



Rapid Shield™

Protective Concrete Coatings A Revolutionary Technology

Quaker global operations

- Formed 1918, now \$0.6Bn sales

- **Key technologies:**

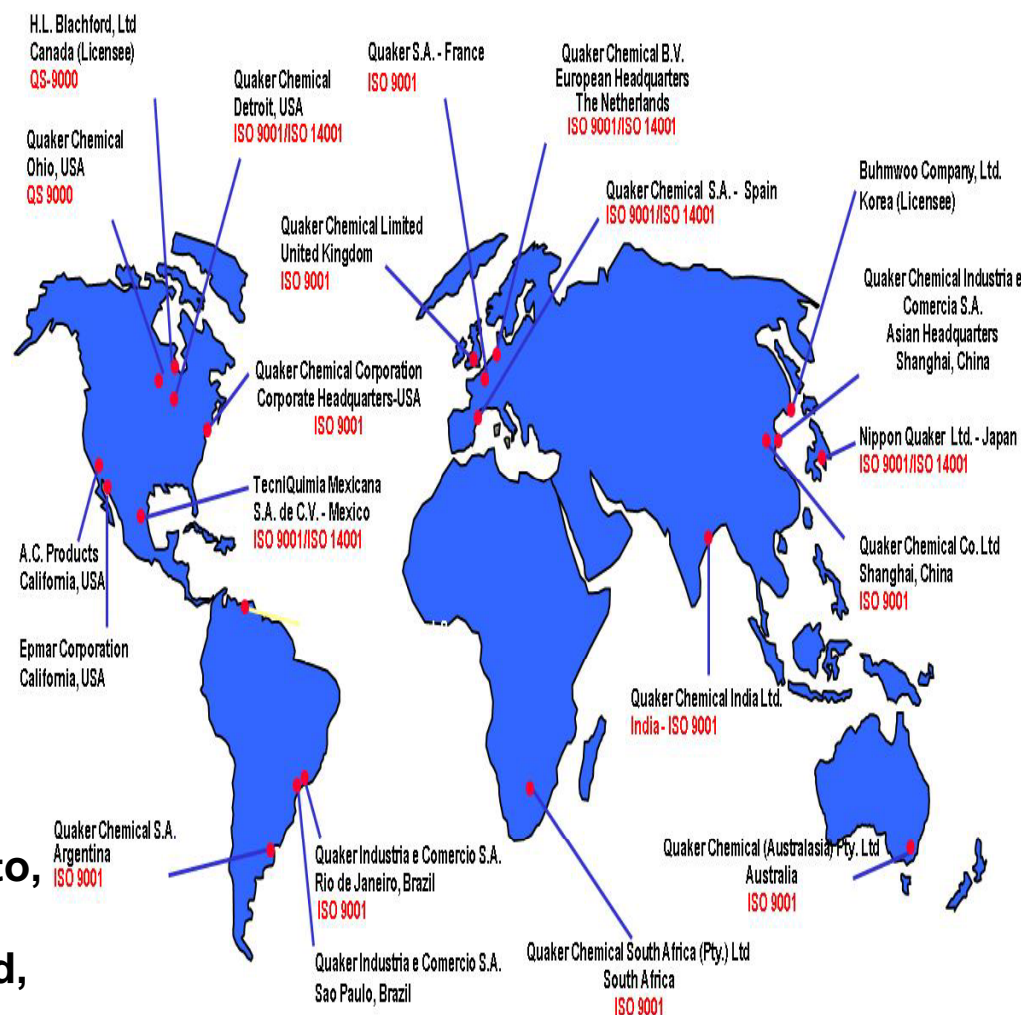
- Industrial coatings
- Fire resistant & biodegradable hydraulic fluids
- Specialty metal working fluids: form, remove, protect surface

- **Key industries:**

- Construction, mining, metal processing, automotive, aerospace, marine, leisure,

- **Key Australian Customers**

- Coles, Versa Cold, Polar Fresh, Woolworths, BHP, BMA, RioTinto, Anglocoal, Vale, Xstrata, BlueScope Steel, OneSteel, Ford, Alcoa



Coating Types and Selection

The resin chemistry used to formulate the coating has the biggest impact on performance. Typical resin chemistries and their relative performance are shown below:

