PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

KW Plastics Quality Laboratory

1 Sanders Road, Troy, AL 36079

(Hereinafter called the Organization) and hereby declares that Organization is accredited in accordance with the recognized International Standard:

ISO/IEC 17025:2005

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system
(as outlined by the joint ISO-ILAC-IAF Communiqué dated April 217):

Chemical, Mechanical, Physical Testing of Polymers

(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen
President/Operations Manager

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

Initial Accreditation Date:	*Issue Date:*	*Expiration Date:*
December 31, 2006	September 8, 2019	December 31, 2021

Accreditation No.:	*Certificate No.:*
59407	L19-439

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjlabs.com

Certificate of Accreditation: Supplement

KW Plastics Quality Laboratory

1 Sanders Road, Troy, AL 36079
Contact Name: Doug McLendon Phone: 800-633-8740

Accreditation is granted to the facility to perform the following testing:

FIELD OF TEST	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	RANGE (WHERE APPROPRIATE) AND DETECTION LIMIT
Mechanical [F]	Polymers	Melt Flow Rate	ASTM D1238, ISO 1133 Per Customer Specification	0.15 g/10 min to 75g/10 min
		Differential Scanning Calorimetry	ASTM D3418 D4591 ISO 11357	See Method
		Colorimetry	ASTM E308 Per Customer Specification ASTM D6290	Wavelength 400 nm to 700 nm Resolution = 10 nm
Physical [F]		Izod Impact Strength	ASTM D256, ISO 180 Per Customer Specification	5 N to 10 250 N (0.1 ft·lb/in to 192 ft·lb/in)
		Gardner Impact	ASTM D5420	0.91 kg weight: 1 J to 20 J 1.8 kg weight: 2 J to 38 J (2 lb weight: 8 in·lb to 176 in·lb 4 lb weight: 16 in·lb to 340 in·lb)
		Flexural Modulus	ASTM D790, ISO 178 Per Customer Specification	345 mPA to 3 450 mPA (50 000 psi to 500 000 psi)
		Tensile Strength Elongation	ASTM D638, ISO 527 Per Customer Specification	Load Cell Capacity 44 N to 4 450 N (10 lb to 1 000 lb) D.L. = 0.04 (0.01 lb)
		Vicat	ASTM D1525 ISO 306	Loads 10N, 50N Rates up to 120 k/hr
		Heat Deflection	ASTM D648, ISO 75	175 °C maximum
		Shore Hardness	ASTM 2240 ISO 868	Shore Hardness 20 to 100
Chemical [F]		Ash Content	ASTM D4218 Per Customer Specification	0.01 % to 80 % D.L. = 0.01 %
		Infrared Analysis	ASTM D5576, D2238, D6248, D3124, D5994, D3594	See Method Quantitative Semi-Quantitative
		Specific Gravity	ASTM D792, ISO 1183 Per Customer Specification	0.8 to 1.4
		X-ray Fluorescence	ASTM F2617	D.L. = 0.1 mg/kg (ppm)
		X-ray Fluorescence Total Lead (Pb)	CPSC-CH-E1002-08	Range: 2 mg/ kg to 200 mg/kg 200 mg/kg to 600 mg/kg D.L. = 2 mg/kg

1. The presence of a superscript F means that the laboratory performs testing of the indicated parameter at its fixed location. Example: Outside Micrometer [F] would mean that the laboratory performs this testing at its fixed location.