



Zeon Chemicals L.P.
4100 Bells Lane
Louisville, Kentucky 40211

CERTIFICATE OF ANALYSIS

To:			Shipped To:		
Customer Order No.	Zeon Order No.	Issue Date 09/28/2015	Country of Origin	Date Manufactured 06/18/2007	
Zeon Product Description NIPOL 1411C		Lot No	Amount() 0		
NO	PARAMETERS	TEST PROCEDURES	SPECIFICATION MIN	MAX	ACTUAL VALUE
1	Raw Polymer: Mooney Viscosity	ASTM D1646 ML 1' + 4' @ 100 deg C			
2	Cure Profile ODR ASTM D-2084 Using Compound per ASTM D3187	Micro Dies 160C 1 deg ML Arc, 100 CPM, 30 min. MH and no preheat. Used Ts1 Industry Ref Black 6 T'90			
3	Total Volatiles	ASTM D1416 Mill-Oven	N/A - See	Heat Loss	Below
4	Total Ash -- %	ASTM D1416 As Specified			
5	ASTM D1416 Total Extractables	Except: Use absolute Methanol as solvent in a soxhlet continous extractor for 16 hrs.			
6	Bound ACN -- %	ZEON Procedure 325	36.70	40.30	38.30
7	HEAT LOSS (%)	ZEON Procedure 1339	0.00	0.70	0.14
8	T-100 (%)	ZEON Procedure 1372	80.00	100.00	91.54
9	Total Ash (MW) %	ZEON Procedure 1502	2.50	13.00	5.75
Recommended Storage: Store under 75 degree F and 50% R.H. with no exposure to direct light.			Retest critical parameters after 06/17/2008		
Remarks: Certificate of Analysis to be MAILED. If the above address, product code, or specification are in error, please call 1-800-735-3388. THANK YOU FOR YOUR BUSINESS!					

Certified by: Gina Warner

Title: QC Lab Supervisor

Date: 09/28/2015

The test results herein are believed to be accurate but are laboratory tests based on limited sampling which do not necessarily simulate actual use conditions. NO REPRESENTATIONS, GUARANTEES OR WARRANTIES OF ANY KIND ARE MADE AND ZEON SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. ZEON shall not be liable for and the customer assumes all risk and liability for any use or handling of any material beyond ZEON's direct control.



Zeon Chemicals L.P.
 4100 Bells Lane
 Louisville, Kentucky 40211

CERTIFICATE OF ANALYSIS

To:	Shipped To:
-----	-------------

Customer Order No.	Zeon Order No.	Issue Date 09/28/2015	Country of Origin	Date Retested 05/16/2008
--------------------	----------------	--------------------------	-------------------	-----------------------------

	Zeon Product Description NIPOL 1411C	Amount () 0
--	---	----------------

NO	PARAMETERS	TEST PROCEDURES	SPECIFICATION		ACTUAL VALUE
			MIN	MAX	
1	Raw Polymer: Mooney Viscosity	ASTM D1646 ML 1' + 4' @ 100 deg C			
2	Cure Profile ODR ASTM D-2084 Using Compound per ASTM D3187	Micro Dies 160C 1 deg ML Arc, 100 CPM, 30 min. MH and no preheat. Used Ts1 Industry Ref Black 6 T'90			
3	Total Volatiles	ASTM D1416 Mill-Oven	N/A - See	Heat Loss	Below
4	Total Ash -- %	ASTM D1416 As Specified			
5	ASTM D1416 Total Extractables	Except: Use absolute Methanol as solvent in a soxhlet continous extractor for 16 hrs.			
10	Agglomerat'n Chk	ZEON Procedure Visual			No Agglomn

Recommended Storage: Store under 75 degree F and 50% R.H. with no exposure to direct light.	Retest critical parameters after 05/16/2009
---	---

Remarks: Certificate of Analysis to be MAILED.
 If the above address, product code, or specification are in error,
 please call 1-800-735-3388. THANK YOU FOR YOUR BUSINESS!

Certified by: Gina Warner  Title: QC Lab Supervisor Date: 09/28/2015

The test results herein are believed to be accurate but are laboratory tests based on limited sampling which do not necessarily simulate actual use conditions. NO REPRESENTATIONS, GUARANTEES OR WARRANTIES OF ANY KIND ARE MADE AND ZEON SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. ZEON shall not be liable for and the customer assumes all risk and liability for any use or handling of any material beyond ZEON's direct control.



Zeon Chemicals L.P.
4100 Bells Lane
Louisville, Kentucky 40211

CERTIFICATE OF ANALYSIS

To:		Shipped To:			
Customer Order No.	Zeon Order No.	Issue Date 09/28/2015	Country of Origin	Date Retested 05/05/2009	
		Zeon Product Description NIPOL 1411C			Amount () 0
NO	PARAMETERS	TEST PROCEDURES	SPECIFICATION MIN	MAX	ACTUAL VALUE
1	Raw Polymer: Mooney Viscosity	ASTM D1646 ML 1' + 4' @ 100 deg C			
2	Cure Profile ODR ASTM D-2084 Using Compound per ASTM D3187	Micro Dies 160C 1 deg ML Arc, 100 CPM, 30 min. MH and no preheat. Used Tsl Industry Ref Black 6 T'90			
3	Total Volatiles	ASTM D1416 Mill-Oven	N/A - See	Heat Loss	Below
4	Total Ash -- %	ASTM D1416 As Specified			
5	ASTM D1416 Total Extractables	Except: Use absolute Methanol as solvent in a soxhlet continous extractor for 16 hrs.			
11	Agglomerat'n Chk	ZEON Procedure Visual			No Agglomn
Recommended Storage: Store under 75 degree F and 50% R.H. with no exposure to direct light.		Retest critical parameters after 05/05/2010			
Remarks: Certificate of Analysis to be MAILED. If the above address, product code, or specification are in error, please call 1-800-735-3388. THANK YOU FOR YOUR BUSINESS!					

Certified by: Gina Warner  Title: QC Lab Supervisor Date: 09/28/2015

The test results herein are believed to be accurate but are laboratory tests based on limited sampling which do not necessarily simulate actual use conditions. NO REPRESENTATIONS, GUARANTEES OR WARRANTIES OF ANY KIND ARE MADE AND ZEON SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. ZEON shall not be liable for and the customer assumes all risk and liability for any use or handling of any material beyond ZEON's direct control.