	Cost	Time to Traffic	Adhesion	Wear	Flexibility	Chemical Resistance	Appearance	VOC	Odor
RapidShield	High	Immediate	Medium	High	Low	Medium	High	Excellent	Excellent
Epoxy	Low	Slow	High	Low	Low	Medium	Low	Good	Fair
Polyurethane	High	Slow	Medium	High	High	High	High	Good	Good
Acrylic Emulsion	Medium	Medium	Medium	Low	Medium	Low	Low	Excellent	Excellent
MMA	Medium	Fast	High	Medium	Low	Medium	Medium	Poor	Poor
Polyureas	High	Medium	Low	High	High	High	Medium	Good	Good

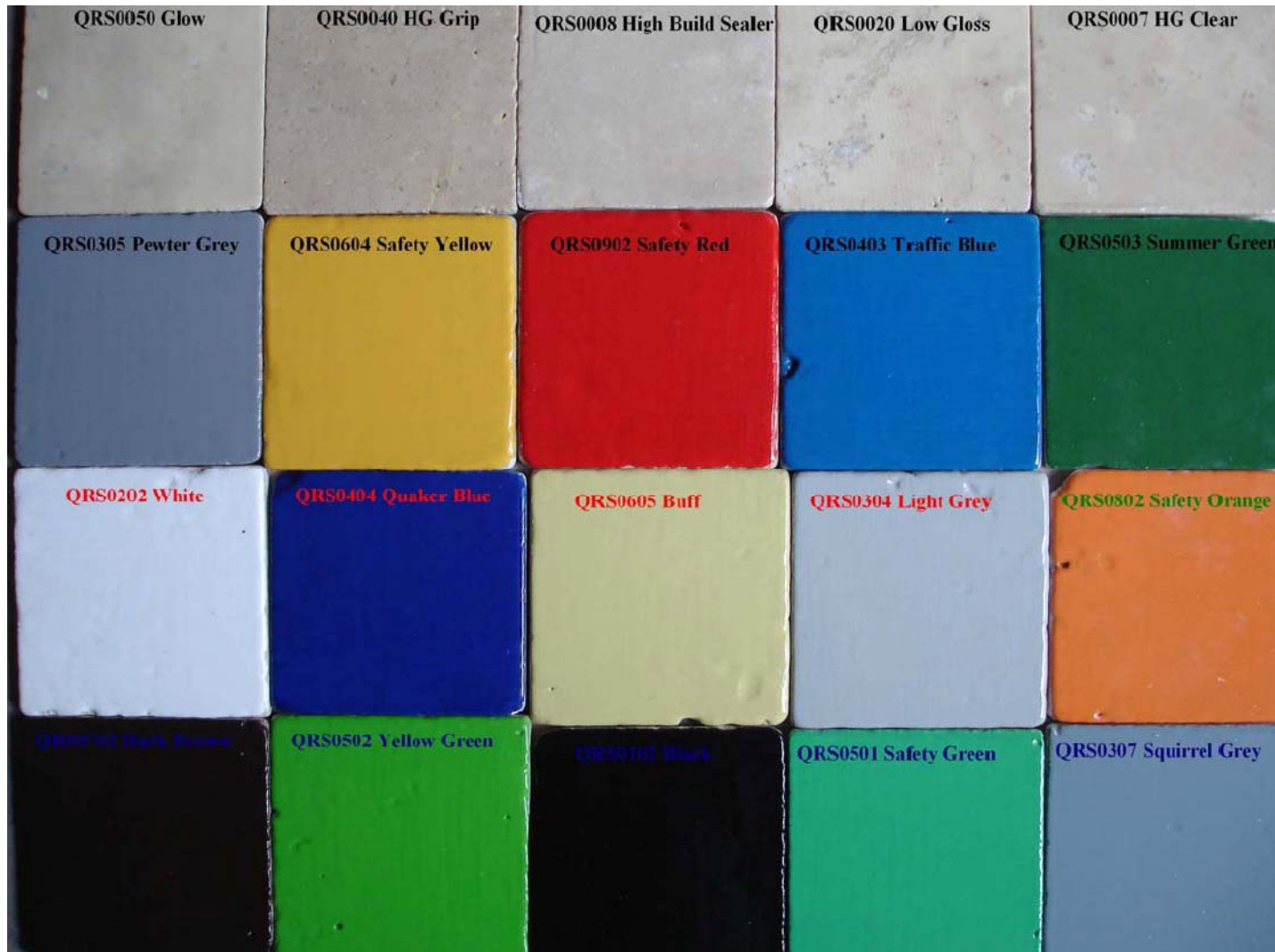
Others: Polyaspartic, etc

RapidShield brings an unmatched combination of fast cure, wear resistance and environmental compliance.

