



MOUNTAIN STATES ASPHALT INC.

205 s Emerald Rd
Tooele, UT 84074


SUPERPAVE™ Binder Grade: PG 70-28 UT						
Sample ID: 2024 Mix Design						
Sample Condition (ie Good/Open): Good		Date Tested: 1/6/2024	By: JH			
Test		Temp	Method	Specification	Result	
ORIGINAL BINDER						
AASHTO M 320 Requirements						
Viscosity, Pa*s		135°C	T 316	3.0 max	2.037	
Dynamic Shear	G*, 10 rad./sec., kPa	70°C	T 315	1.3 min	1.78	
	Phase Angle, δ (°)			71 max	66.2°	
Additional Requirements						
RTFOT RESIDUE						
AASHTO M 320 Requirements						
Mass Change, % (Mass Loss is reported as Negative)			T 240	1.0 max	-0.149%	
Dynamic Shear		G*/sinδ, 10 rad./sec., kPa	70°C	T 315	2.2 min 3.74	
Additional Requirements						
Elastic Recovery, %		25°C	T 301	85 min	91%	
PRESSURE AGING RESIDUE (100°C, 300 psi, 20 hr.)						
AASHTO M 320 Requirements						
Dynamic Shear		G*(sinδ), 10 rad./sec., kPa	25°C	T 315	5,000 max 1665	
Creep Stiffness	Stiffness, MPa (60 sec.)		-18°C	T 313	150-300	184
	m Value				0.300 min	0.349
Creep Stiffness -6°C	Stiffness, MPa (60 sec.)		-24°C	T 313	Report	388
	m Value				Report	0.285
Delta Tc			-	-1 min	0.662	

*Result from subcontractor

The Mixing Temperature Range corresponding to a viscosity range of 0.15 to 0.19 Pa.s, is 323-331°F.
 The Compaction Temperature Range corresponding to a viscosity range of 0.25 to 0.31 Pa.s, is 304-311°F.
 These are laboratory mixing and compaction estimates, adjustments to the temperatures are likely needed for laboratory testing and verification, as well as in the field.

Notes: This sample complied with the requirements of UDOT Section 02745 - Asphalt Materials, PG 70-28

Tested By:



 Jameson Hulse, Binder Tech

Reviewed By:



 Gene Chrisenbery, Vice President

Typical Temperature-Viscosity Graph

Material
Specific Gravity, 15°C

PG 70-28
1.031

Recommended Mix and Compaction Temperature

PG 70-28	Mixing Hi Limit	331 °F
PG 70-28	Mixing Low Limit	323 °F
PG 70-28	Comp High Limit	311 °F
PG 70-28	Comp Low Limit	304 °F

Correlation

0.9999

