Technical Solution Supplies

SILICONE COATINGS AND SEALANTS

Exclusive distributor of CSL Silicones in Southern Africa

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+27 (0)31 002 7376 sales@tssupplies.co.za tssupplies.co.za

FIVE SITE PROBLEMS. FIVE PROVEN FIXES.

Technical Solution Supplies is a Durban based technical distributor. We are the exclusive distributor of CSL Silicones in Southern Africa, including the DRC and the Seychelles.

CSL makes silicone coatings and sealants in Canada. We bring in the ones that answer the problems we kept seeing on site: rust on plant steel, flashovers on dirty insulators, leaking roofs, failed concrete joints and graffiti.

We are a small, hands on team with a background in civils, concrete repairs and plant maintenance. When you call, you speak to the people who know the product.

These are professional systems, not a quick fix off a hardware store shelf. We help with the spec, train the applicator and come to site when it's needed.

COMPANY DETAILS

Name	Technical Solution Supplies
Reg no	2021/561569/07
VAT no	4240304958
Address	High Road, Warner Beach, KwaZulu Natal, 4126
Phone	+27 (0)31 002 7376
Email	sales@tssupplies.co.za
Web	tssupplies.co.za



Chlorine plant, Johannesburg. Before and after one coat of Si-COAT 579 CM. TSS case study.

WHAT'S INSIDE

Start with the problem. Each product gets two pages: on the left, what it fixes and where it has worked. On the right, the technical data.

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CORROSION MAINTENANCE COATING

Si-COAT 579 CM

One coat silicone over prepared rust, for steel you can't shut down to blast.



Harbour hopper, Durban. TSS case study.

FLORIDA FENCE TEST · 36 MONTHS

1st of 29

One coat on rusted, hand cleaned steel. No rust creep, blistering or loss of adhesion.

POWER PLANT PIPING · FLORIDA

About 20 years

Coated in 2003. Film thickness measured the same about 20 years later.

OVER PREPARED RUST

One coat

0.2 to 0.5 mm dry over hand tool, power tool or water jet cleaned steel.

ISO 12944-6 · WITH CSL 979

C5 High

As the Si-COAT CM System with CSL 979 primer underneath.

IN THE FIELD



Fertiliser plant

Hoopstad, Free State. Process trough.



Bulk liquid terminal

Durban, 2025, by Tubetech. No defects at inspection.



Chlorine plant

Johannesburg. Process tank, one coat.

SI-COAT 579 CM · THE NUMBERS

One coat over prepared rust
Stripe coat edges, welds and bolts, then one full coat.

Moves with the steel
180% elongation. Bridged cracks in aged coating in bend tests.

Silicone doesn't chalk
5,000 h UV with colour change under 1 delta E.

Performance	
Salt fog, ASTM B117	3,000 h, pass
UV, ASTM G154	5,000 h, delta E under 1
Elongation	180%
Impact and mandrel bend	Pass
Pressure washing	Up to 150 bar
Chemicals	Acid vapour, splash, oils, diesel
Service temperature	Minus 60°C to 200°C

Application	
Surface prep	SSPC SP2, SP3 or SP12 WJ-4
Stripe coat	About 0.13 mm (5 mil)
Full coat, dry	0.2 to 0.5 mm (8 to 20 mil)
Coverage	About 0.33 to 0.75 L/m^2
Surface temperature	5°C to 60°C
Skin · tack free	25 min · 60 min
Dry · full properties	4 to 6 h · 7 days

APPLYING IT

1 Prep
Remove loose rust, salts, grease and flaking paint. Chlorides under 7 ppm when water jetting. Old coating left on must pass ASTM D3359 4A or 4B.

2 Stripe coat
About 0.13 mm on edges, welds, bolts, corners and pits.

3 Full coat
One coat, 0.2 to 0.5 mm dry. Airless spray is best; brush or roller on small areas.

4 Field notes
Runs from the concrete plinth onto the steel in one coat. Bolts can still be undone.

WHERE IT GOES

- Tank exteriors, pipe racks and supports
- Mines, smelters, chemical and fertiliser plants
- Substation steel and towers
- Bridges, ports and coastal steel

NOT FOR

- Tank linings, interiors or floors
- Buried steel or permanent immersion
- Pooling acid without CSL sign off
- C5 work without CSL 979 primer

