

Scope of Accreditation For Vi-Chem Corporation

55 Cottage Grove Street S.W.
Grand Rapids, MI 49507
Rahul Dhavalikar, Ph.D.
(616) 247-8501

In recognition of a successful assessment to ISO/IEC 17025 2005, accreditation is granted to **Vi-Chem Corporation** to perform the following tests:

Accreditation granted through: **October 6, 2009**

Testing

Technology	Range, when necessary	Methods Used	Product Types	Remarks
Charpy Impact	(0 to 200) in lb _f	ISO179-1	Plastic/TPE's	
Color Reading	L (0 to 96)	ASTM D2244 SAE J1545	Plastics/TPE's	
Compression Set		ASTM D395 ISO815 - 1, 2	Plastics/TPE's	Test temp: (-40 to 250)°C
Flammability		ISO3795 FMVSS302 GM9070P SAE J369	Plastics/TPE's	
Flexural Properties	(0 to 500)N (0 to 5000)N (2, 4, 6, 8) in	ASTM D790 ISO178	Plastics/TPE's	Test temp: (-40 to +250)°C
Fluid Resistance		ASTM D471 ISO1817	Plastics/TPE's	
Auto Fluid Staining		Chrysler : LP 463 PB-57-03	Plastics/TPE's	
Fogging	2% to 100%	Chrysler : LP463DB-12-01 GM: GM9305P SAE J1756 (Sec. 7) GMW3235-B	Plastics/TPE's	Test temp: Cool: (21 to 38) °C Hot: (85 to 110)°C
Gardner Impact	(0 to 8.9) J	ASTM D 5420	Plastics/TPE's	
Gloss Evaluation		ASTM D523 ASTM D2457	Plastics/TPE's	60° gloss only
Hardness (Shore A, C, D)	20A to 90A 20C to 90C 10D to 90D	ASTM D2240 ISO868	Plastics/TPE's	
Heat Aging		ASTM D573 ISO188 (sec 8.1)	Plastics/TPE's	
Izod Impact Resistance	(0 to 20) in-lb _f	ASTM D256, Rev A ISO180	Plastics/TPE's	
Mold Shrinkage		ISO2577	Plastics/TPE's	



