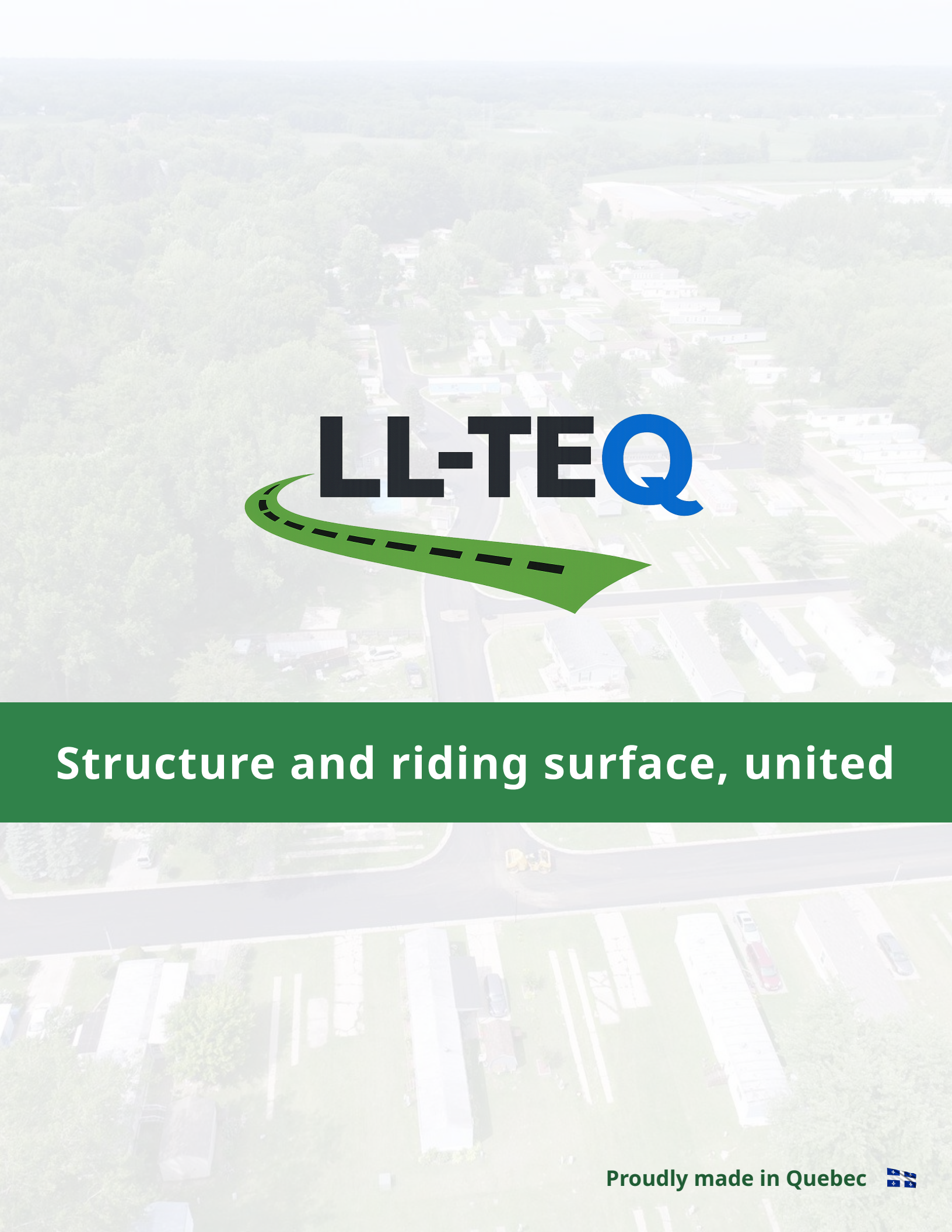


Structure and riding surface, united

Proudly made in Quebec

STRUCTURAL PERFORMANCE

Structure and riding surface, united

A single layer that is both the riding surface *and* the pavement structure

204 t — **C-17 bearing capacity**
A C-17 Globemaster carried as the final riding surface

3,705 — **PSI in compression**
25.5 MPa, AASHTO-accredited third-party lab

1.78 mm — **of rutting**
after 20,000 passes, less than a seventh of the limit

100 k — **cycles at 46-60 °C**
no measurable deformation or rutting

Purpose of this document

Summarize the structural-performance highlights of the LL-TEQ™ system: measurements from accredited third-party laboratories and bearing capacities certified by military authorities, not projections.

✓ The road that carries a C-17

A C-17 Globemaster, 204 tonnes (450,000 lb), carried as the *final* riding surface, through 100,000 load cycles at 46 to 60 °C with no deflection or rutting, a performance certified by U.S. military engineers (PCASE 2.09 method). What carries a loaded military cargo aircraft carries a ten-wheeler, a full delivery van or your car without difficulty.