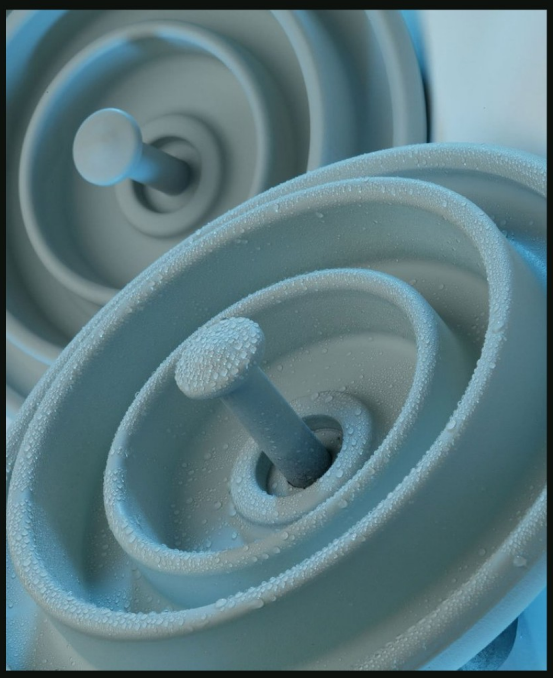
Cure times at 25°C and 50% RH. Coverage is before losses. Si-COAT 581 CM Clear takes the same prep and film build, for steel you still want to see.

Product page, TDS and FAQ:
tssupplies.co.za/corrosion-maintenance-2

HIGH VOLTAGE INSULATOR COATING

Si-COAT 570 HS

One part RTV silicone coating that stops pollution flashovers on insulators, bushings and arresters.



Water beads on coated disc insulators.

IEC TR 62730 · CLAUSE 7.2

5,000 hours

Rain, salt fog, heat and sunlight under voltage. No flashovers. Passed.

IEC TR 62730 · CLAUSE 7.1

30,853 cycles

Tracking and erosion wheel test. The standard asks 30,000. Passed.

HYDROPHOBICITY · IEC 62073

116°

Water beads and runs off. The pollution layer stays mostly dry.

FIELD RECORD · PER CSL

15+ years

More than 15 years in service with zero failures.

IN THE FIELD



Coated post insulators

Porcelain posts coated with 570 HS.



Water beading

The cured film sheds water instead of wetting out.

Chile, 66 kV line at a lithium mine in Antofagasta: insulator cleaning went from monthly to once in four years, with no flashovers since 2019.

SI-COAT 570 HS · THE NUMBERS

Water beads
A 116° contact angle keeps leakage current low.

Dirt turns repellent
Low molecular weight silicone moves into the pollution layer.

Resists tracking
ATH filled, with CSL's larger patented ATH particle.

Performance	
Hydrophobicity, IEC 62073	116° static, 114° adv, 92° rec
Tracking, IEC 60587	Pass 1A 4.5, 1B 4.5
UV and salt fog, IEC 61109	5,000 h, no degradation
CEA tracking wheel	Over 1,000 h
Dielectric, ASTM D149	About 28 kV/mm (718 V/mil)
Service temperature	Minus 40°C to 250°C

Application	
Dry film, typical	0.38 mm (15 mil)
Dry film, minimum	0.25 mm (10 mil)
Eskom work	0.3 mm minimum
Coverage	About 0.5 L/m^2
Skin · tack free	20 to 25 min · 30 to 40 min
Cured through · full	About 6 h · 7 days

APPLYING IT

1 Prep
High pressure water wash at 14 to 70 bar. Cement build up needs dry abrasive cleaning. Remove old grease, then wipe with acetone and isopropyl alcohol.

2 Apply
Airless spray is best; brush or dip also work. Film thickness per IEEE 1523. No primer, no mixing.

3 Conditions
Not below 5°C, with the air at least 3°C above dew point.

4 When
Before energising, or during a planned outage. Never on live equipment.

WHERE IT GOES

- Porcelain, glass and composite insulators
- Bushings, arresters and busbar supports
- Coastal, mine and smelter substations
- Wind and solar farm substations, MV switchgear

NOT FOR

- Live equipment
- Over old grease
- Animal or bird bridging; that needs guards

Both IEC TR 62730 tests passed at independent ISO/IEC 17025 accredited high voltage laboratories. Full reports on request. Eskom Transmission's RTV standards list both tests as a route for heavy pollution sites; approval is Eskom's own process.

