following characteristics:-

- 1. A durable wearing surface unaffected by U.V., water, and automotive fuels and fluids
- 2. A paving material that is cost effective, price stable, low maintenance
- 3. A paving material that bonds to new asphalt, severely oxidized asphalt and concrete
- 4. A paving material that is fast and easy to apply, has good skid properties and low noise riding surface
- 5. A paving material that offers various colours to suit different needs and are versatile
- 6. A paving material that is environmentally friendly & helps reduce urban heat island and air pollution

Asphalt	Concrete	TuffSeal
–	√	√
–	–	√
–	–	√
√	–	√
–	√	√
–	–	√

# Current Vs TuffSeal Method of Resurfacing



Description	Current Method	 TUFFSEAL	Conclusion
Surface Preparation	No	Yes	1 machine for TuffSeal VS at least 3 machines for Asphalt
Milling Machine	Yes	No	
Application Machine	With Fresh Asphalt	With TuffSeal	
Compaction Machine	Yes	No	
Curing	Yes	Yes	

# Tuffseal Colors



Tuffseal is Available in Several Custom Colors. Much greater traction and durability are our advantages over alternative pavement markings.



Custom colors are available for traffic marking, loading zones, airport runway markers, accessibility challenged, school and hospital emergency lanes, caution zones and fire department access.

