

**TECHNOLOGY DEPLOYED IN MATC**

FHWA-HIF-21-049

# INDIRECT TENSILE ASPHALT CRACKING TEST (IDEAL-CT)

*Determine the cracking potential of your asphalt mixtures*

## HOW IT WORKS




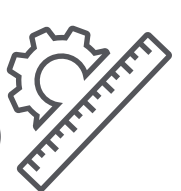



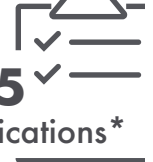
The IDEAL-CT is an indirect tension test that determines the cracking potential of asphalt mixtures with a fracture mechanics-based parameter: Cracking Tolerance Index ( $CT_{Index}$ ). Asphalt mixture specimens are conditioned and fabricated to 150 mm in diameter and 62 mm in height, with  $7.0 \pm 0.5$  percent air voids, no notching/cutting necessary. The test is typically run at 25°C with a monotonic loading rate of 50 mm/minute of cross-headed displacement.



Image Source: FHWA  
Load frame performing IDEAL-CT

**The larger the  $CT_{Index}$  value, the better the cracking resistance.**

## IDEAL-CT FEATURES

<p>Highly <b>VERSATILE</b></p> 	<p>Quick Preparation and <b>OPERATION</b></p> 	<p>Field Laboratory <b>ACCESSIBLE</b></p> 
<p>Retrofit for existing load frame <b>COSTS ~ \$4,000</b></p> 	<p>New load frame and equipment <b>COSTS ~ \$12,000</b></p> 	
<p>Tests at least <b>3 REPLICATES</b> for each sample</p> 	<p>Generates a <math>CT_{Index}</math> for each sample in <b>&lt; 5 MINUTES</b></p> 	<p>Meets <b>ASTM D8225</b> standards and specifications*</p> 

Current Performance Testing Program Evaluations of IDEAL-CT in: Texas, Oklahoma, Virginia, Kentucky, Minnesota, Maine, Vermont, National Center for Asphalt Technology (NCAT).

**Learn more at <https://www.fhwa.dot.gov/MATC>**

\* These standards and specifications are not FHWA requirements.