

Univar Solutions Batch#: 0834 K05120
 Material#: 16140758
 Initial AC Date: 12/8/20

MFG Date: 9/11/20
 Exp Date: 12/8/21

10/1/20



2780 Waterfront Pkwy E., Indianapolis IN 46214
 Phone: 317-328-5660 Fax: 317-328-2359 www.calumetspecialty.com

Certificate of Analysis

PO Number: 4524373075	Order Number: 679681
Product: CALUMET 420-460	Shipping Date: Sep 27, 2020
Cust. Mat. No: 16055819	Date of Mfg: Sep 1, 2020
Product Code: 300345004000	Qty: 43,820 LB
Lot Number: 2009010040	Container ID: T 470
Carrier: 0060001402-SINDLE TRUCKING, LLC	Truck ID: 1800

Billing: UNIVAR SOLUTIONS USA PO BOX 34325 SEATTLE WA 98124-1325	Shipping To: UNIVAR USA INC. 2600 S. GARFIELD AVE COMMERCE CA 90040	Shipping From: Calumet Refining, LLC 1756 Old Highway 7 Cotton Valley LA 71018-2989
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Test Description	Units	Method	Min.	Max.	Results
API GRAVITY @ 60°F		D4052	43.0	51.0	45.2
SPECIFIC GRAVITY @ 60/60°F		D1250	0.7750	0.8109	0.8008
POUNDS PER GALLON @ 60°F	lb/gal	D1250			6.676
COLOR, SAYBOLT		D156	28		30
VISCOSITY @ 40°C	cSt	D445			1.93
FLASH POINT, PMCC (°F)	°F	D93			204
ANILINE POINT (°F)	°F	D611			171.7
ANILINE POINT (°C)	°C	D611			77.5
DISTILLATION, IBP (°F)	°F	D86	422		430
DISTILLATION, 5% (°F)	°F	D86			438
DISTILLATION, 10% (°F)	°F	D86			439
DISTILLATION, 20% (°F)	°F	D86			440
DISTILLATION, 30% (°F)	°F	D86			441
DISTILLATION, 40% (°F)	°F	D86			443
DISTILLATION, 50% (°F)	°F	D86			445
DISTILLATION, 60% (°F)	°F	D86			447

Analysis Certified By: Daniel Holder Laboratory Manager Daniel Holder
 Printed Name Title Lab Signature/Loader

All sales of Products by Calumet Specialty Products Partners, L.P. and its subsidiaries and affiliates are subject to the applicable terms and conditions of sale at <http://www.calumetspecialty.com/customer-service/terms-of-sale>, which are incorporated herein by reference.



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Test Description	Units	Method	Min.	Max.	Results
DISTILLATION, 70% (°F)	°F	D86			450
DISTILLATION, 80% (°F)	°F	D86			454
DISTILLATION, 90% (°F)	°F	D86			460
DISTILLATION, 95% (°F)	°F	D86			466
DISTILLATION, DP (°F)	°F	D86			474
WATER CONTENT (ppm)	ppm	D1533		475	474
AROMATIC CONTENT (wt %)	wt %	D5186		500	57
REFRACTIVE INDEX @ 25°C		D1218		1.0	0.1
KAURI-BUTANOL VALUE		D1133			1.4395
					25.7

Analysis Certified By: Daniel Holder
 Printed Name

Laboratory Manager
 Title

Daniel Holder
 Lab Signature/Loader

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