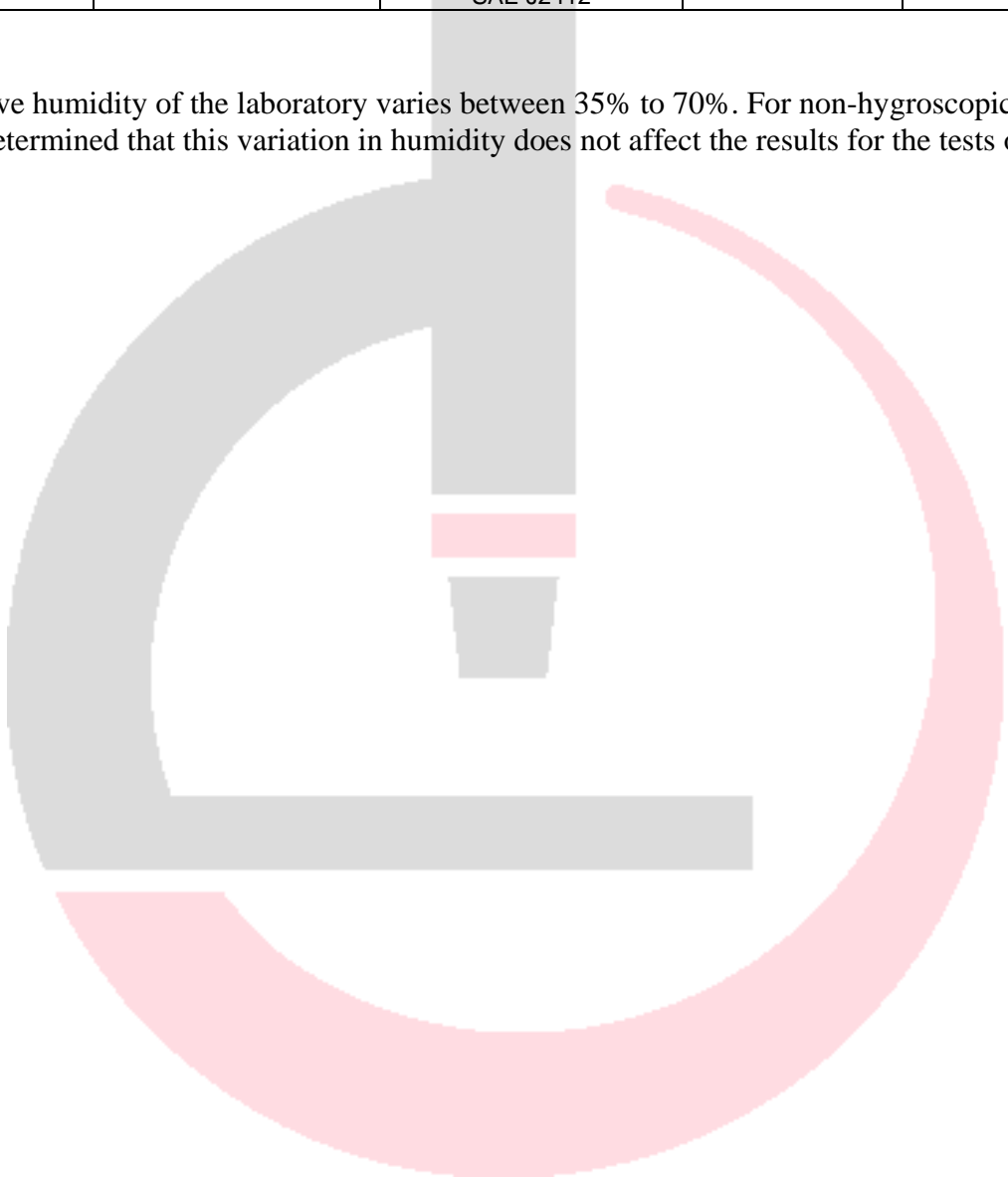
Technology	Range, when necessary	Methods Used	Product Types	Remarks
Oven Aging		SAE J2236	Plastics/TPE's	
High temperature humidity aging		GM9329P	Plastics/TPE's	
Specific Gravity (Relative Density)	(0.010 to 25.000) g/cm ³	ASTM D792 ISO1183-1 Method A	Plastics/TPE's	
Tear Strength	(0 to 3700) kN/m (0 to 370) kN/m	ASTM D624 ASTM D1004 ISO34-1B	Plastics/TPE's	Test temp: (-40 to +250)°C
Tensile Properties	(0 to 1450) MPa	ASTM D412 (Method A) ASTM D638 ISO37, Type 1 ISO527, 1,2,3 Type 5	Plastics/TPE's	Test temp: (-40 to +250)°C
Volatile Loss	0% to 98%	ASTM D1203 (Method A) Chrysler LP 463DD-04-01 Rev C ISO 176 Method A	Plastics/TPE's	
Asphalt Staining		DCX: LP463PB-57-02 Ford: M4D689 (Par. 3.6) GM9689P	Plastics/TPE's	
Cleaning/Solvent Resistance		GM9900P	Plastics/TPE's	
Cold Flexibility		Chrysler: LP463DD-07-01 Ford: FLTM BN102-01A GM9503P	Plastics/TPE's	Test temp: (-40 to 0)°C
Crocking		Ford: FLTM BN107-01 GM9033P SAE J861	Plastics/TPE's	
Crock and Mar Resistance		Chrysler : LP463PB-54-01	Plastics/TPE's	60° gloss only
Five Finger Scratch		Chrysler: LP463DD-18-01 Ford: FLTM BN108-13 GMN3943	Plastics/TPE's	
Hot/Cold Cycles		Chrysler: LP463DD-08-02	Plastics/TPE's	
Mar Resistance		GM9150P	Plastics/TPE's	
Compression Load Deflection		Chrysler LP 463AB-05-08 Rev B	Plastic/TPE's	
Odor		Ford: FLTM BO131-01 FLTM BO131-03 SAE J1351 GMW3205-B3	Plastics/TPE's	
Soilability		Chrysler: LP463KC-04-01 Ford: FLTM BN112-08	Plastics/TPE's	
Taber Wear Resistance of Trim Materials		Chrysler: LP463KB-21-01 ASTM D3884	Plastics/TPE's	
Wear Resistance of Soft Trim Materials		Chrysler: LP463KB-06-01	Plastics/TPE's	
Melt Flow Rate		ASTM D 1238, Type B ISO 1133, Type B	Plastics/TPE's	



Technology	Range, when necessary	Methods Used	Product Types	Remarks
Xenon Arc-Type Weathering		ASTM D2565 SAE J2527 SAE J1885 SAE J1960 SAE J2412	Plastics/TPE's	

Notes:

- 1) Relative humidity of the laboratory varies between 35% to 70%. For non-hygroscopic materials, it was determined that this variation in humidity does not affect the results for the tests on this scope.



Approved by: _____ Date: April 8, 2009

R. Douglas Leonard
Chief Technical Officer