

laboratory	NOCIL Limited- Quality Assurance Department, C-37, TTC Industrial Area, Pawne Village, Navi Mumbai, Maharashtra		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	22.05.2015
Certificate Number	T-1595	Valid Until	21.05.2017
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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / limits of Detection
I. INDUSTRIAL AND FINE CHEMICALS				
1.	2,2,4-trimethyl-1,2-dihydroquinoline, Polymerized (Pilnox TDQ)	Loss on Drying % w/w	NOCIL G-22-B Issued Date: Jan, 2015 Revision 0	0.02 % to 0.3 %
		Ash % w/w	ASTM D 4574: 2006 (RA 2012)	0.01 % to 0.3 %
		Softening Point°C (Mettler Cup & Ball)	ASTM D6090: 2012 pp 1 to 3	87 °C to 98 °C
2.	N-(Cyclohexylthio) phthalimide (Pilgard PVI)	Loss on Drying % w/w	NOCIL G-22-B Issued Date: Jan, 2015 Revision 0	0.02 % to 0.3 %
		Ash, % w/w	ASTM D 4574: 2006 (RA 2012)	0.01 % to 0.3 %
		Toluene Insoluble, % w/w	NOCIL 04-03-04 Issued Date: Jan, 2015 Revision 0/ Based on ASTM D 4934: 2002 (RA 2012)	0.01 % to 0.2 %
		Melting Point.°C	ASTM D1519: 1995 (RA 2009) Method A	88 °C to 92 °C
		Assay, % w/w	NOCIL 04-3: 08 Issued Date: Jan., 2015 Revision. 0	95 % to 99.99 %

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3.	N- (1,3-Dimethylbutyl)-N'-phenyl-p-phenylene diamine (Pilflex 13)	Volatile Material % w/w @ 70°C/3 Hrs.	ASTM D 4571: 2006 (RA 2012)	0.01 % to 0.3 %
		Ash, % w/w	ASTM D 4574: 2006 (RA 2012)	0.01 % to 0.2 %
		Melting Point.°C	ASTM D 1519: 1995 (RA 2009) Method A	47 °C to 52 °C
		Assay, %	ASTM D 4937: 1996 (RA 2012) Procedure B	95 % to 99.9 %
4.	N-Cyclohexyl-2-benzothiazole sulfenamide (Pilcure CBS) and 2- (4-Morpholinio) benzothiazole (Pilcure MOR)	Ash % w/w	ASTM D 4574: 06 (RA 2012)	0.01 % to 0.3%
		Loss on Drying % w/w	NOCIL G-22-B Issued Date: Jan, 2015 Revision 0	0.02 % to 0.3 %
		Methanol Insoluble, % w/w	ASTM D 4934: 02 (RA 2012)	0.02 % to 0.3 %
		Assay, % w/w	ASTM D 4936: 2010	95 % to 99.9 %
		Free Amine, % w/w	ASTM D 4936: 2010	0.02 % to 0.5 %

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / limits of Detection
5.	2,2'-Dithiobis benzothiazole (Pilcure MBTS)	Ash %, w/w	ASTM D4574: 2006 (RA 2012)	0.01 % to 0.5%
		Loss on Drying % w/w	NOCIL G-22-B Issued Date: Jan, 2015 Revision 0	0.02 % to 0.5 %
		Melting Point. °C	ASTM D 1519: 1995(RA 2009) Method A	170 °C to 180 °C
		Oil content (PE Extract), % w/w	NOCIL G-40 Issued Date Jan, 2015 Revision 0 /Based on ASTM D 4573: 2003 (RA 2009)	0.2 % to 3.0 %
		Assay, % w/w	ASTM D 5051: 2006 (RA 2012)	90 % to 99 %
		Free MBT %, w/w	ASTM D 5044: 2006 (RA 2012)	0.1 % to 1.0 %
6.	Hexamethylene-1,6-bis thiosulfate), disodium salt, dihydrate (Pilcure DHTS)	Assay,% w/w	NOCIL O2-3-342 Issued Date: Jan, 2015 Revision 0	95 % to 99.9 %
		Sodium Chloride, % w/w	NOCIL O2-3-342 Issued Date: Jan, 2015 Revision 0	0.01 % to 0.2 %

