

600

RSV 0014923

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MONSANTO COMPANY ORGANIC CHEMICALS DIVISION RAW MATERIAL SPECIFICATION	MATERIAL CODE	10440	60-601.101
	USING DEPT.	840.60	
	SUPPLIER	American Cyanamide	
MATERIAL			
ACRYLAMIDE			
CHEMICAL FORMULA			
$\text{CH}_2 = \overset{\text{O}}{\underset{\parallel}{\text{C}}} \text{NH}_2$			
MOL WT. 71.1			
SUPERSEDES SPECS OF	SAMPLE FOR ANALYSIS		
NEW	1 x 8 ounce WM Bottle		

TEST	LIMITS	METHOD
<u>On each lot</u>		
Appearance	White pelletized solid	602.431
Assay	96% min	602.433
Melting range	83-86°C	602.244
Solubility (20% aqueous solution)		602.245
Color	APHA 30 max.	
Turbidity	Essentially clear	
<u>Upon Request</u>		
Iron	40 ppm max.	602.449
Moisture	0.8% max.	602.246
Sulfate (as SO ₄ ²⁻)	1.5% max.	602.247

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MONSANTO COMPANY ORGANIC CHEMICALS DIVISION RAW MATERIAL SPECIFICATION	MATERIAL CODE 12150	60-601.102 Approvals: <i>M E Gibbs</i> Mfg. Representative M. E. Gibbs <i>L P Bosanquet</i> Research Gr. Leader L. P. Bosanquet
	USING DEPT. 840.60	
	SUPPLIER Monsanto, Texas City	
MATERIAL AMMONIA CHEMICAL FORMULA NH_3		
MOL WT. 17.0 SUPERSEDES SPECS OF NEW		SAMPLE FOR ANALYSIS 1 liter pressure bomb

TEST	LIMITS		METHOD
	MIN	MAX	
NH ₃ , %	99.5		
Moisture, %		0.5	
Cil, ppm		5	
Iron, ppm	0	0.5	
Sulfur		NIL	
Chlorides, ppm		1	
Na ₂ O, ppm		1	

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MONSANTO COMPANY ORGANIC CHEMICALS DIVISION RAW MATERIAL SPECIFICATION		MATERIAL CODE 12540	60-601.103 Approvals:
		USING DEPT. 840.60	
		SUPPLIER FMC	<i>ME Gibbs</i> Mfg. Representative M. E. Gibbs
MATERIAL AMMONIUM PERSULFATE CHEMICAL FORMULA $(\text{NH}_4)_2\text{S}_2\text{O}_8$			<i>L P Bosanquet</i> Research Gr. Leader L. P. Bosanquet
MDL WT. 228.2			
SUPERSEDES SPECS OF NEW		SAMPLE FOR ANALYSIS 1 x 16 ounce WM Bottle	

TEST	LIMITS	METHOD
Assay	98.0% min.	602.435
Active oxygen content	6.8% min.	602.248

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MONSANTO COMPANY ORGANIC CHEMICALS DIVISION RAW MATERIAL SPECIFICATION	MATERIAL CODE	16050	60-601.104 Approvals: <i>M E Gibbs</i> Mfg. Representative M. E. Gibbs <i>L P Bosanquet</i> Research Gr. Leader L. P. Bosanquet
	USING DEPT.	840.60	
	SUPPLIER	Shell (IONOL CP-40)	
MATERIAL			
BUTYLATED HYDROXY TOLUENE			
CHEMICAL FORMULA			
MOL WT. 220.4			
SUPERSEDES SPECS OF	SAMPLE FOR ANALYSIS		
NEW	1 x 8 ounce WM Bottle		

TEST	LIMITS	METHOD
Appearance	40% emulsion	
<u>Specifications for purified crystals</u>		
Purity	99.0%	
Solidification point, °C	69.4 min.	
Color, Pt-Co, 30% w solution in acetone	15. max.	
Ash, % w. max.	0.002	

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MONSANTO COMPANY ORGANIC CHEMICALS DIVISION RAW MATERIAL SPECIFICATION	MATERIAL CODE	32550	60-601.105 Approvals: <i>M. E. Gibbs</i> Mfg. Representative M. E. Gibbs <i>L. P. Bosanquet</i> Research Ct. Lead L. P. Bosanquet
	USING DEPT.	840.60	
	SUPPLIER	Monsanto, Texas City	
MATERIAL	ETHYLENE		
CHEMICAL FORMULA	C ₂ H ₄		
MOL WT. 28.0			
SUPERSEDES SPECS OF	SAMPLE FOR ANALYSIS		
NEW	1 liter pressure bomb		