Environmental/Worker Safety Advantages of RapidShield

- **Instant cure** - less production down time
 - **No odour** - No solvent to breath in (no VOC)
 - **High gloss** - last much, much longer than paints and wax
 - **Easy to clean** - the rubber tire marks, oil and dirt
- Brightens up the place
 - The floor is very glossy but is not slippery
 - No flammability issues
 - No mixing and worrying about the right ratio
 - Reduces in-house chemicals
 - No waste
 - No special equipment needed for application
 - Apply during production schedules - Use of floor quicker
 - We don't need to reline stripe every plant tour
 - The workers like the floors and take care of them

RapidShield Standard Colours



RapidShield Physical Property Testing

- Coefficient of Friction ASTM C 1028 - OSHA recommends
 - Less than 0.5 is very slippery
 - Dry, Flat Surfaces 0.5 –0.6
 - American Disabilities Act (ADA)
 - 0.6 –0.7 for Walkways
 - >0.8 for Ramps/inclines
 - RapidShield 0007 Top Coat Clear
 - 0.81 Leather
 - 1.25 Nubrene
- Compressive Strength 13,000 psi
- Tensile Strength 2,500 psi
- Flexural Strength 4,500 psi
- Hardness 85 (2H + pencil hardness)
- Bond Strength > 400 (100% Concrete Failure)
- Abrasion Resistance 0.02 gm

RapidShield in Industrial Environment



RapidShield in Food Industry



RapidShield Warehousing



Before

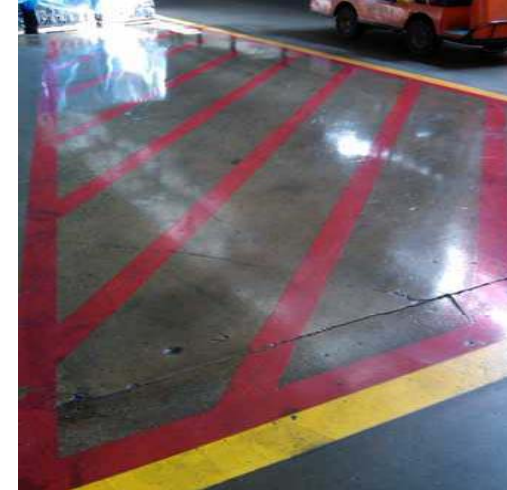


After

RapidShield Durability



Fresh Lines



After 2 years



Chemical resistant



Multiple Colours Same day



Close Continued Working

Back in production &
Close continued working



RapidShield tyre resistance



RapidShield easy to clean

Rubber tyre marks can be **CLEANED** from RapidShield™ Coatings but will not clean from the Epoxy