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / limits of Detection
7.	2-Mercapto Benzothiazole (Pilocure MBT)	Assay % w/w	ASTM D 1991: 2005 (RA 2010)	90 % to 99.9%
		Ash, % w/w	ASTM D4574: 06 (RA 2012)	0.01 % to 0.5%
		Loss on Drying % w/w	NOCIL G-22-A Issued Date: Jan, 2015 Revision 0 /Based on ASTM D 4571: 2006	0.02 % to 1.0 %
		% Oil	NOCIL G-40 Issued Date: Jan, 2015 Revision 0 /Based on ASTM D 4573: 2003 (RA 2009)	0.2 % to 3.0 %
		Melting Point.°C	ASTM D 1519: 1995 (RA 2009) Method A	170 °C to 185 °C
8.	Tetramethyl Thiuram Disulphide (PilocureTMT)	Loss on Drying % w/w	NOCIL G-22-B Issued Date: Jan., 2015 Revision 0	0.02 % to 1.0 %
		Ash, % w/w	ASTM D 4574: 2006 (RA 2012)	0.01 % to 0.5 %
		% Oil	NOCIL G-40 Issued Date: Jan, 2015 Revision 0 /Based on ASTM D 4573: 03 (RA 2009)	0.2 % to 3.0 %
		Assay, % w/w	IS 8979: 1997 (RA 2003) Amd.1	95 % to 99.9 %
		Melting Point.°C	ASTM D 1519: 1995 (RA 2009) Method A	140 °C to 155 °C

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9.	Zinc salt of Diethyl Dithio-carbamate (Pilcure ZDC)	Loss on Drying % w/w	NOCIL G-22-B Issued Date: Jan, 2015 Revision 0	0.02 % to 1.0 %
		Zinc, % w/w	NOCIL 02-03-323A Issued Date: Jan, 2015 Revision 0 /Based on ASTM E945: 2012 pp 1 to 4	17 % to 20 %
		Melting Point. °C	ASTM D 1519: 1995 (RA 2009) Method A	175 °C to 185 °C
		Assay, %	NOCIL 02-03-356 Based on IS 6918:2002 Annexure B Issued Date: Jan, 2015 Revision 0	95 % to 99.9 %
10.	Zinc salt of 2-Mercapto Benzothiazole (Pilcure ZMBT)	Loss on Drying % w/w	NOCIL G-22-B Issued Date: Jan, 2015 Revision 0	0.02 % to 1.0 %
		Zinc ,w/w%	NOCIL 02-03-323A Based on ASTM E 945: 2012 Issued Date: Jan, 2015 Revision 0	18 % to 23 %
		FMBT, w/w%	NOCIL 02-03-304 Issued Date: Jan, 2015 Revision 0 /Based on ASTM D 1991: 2005 (RA 2010)	0 % to 6.5%

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11.	Pilcure CBS Pilcure MBT Pilcure MBTS Pilcure TMT Pilcure ZDC Pilcure ZDBC Pilcure ZMBT Pilcure NS	Particle Size, Mean D(4,3)	ASTM E2651: 2013	0.1 micron to 20 micron
12.	Zinc salt of di N-Butyl dithiocarbamate (Pilcure ZDBC)	Assay, %	NOCIL 02-03-356 Issued Date:Jan, 2015 Revision 0 /Based on IS 6918: 2002 Annexure B	90% to 99.9 %
		Loss on Drying% w/w	NOCIL G-22-B Issued Date: Jan, 2015 Revision 0	0.02% to 1.0 %
		Zinc, % w/w	NOCIL 02-03-323A Issued Date: Jan, 2015 Revision 0 /Based on ASTM E 945: 2012	12 % to 16 %
		Melting Point.°C	ASTM D 1519: 1995 (RA 2009) Method A	100°Cto 115°C
13.	Desiccants	Dimethyl Fumarate Content	NOCIL METHOD G-77 Issued Date: Jan, 2015 Revision 0	100 µg/l to 1000 µg/l

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14.	Determination of Trace Metals by ICP-OES in Rubber Chemical Products	Fe	NOCIL Method G-74 Issued Date: Jan, 2015 Revision 0 ICP Method Based on EPA-6010C , Feb 2007 Revision 3	0.1 mg/L to 50 mg/L
		Cu		0.1 mg/L to 50 mg/L
		Mn		0.1 mg/L to 50 mg/L
		Pb		0.1 mg/L to 50 mg/L
		Cd		0.1 mg/L to 50 mg/L
		Pt		0.1 mg/L to 50 mg/L
		B		0.1 mg/L to 50 mg/L
		Cr		0.1 mg/L to 50 mg/L
		Zn		0.1 mg/L to 50 mg/L
		Co		0.1 mg/L to 50 mg/L
		Sr		0.1 mg/L to 50 mg/L
		Hg		0.1 mg/L to 50 mg/L
		As		0.2 mg/L to 50 mg/L
		Zr		0.2 mg/L to 50 mg/L
Al	0.2 mg/L to 50 mg/L			

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