TEST	LIMITS	METHOD
<u>Upon Request</u>		
Ethylene	99.85% min.	602.016 (GC)
Impurities:		
Acetylene	0.0002% max.	602.016 (GC)
Carbon dioxide	0.0005% max.	602.040 (GC)
Carbon monoxide	0.0002% max.	602.041 (GC)
DMF	0.0001% max.	602.332
Hydrogen	0.0100% max.	602.042
Methane	0.15 % max.	602.016 (GC)
Ethane	0.15 % max.	602.016 (GC)
Methanol	0.0005% max.	602.331 (GC)
Water	0.002 % max.	No Method
Nitrogen	0.050 % max.	602.041 (GC)
Oxygen	0.0002% max.	602.041 (GC)
Propylene + Heavier	0.002 % max.	602.043 (GC)
Sulfur	0.0001% max.	No Method

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MONSANTO COMPANY ORGANIC CHEMICALS DIVISION RAW MATERIAL SPECIFICATION	MATERIAL CODE	33600	60-601.106
	USING DEPT.	840.60	
	SUPPLIER	Mallinckrodt	<i>M. E. Gibbs</i>
	MATERIAL	FERRIC AMMONIUM SULFATE	
CHEMICAL FORMULA			M. E. Gibbs
$\text{Fe}(\text{NH}_4)(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$			<i>L. P. Bosanquet</i>
MOL WT 480.9			Research Gr. Leader
SUPERSEDES SPECS OF			L. P. Bosanquet
NEW	SAMPLE FOR ANALYSIS		
	1 x 8 ounce WM Bottle		

TEST	LIMITS	METHOD
Appearance	Colorless to pale violet with some brown discoloration	602.431
Chloride (as Cl^-)	0.01% max.	602.440
Odor	Odorless	602.249
Assay	99% min.	602.436

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MONSANTO COMPANY ORGANIC CHEMICALS DIVISION RAW MATERIAL SPECIFICATION		MATERIAL CODE 60-601.107 USING DEPT. 840.60 SUPPLIER Celanese	Approvals: <i>M E Gibbs</i> Mfg. Representative M. E. Gibbs <i>L P Bosanquet</i> Research Gr. Leader L. P. Bosanquet
MATERIAL METHANOL CHEMICAL FORMULA CH_3OH			
MOL WT. 32.0 SUPERSEDES SPEC OF NEW		SAMPLE FOR ANALYSIS	

TEST	LIMITS	METHOD
% Methanol	99.85% min.	
Color - Pt Co	5 APHA max.	
Acidity (Acetic Acid)	0.003 wt. % max.	
Permanganate time	50 minutes min.	
Acetone	0.003 wt. % max.	
Odor	Characteristic - free of foreign odors	
Water	0.10 wt. % max.	
Appearance	Clear & free of suspended matter	

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MONSANTO COMPANY ORGANIC CHEMICALS DIVISION RAW MATERIAL SPECIFICATION		MATERIAL CODE 60-601.108
		USING DEPT. 840.60
		SUPPLIER Eastman
MATERIAL MONO METHYL ETHER HYDROQUINONE		Approvals: <i>M. E. Gibbs</i> Mfg. Representative M. E. Gibbs
CHEMICAL FORMULA $\text{CH}_3\text{OC}_6\text{H}_4\text{OH}$		<i>L. P. Bosanquet</i> Research Gr. Leader L. P. Bosanquet
MOL WT. 124.13		
SUPERSEDES SPEC OF NEW	SAMPLE FOR ANALYSIS 1 x 4 ounce WM Bottle	

TEST	LIMITS	METHOD
Appearance	White crystals	
Melting point, °C	54-56	
Boiling point, °C	246	
Flash point, °C	132	
Fire point, °C	135	