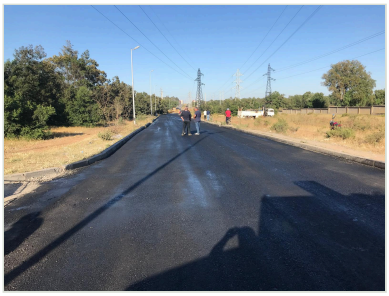
The LL-TEQ™ system turns the soil in place into a solid pavement, in a single block. No layers that peel apart: the riding surface and the structure are one. The figures that follow come from independent accredited laboratory tests and bearing capacities certified by military engineers. These are not projections, they are measurements.

01

Stronger in service than in the lab

The role of confinement* in a real pavement

** Confinement: the surrounding soil grips the material on every side. Unable to spread, it carries far more.*



In the lab, a small isolated sample is crushed, free to spread sideways. In a real pavement, the treated material is gripped on every side by the surrounding soil: the lab figure is therefore a **floor**, not the true in-service strength.

Loose sand gives way underfoot; packed into a bucket, it holds you standing. The LL-TEQ™ polymer binder welds the particles into a single block, and the harder the load presses, the tighter the material packs and the more it holds.

✓ 3,705 PSI (25.5 MPa) verified, and that is a floor

On the test bench, isolated, compressive strength already reaches 3,705 PSI (25.5 MPa), measured by an independent AASHTO-accredited laboratory. In service, confined, it exceeds that figure.

02

No rutting, and heat does not soften it

Rutting under immersion and heat resistance

On a road, a 12.5 mm rut is the limit beyond which the pavement is judged too deeply worn and must be rebuilt. LL-TEQ™ technology stays far below that limit, even under deliberately severe conditions.

Rutting: wheel-track test under full immersion

Only 1.78 mm of rutting after 20,000 passes, under full immersion in water, less than a seventh of the 12.5 mm limit.

Heat: 100,000 load cycles at 46 to 60 °C

No measurable deformation or rutting: heat does not fatigue the material.

03

Water does not have time to get in

Hydraulic conductivity measured in the laboratory

Laboratory tests measure a material so impermeable that, through its mass, the time water would take to advance a single centimetre is measured in **years**.

In other words, even for a road constantly covered with water, it would take years before the water passed through. And a real road is never permanently underwater: rain runs off, the surface dries, and that water never has time to get in.

04

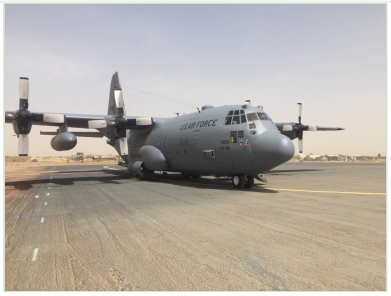
Loads that few surfaces in the world can take

Military certification: PCASE 2.09 method

U.S. military engineers certified LL-TEQ™ technology as the final riding surface under heavy cargo aircraft, calculating the number of allowable passes from field measurements:

AIRCRAFT	LOAD	CERTIFIED PASSES
C-17 Globemaster	204 t (450,000 lb)	2,470
C-130 / C-130J	70 t (155,000 lb)	23,847
KC-130J	79 t (175,000 lb)	10,000+

> These loads, concentrated under high tire pressures, exceed those of road traffic. What carries a loaded military cargo aircraft carries a ten-wheeler, a full delivery van or your car without difficulty.



05

Why it is credible

Independent families of evidence that converge

Several independent families of evidence (compressive strength, rutting resistance, heat and water resistance, real aircraft loads) all converge on the same conclusion: high structural performance. The raw data come from accredited third-party laboratories and military authorities, not from the manufacturer or the distributor.

✓ These are not projections, they are measurements

This document summarizes the highlights. The full engineer-signed technical dossier details every test and its limits.

Full dossier

Structural performance of the LL-TEQ™ system, Mark D. Hardy, P.E., Hardy Engineering, Santa Monica (CA), PE license 36538, 12 May 2026.

06

Sources

Supporting evidence: third-party laboratories and authorities

Accredited tests and field data underpinning the figures above, carried into the engineer-signed dossier.

TEST / ITEM	METHOD	LABORATORY / AUTHORITY · YEAR
Ozinga crushed-concrete core, 4% treated	**ASTM C31/C42**	S.A.M. Consultants (AASHTO) · 2019
Sandy silty clay with gravel, 4% treated	**ASTM C31/C42**	S.A.M. Consultants (AASHTO) · 2017
Sand-clay cores, 4% treated	**ASTM C39/C42**	S.A.M. Consultants (AASHTO) · 2016
28-day cure curve	**ASTM C31/C42**	S.A.M. Consultants (AASHTO) · 2023
Hamburg wheel-track test	**AASHTO T-324**	Behnke Materials Engineering (AMRL) · 2018
MMLS accelerated loading	**MMLS**	Kamen Engineering, Australia · 2012
Hydraulic conductivity	**ASTM D5084**	S.A.M. Consultants (AASHTO) · 2017
Mocoron airfield (Honduras): DCP / CBR / passes	**PCASE 2.09**	USAF AFSOC · 2015-2019
ALZ Sandhill (Twentynine Palms): DCP / passes	**PCASE 2.09**	USMC MAWTS-1 · 2019
Geotechnical survey and immediate bearing index	**IPI**	Grollemund LaboRoutes, France · 2019

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