Product page, TDS and FAQ:
tssupplies.co.za/high-voltage-insulator-coatings

SILICONE ROOF COATING

CSL 461 RC

One coat of high solids silicone that seals the roof and keeps the building cooler.



CSL reference roof coated with 461.

VOLUME SOLIDS

94%

Nearly all of what goes on stays on. One coat builds to 0.5 mm dry.

COOL ROOF · CRRC 1368-0002

SRI 107.9

Solar reflectance 0.856. Still 88.9 once soiled.

ELONGATION

282%

At 23°C, and 330% at minus 18°C. It moves with the sheets.

SERVICE RECORD · PER CSL

20+ years

More than 20 years on roofs in North America.

IN THE FIELD

Cooler inside

CSL reports a building ran 7 to 9°C cooler inside after coating.

Listed and approved

FM approved maintenance coating, UL listed, CRRC rated and Miami Dade approved.

Trained applicators

CSL's written product warranty applies where the applicator was trained by TSS.

CSL 461 RC · THE NUMBERS

One seamless coat
At least 0.5 mm dry over fasteners, laps and seams.

Ponding water is fine
461 RC withstands ponding water, per the TDS.

It breathes
Vapour permeance of 4.44 perms.

Performance	
Volume solids	94%
Elongation	282% at 23°C, 330% at minus 18°C
Solar reflectance	0.856 initial, 0.723 soiled
Emittance	0.89
SRI	107.9 initial, 88.9 soiled
Vapour permeance	4.44 perms
Temperature stability	Minus 60°C to 200°C

Application	
Dry film	0.5 mm min (20 mil)
Coverage	About 0.5 L/m^2
Air and surface	5°C to 60°C
Skin time	About 68 min at 0.5 mm
Recoat	4 to 6 h
Full properties	7 days
Accessories	462 RC walkpad, 469 granules

APPLYING IT

1 Wash
Power wash with detergent, rinse and let the roof dry.

2 Make it sound
Loose rust and coating off metal. Laitance, dust and grease off concrete.

3 Test patch
Check adhesion on the actual roof. Bitumen and torch on: ask TSS.

4 Coat
One coat to 0.5 mm dry, wet on wet where needed. Lay a 462 RC walkpad where people walk.

WHERE IT GOES

- Factories, warehouses and mine buildings
- Data centres and cold stores
- Concrete roof slabs
- Existing coated roofs and spray foam

NOT FOR

- Asphalt shingles
- Drinking water contact
- Rusted through sheets or rotten decking
- Foot traffic without a walkpad

Listings: ASTM D6694, UL, FM approved maintenance coating, CRRC 1368-0002, Title 24, Miami Dade FL41816-R2, NSF P151 (white). Coverage is before losses. Wet silicone is slippery; use fall protection.

Product page, TDS and FAQ:
tssupplies.co.za/roof-coatings

SELF LEVELLING JOINT SEALANT

CSL 316 SL

Silicone sealant for concrete joints on roads, bridges, airports and ports.



Open longitudinal joint on a concrete road.

MOVEMENT · ASTM C719

+100 / –50%

Four times the stretch and twice the squeeze of a ±25% polyurethane.

ELONGATION · ASTM D412

1,000%

At 10 Shore A it stays soft, so the joint edges carry very little stress.

ROADS · SANRAL PROJECTS

COTO

Conforms to the COTO specification. ASTM D5893 Type SL.

PRODUCT WARRANTY

10 years

Against material defects, on CSL standard terms.

IN THE FIELD

Bridges

High movement and low modulus suit bridge deck joints.

Airports

Resists jet fuel, Skydrol and glycol in CSL's modified ASTM C719 test.

Service record

CSL reports joints in service in North America for more than 20 years.

CSL 316 SL · THE NUMBERS

Levels itself
Fill bottom up in one pass and it flows flat.

Low stress
10 Shore A, so weak arrises are not pulled apart.

Built for outdoors
Neutral cure silicone, minus 60°C to 200°C.