RapidShield in Warehouses



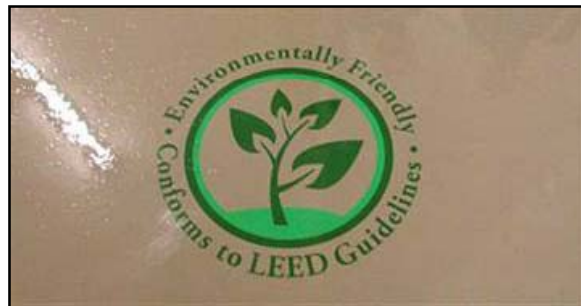
RapidShield in Warehouses



RapidShield in Warehouses



Corporate Signs



Long life Corporate signs and logo's with in flooring system



RapidShield in Australia



Bluescope WP
warehouse



Spencer
Street bus
station



City Link



Visy Pulp
and Paper



RapidShield in Australia



Australian Post



↗
Versa Cold
-26°C



↗
Coles Eastern Creek



Polar Fresh Melbourne
+2°C



Woolworth Melbourne



↗
Toll Express Eastern Creek



RapidShield in Australia



Toll Express
warehouse



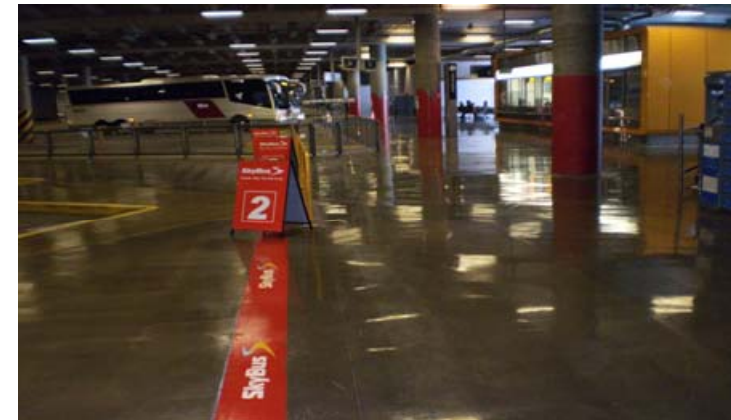
VersaCold
warehouse



Allied mills



Sky Bus
Station



RapidShield in Australia



←
**VersaCold
Eastern Creek**



← →
**VersaCold
Melbourne**



→
**Coles
Adelaide**



RapidShield Steps



1. Arriving
on site



4. Taping



2. Removing
old paint



5. Painting



3. Measuring



6. Curing

5. Finished
job





RapidShield with Anti-skid

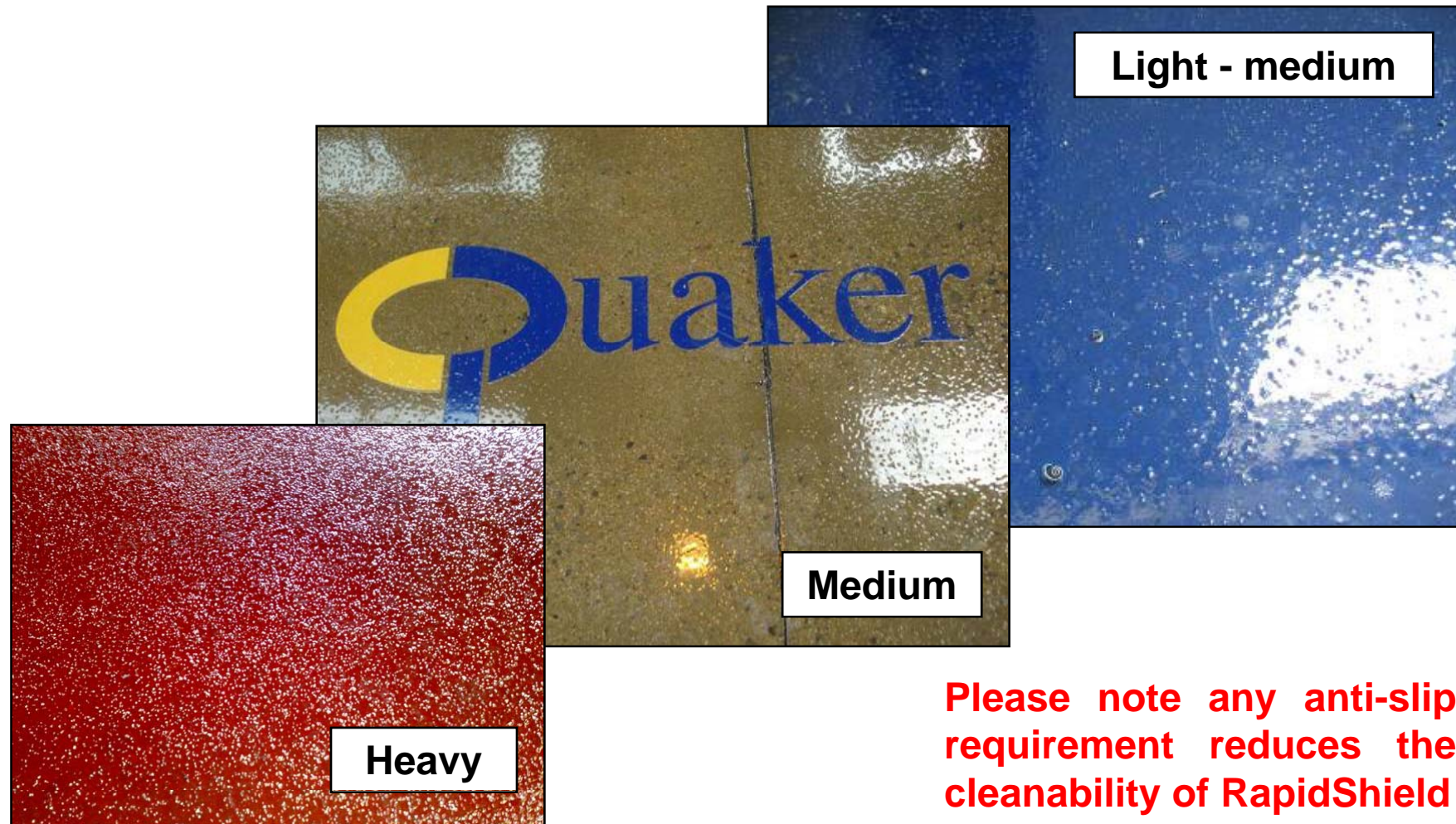


Instant **Anti-Slip** floors



RapidShield with Anti-skid

All standard anti-slip finishes are available with RapidShield.



Please note any anti-slip requirement reduces the cleanability of RapidShield

RapidShield Chemical Resistance

7 Day 4" Watchglass Test Testing performed on RapidShield

PASS

- Alcohols (e.g. Ethanol, Methanol, Isopropyl Alcohol, Lactol Spirits)
- Engine oils (e.g. 10-40W Motor Oil)
- Alkaline substances (e.g. Triethanol Amine)
- Alkaline cleaners (e.g. Orange Glo Cleaner, Window Cleaner, Quickclean)
- Weak acids (e.g. 10% Citric Acid, Vinegar, 0.25N H₂SO₄)