# Car Park (Asphalt)



**Before**

**After**



School Carpark in Tyler, Texas

# Car Park (Asphalt)



**Before**

**After**



School Carpark in Tyler, Texas

# Car Park (Asphalt)



**Before**

**After**



School Carpark in Tyler, Texas

# Car Park (Asphalt)



**Before**

**After**



School Carpark in Tyler, Texas

# Car Park (Asphalt)



**Before**

**After**



Restaurant Carpark in Tyler, Texas

# Car Park Handicap Lots (Asphalt)



**Before**



**After**



Handicap Lots in Tyler, Texas

# Underground Carpark (Concrete)



Before



After



Asia Industrial Building

# Entrance/Exit (Asphalt)



Singapore Institute of Technology @ Dover Rd Campus

# Driveway (Asphalt)



Singapore Institute of Technology @ Dover Rd Campus

# Loading/ Unloading Bay (Asphalt)



Singapore Institute of Technology @ Dover Rd Campus

# Loading/ Unloading Bay (Concrete)



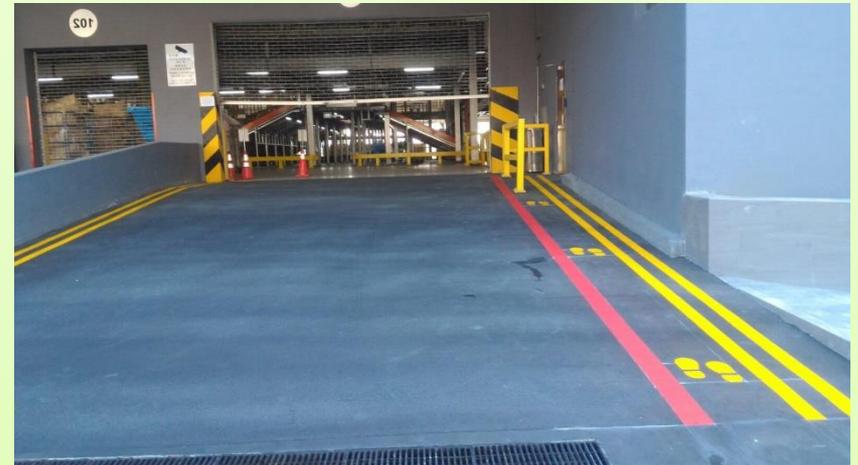
SATS @ Changi Cargo Centre

# Loading/ Unloading Bay (Concrete)



SATS @ Changi Cargo Centre

# Ramp (Concrete)



SATS @ Changi Cargo Centre

# Footpath (Concrete)



Before



After



Jurong Port  
Part of SGBC's Green Mark certification process

# Hospital Emergency Entrance(Asphalt)



**Before**



**After**



Hospital Entrance in Tyler, Texas

# Bus Lane (Concrete)



Petir Road near Bukit Panjang MRT

# Classroom (Concrete)



SIT@Tampines



# Taxiway Marking (Concrete)



# Basketball Court (Asphalt)



**Before**

**After**



Basketball Court in Tyler, Texas

# Footpath (Asphalt)



**Before**



**After**



Footpath in Tyler, Texas

# PCN Junction (Concrete)



Nparks PCN @ Yishun

# Road Sign (Asphalt)



Changi Airport

# Give Way to Bus (Asphalt)



Give-Way-To-Bus Zone @ Bedok North Road

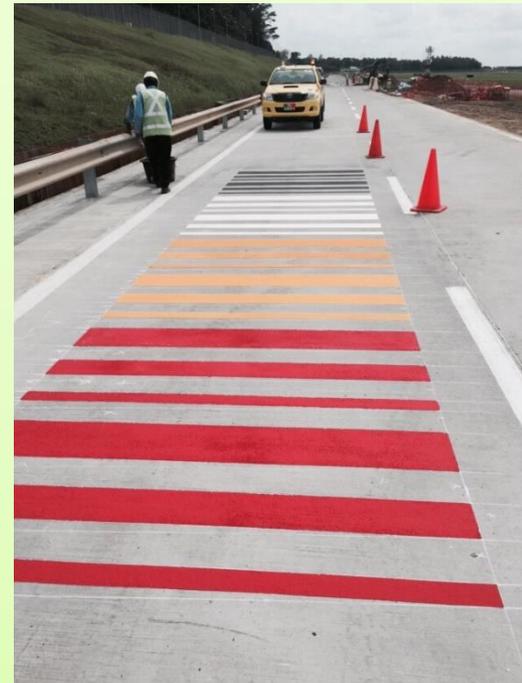
# Tuffseal-S: Roadmarking



## Asphalt pavement



## Concrete pavement



Roadmarkings in Changi Airport

# Tuffseal-S: Roadmarking



Roadside Kerb in Changi Airport

# Bridge Deck Repair



**Before**



**After**



# Public Concrete Repair



**Before**



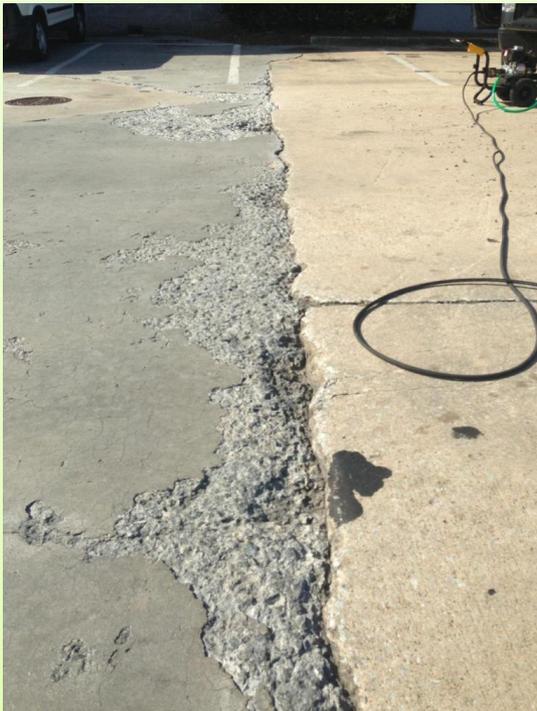
**After**



# Public Concrete Repair



**Before**



**After**



# Stops further aggregates raveling



**Before**



**After**



# Summary



S/No	Characteristics	Reason
1	Low-Cost, Low Maintenance	<ul style="list-style-type: none"> <li>a. Resistant to U.V., water, acid rain and automotive fuels &amp; hydraulic fluids</li> <li>b. Cost Effective (In terms of Life Cycle Costs)</li> <li>c. Stable Price (immune to oil price volatility)</li> <li>d. 3-year warranty ensure money saved over life of Warranty</li> </ul>
2	Green	<ul style="list-style-type: none"> <li>a. Leaves no carbon footprint</li> <li>b. Reduces Urban Heat Island Built-up</li> <li>c. provides passive air pollution control<sup>^</sup></li> <li>d. Member of US Green Building Council. Can be use in LEED approved projects</li> </ul>
3	Fast and Easy Application	No Milling. Bonds well to new/oxidized Asphalt and Concrete
4	Good Anti-Skid Properties/ Low Noise Riding Surface	Can customize aggregate sizes to suit requirements
5	Variety of Colours	Cater to the different needs of Traffic Management Control