Performance	
Specification	ASTM D5893 Type SL
Movement, ASTM C719	+100 / –50%
Hardness, ASTM D2240	10 Shore A
Elongation, ASTM D412	1,000%
Weathering, ASTM C793	No degradation
Roads	Conforms to COTO
Service temperature	Minus 60°C to 200°C

Application	
Joint width	6 to 25 mm
Sealant thickness	About half the width, 6 to 12 mm
Ambient temperature	Up to 50°C
Tooling · tack free	About 22 min · 90 min
Cured · full properties	48 h · 7 days
Packs	300 ml, 18.9 L, 189 L
Shelf life	12 months, dry, below 32°C

APPLYING IT

1 Clean
High pressure clean the joint faces, then let them dry fully. New concrete needs 7 days minimum.

2 Backer rod
PU or PE foam, snug on both sides, set to the right depth.

3 Trial bead
Check adhesion on the actual concrete after 7 days. Primer normally not needed.

4 Fill
Bottom up in one pass, tool against the faces, 6 to 12 mm below the surface.

WHERE IT GOES

- Concrete roads and highways
- Bridge deck joints
- Airport aprons and taxiways
- Ports, mine yards and logistics yards

NOT FOR

- Vertical or overhead joints
- Joints under 6 mm or over 25 mm
- Saw cut joints under hard forklift wheels
- Permanent immersion or drinking water

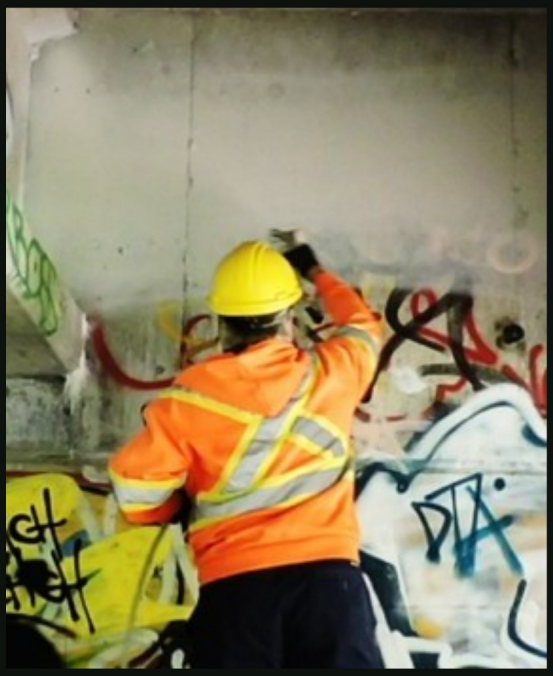
Cure times at 25°C and 50% RH. Fuel resistance comes from CSL's modified ASTM C719 cycle with JP-4, Skydrol B, hydraulic fluid and glycol. SANRAL does not approve products; it works to the COTO specification.

Product page, TDS and FAQ:
tssupplies.co.za/joint-sealants

CLEAR ANTI GRAFFITI COATING

Si-COAT 532 AG

Clear, permanent silicone coating. Graffiti comes off with a cold water pressure wash.



CSL anti graffiti reference job.

VOC · PER CSL

53 g/L

Meets SCAQMD VOC limits. 94% volume solids.

GRAFFITI REMOVAL

Cold water

A pressure wash at about 83 bar (1,200 psi) takes most graffiti off.

TYPICAL DRY FILM

0.18 mm

Range 0.13 to 0.23 mm. Clear, so the surface keeps its look.

NON SACRIFICIAL

Permanent

It bonds to the surface and stays on through repeated cleaning.

IN THE FIELD

Dallas, Texas

President George Bush Turnpike. Decorative concrete retaining walls.

Toronto and Guelph

Pearson Airport monorail columns. A trail underpass and GO Station stonework.

Montreal

Rue du Fort tunnel walls, cleaned with a cold water pressure washer only.

These jobs used CSL's pigmented anti graffiti coating, 528 AG or 529 AG: the same coating as 532 AG, with colour added.

SI-COAT 532 AG CLEAR · THE NUMBERS

Clear over almost anything
Metal, concrete, brick, stone, wood and sound coatings.

Cleans with water
A cold water pressure wash for most paint.

Stays on
Non sacrificial. No recoat after every clean.