- Solvents (e.g. Butyl Cellosolve, MEK, VM&P Naphtha, 1:1 Acetone/Water)
- Brake fluids (DOT Brake Fluid)
- Machining coolants (e.g. Quakeral 377)
- Salts solutions (e.g. 10% NaCl)
- Mineral Oils (e.g. WD-40, corrosion inhibitors, gear oil)
- Rust converters (e.g. Pipe and Rust converter Quakercoat 707)
- Fuels (e.g. Jet Fuel JP-5)
- Soaps (e.g. 5% Tide Soap)
- Diluted bleach (e.g. 5%) used in food industry

FAIL

- Strong Acid (e.g. 1N HCl, Acid Stain 37N-1)
- Strong Alkaline (e.g. Stripper (gold), 0.5N NaOH)
- Strong oxidizers (e.g. 100% Clorox Bleach, Iodides) left on the floor longer than 2 hours

RapidShield Chemical Resistance



RapidShield Floor Maintenance



- very easy to clean;
- faster to clean than other floor coatings;
- requires soft touch to remove dirt, oil or tire marks;
- to extend the gloss finish RapidShield requires:
 - maintenance program

Quality starts with a clean floor!

Floors take the greatest abuse of any building surface. Therefore maintenance is required to properly protect your investment.

The results are totally dependant on the establishment of a sound program carried out by thoroughly trained and conscientious employees.

RapidShield Floor Maintenance

For a long lasting RapidShield floor

Dirt is an abrasive material carried in on people's shoes and equipment. It can act like sandpaper and scratching a floor finish.



RECOMMENDATIONS

Sweep: Daily with a broom or power sweeper with soft pads or brushes.

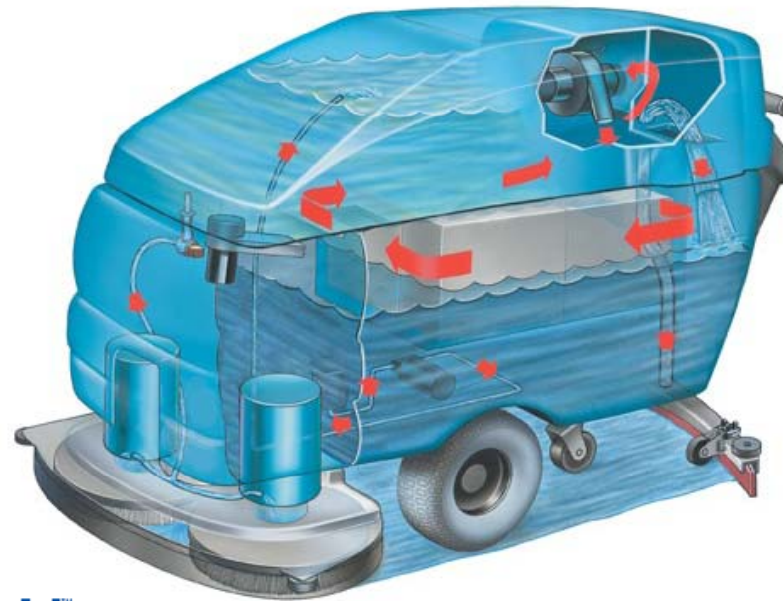
Scrub: A minimum of once a week.

Clean: All spills. Avoid spreading the spill. This will minimize possible dulling, staining, or softening of the finish by aggressive chemicals.

Prevent: Train employees to avoid dragging or sliding heavy equipment or pallets across the floor. Avoid dropping sharp or heavy items. Avoid spinning fork truck wheels.

Note: *The harsher the environment of your facility, the more frequently you will have to clean it. Dust and dirt dull the finish unless removed on a regular basis*

RapidShield Floor Maintenance

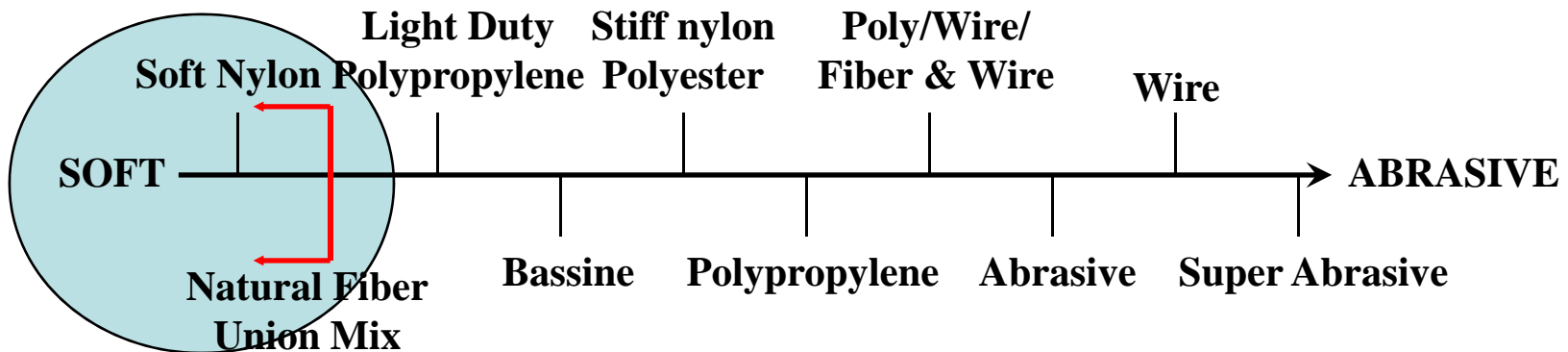


Disk Brush



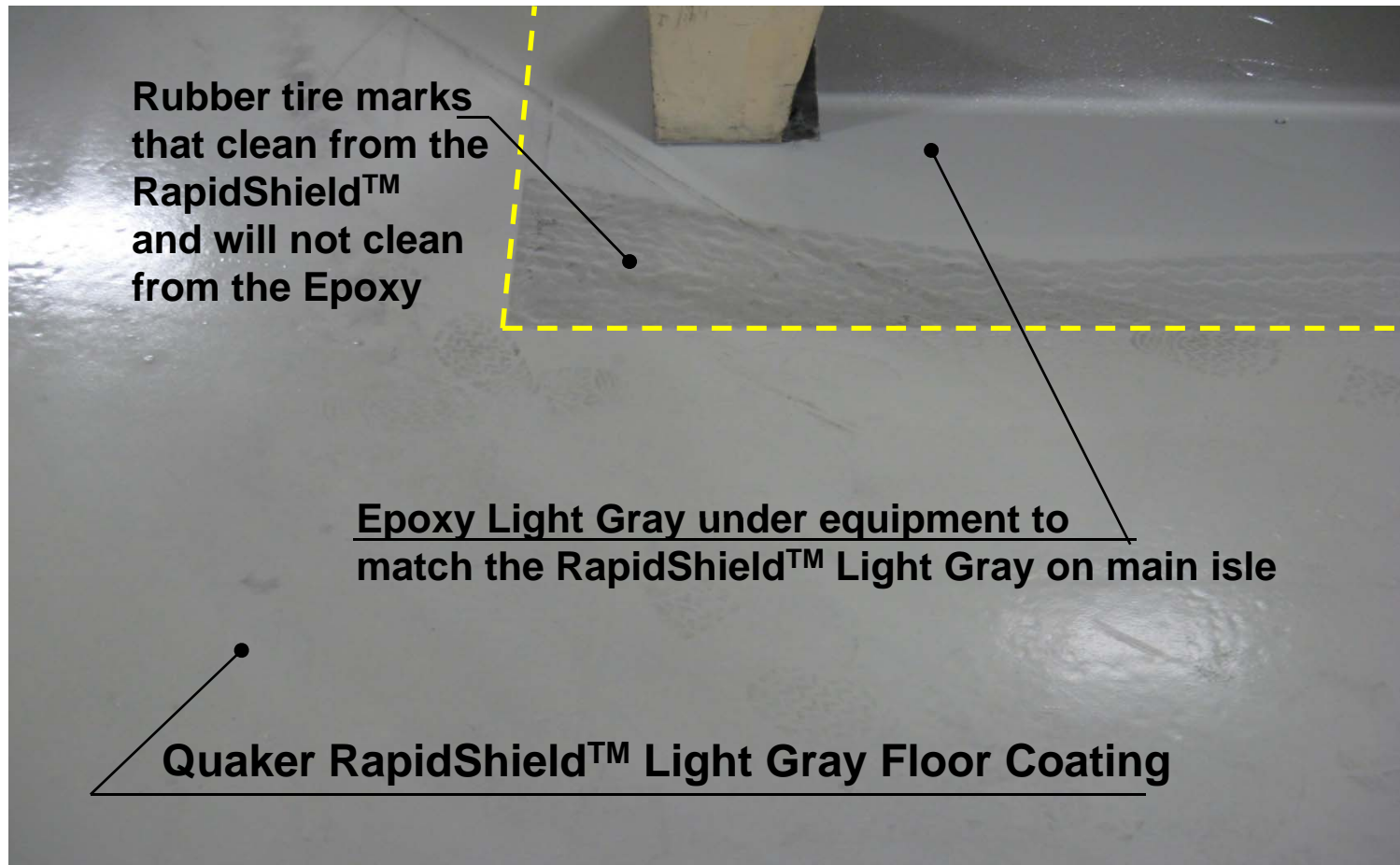
Cylindrical Brush

RapidShield™

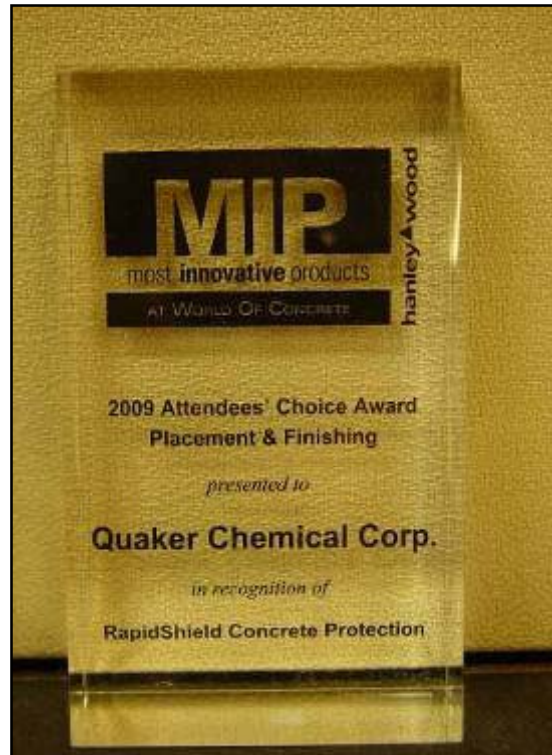


RapidShield Floor Maintenance

RapidShield™ is easier to clean than epoxy floors



RapidShield Awards



Most Innovative Product at World of Concrete 2009!

Occupational Health and Safety Award"



**General Motors
"Emerging Technology
Application" Award**



Floor Coating Products: Approvals