Performance	
VOC	53 g/L, meets SCAQMD
Volume solids	94%
Hardness	33 Shore A
Tensile strength	0.7 MPa (100 psi)
Elongation at break	100%
Finish	Clear, semi gloss
Temperature stability	Minus 60°C to 200°C

Application	
Dry film, typical	0.18 mm (7 mil)
Dry film range	0.13 to 0.23 mm (5 to 9 mil)
Coverage	About 0.14 to 0.25 L/m^2
Skin · tack free	45 to 60 min · 60 to 90 min
Cured through · full	4 to 6 h · 7 days
Packs	3.8 L, 18.9 L, 189 L
Shelf life	24 months, below 32°C

APPLYING IT

1 Prep
Clean, sound and dry. Remove old tags and chalking paint first. Test patch on matte surfaces.

2 Mix and apply
Power mix at 300 to 400 rpm for 5 minutes. Do not thin. Airless spray is best.

3 Remove graffiti
Cold water at about 83 bar. Paint older than 10 days: warm water.

4 Special paints
Biodegradable surfactant on a pad, then rinse straight away.

WHERE IT GOES

- Bridges, underpasses and retaining walls
- Trains, stations and bus shelters
- Face brick, stone and frontages
- Signage and electrical kiosks

NOT FOR

- DIY use
- Hiding old graffiti
- Below 5°C or near dew point
- Buildings over 60 years old, without a heritage check

Cure times at 25°C and 50% RH. Coverage is before losses. For professional applicators only. Ventilate confined spaces or use respiratory protection.

Product page, TDS and FAQ:
tssupplies.co.za/si-coat-528ag-anti-graffiti-coating

TESTED BEFORE WE SELL IT

Every figure in this brochure comes from a test report, a data sheet or a job on record. Ask and we'll show you.

SI-COAT 570 HS

5,000 hours

IEC TR 62730 multiple stress test. Rain, salt fog, heat and sunlight under voltage. No flashovers.

SI-COAT 570 HS

30,853 cycles

IEC TR 62730 tracking and erosion wheel. The standard asks 30,000. No tracking.

SI-COAT 579 CM

1st of 29

Florida Fence Test, 36 months on the Atlantic coast. One coat on rusted, hand cleaned steel.

SI-COAT 579 CM

About 20 years

Power plant piping coated in 2003. Film thickness the same about 20 years later.

579 CM WITH CSL 979

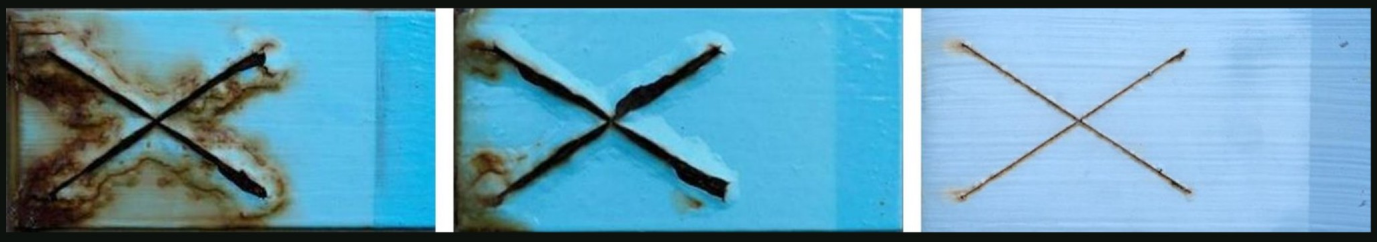
C5 High

ISO 12944-6:2018, as the Si-COAT CM System with 979 primer.

CSL 316 SL

+100 / –50%

ASTM C719 movement. Conforms to the COTO specification.



Florida Fence Test panels after three years. Right: one coat of 579 CM on rusted, hand cleaned steel. Left and centre: three coat systems on blasted steel.

Full 570 HS test reports on request: sales@tssupplies.co.za

WHY BUY FROM TSS

Exclusive CSL distributor

Technical Solution Supplies distributes CSL Silicones products across Southern Africa, including the DRC and the Seychelles.

Trained applicators

CSL gives a written product warranty where the applicator has been trained by TSS.

Professional systems

Proper prep, proper film build and trade pack sizes. Not a hardware store quick fix.

Delivered

Free delivery within South Africa by courier from TSS.

SEND US THE PROBLEM

Photos, a rough size and where it is. We'll come back with the right product and how to apply it.

sales@tssupplies.co.za · +27 (0)31 002 7376

Scan to send it

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