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MONSANTO COMPANY		MATERIAL CODE	60-601.109
ORGANIC CHEMICALS DIVISION		52652	Approvals:
RAW MATERIAL		USING DEPT.	
SPECIFICATION		840.60	
		SUPPLIER	<i>M.E. Gibbs</i>
		Rohm & Haas	Mfg. Representative
MATERIAL			M. E. Gibbs
SODIUM FORMALDEHYDE SULFOXYLATE			
CHEMICAL FORMULA			<i>L.P. Bosanquet</i>
			Research Gr. Leader
			L. P. Bosanquet
MOL WT. 154.1			
SUPERSEDES SPECS OF		SAMPLE FOR ANALYSIS	
NEW		1 x 8 ounce WM Bottle	

TEST	LIMITS	METHOD
Appearance	White solid	602.431
Ash	Report (16.5% Typical)	602.434
Assay	97.0 to 101.1%	602.437
Odor	Odorless to faint garlic-like odor	602.249

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MONSANTO COMPANY ORGANIC CHEMICALS DIVISION RAW MATERIAL SPECIFICATION		MATERIAL CODE 18610 (50%) USING DEPT. 840.60 SUPPLIER Monsanto, Texas City	60-601.110 Approvals: <i>M E Gibbs</i> Mfg. Representative M. E. Gibbs <i>L P Bosanquet</i> Research & Leader L. P. Bosanquet
MATERIAL CAUSTIC			
CHEMICAL FORMULA NaOH			
MOL WT. 40			
SUPERSEDES SPEC OF NEW		SAMPLE FOR ANALYSIS 1 x 8 ounce NM glass bottle with polyseal cap	

TEST	LIMITS	METHOD
Appearance	Clear to milky liquid free of suspended matter	602.212 (WC)
Assay, wt.% as NaOH	24 min.	602.063 (WC)
Iron, ppm	3 max.	602.657 (WC)
Chlorides, wt. %	0.6 max.	602.659 (WC)
Sulfates, wt. %	0.02 max.	602.660 (WC)
Carbonates, wt. %	0.15 max.	602.658 (WC)
Color, APHA	100 max.	602.009 (WC)

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IN 88 (REV. 12/69)

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MONSANTO COMPANY ORGANIC CHEMICALS DIVISION RAW MATERIAL SPECIFICATION		MATERIAL CODE 52902	60-601.111 Approvals: <i>M E Gibbs</i> Mfg. Representative M. E. Gibbs <i>L P Bosanquet</i> Research &r. Leader L. P. Bosanquet
		USING DEPT. 840.60	
		SUPPLIER Proctor & Gamble	
MATERIAL SODIUM LAURYL SULFATE			
CHEMICAL FORMULA $\text{NaC}_{12}\text{H}_{25}\text{SO}_4$			
MOL WT. 288.4			
SUPERSEDES SPECS OF NEW		SAMPLE FOR ANALYSIS 1 x 8 ounce WM Bottle	

TEST	LIMITS	METHOD
<u>On each lot</u>		
Appearance	Clear liquid, free of sediment	602.432
Assay (Alkyl Sulfate)	29.0% min.	602.438
pH (10% solution)	8.0 (Typical)	602.250
<u>Upon request</u>		
Free fatty alcohol	1.0% max.	602.251
Inorganic salt	1.0% max.	602.440, 602.247
Iron	1.0 ppm max.	602.449
Cloud point	12°C max.	602.441

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MONSANTO COMPANY ORGANIC CHEMICALS DIVISION RAW MATERIAL SPECIFICATION	MATERIAL CODE	60-601.112
	32710	Approvals:
	USING DEPT.	
	840.60	
	SUPPLIER	
	Dow Chemical Company	
MATERIAL		
TETRASODIUM ETHYLENEDIAMINE TETRAACETATE		
CHEMICAL FORMULA		
	$C_{10}H_{12}N_2Na_4O_8$	
MDL WT. 380.2		
SUPERSEDES SPECS OF	SAMPLE FOR ANALYSIS	
NEW	1 x 8 ounce WM Bottle	

M E Gibbs
Mfg. Representative
M. E. Gibbs
L P Bosanquet
Research Gr. Leader
L. P. Bosanquet

TEST	LIMITS	METHOD
<u>On each lot</u>		
Appearance	White powder, free of foreign particles	602.431
Chelation value @ pH 11	215 mg $CaCO_3$ /gram min.	602.439
pH (10% aqueous solution)	10.5 to 11.5	602.250
<u>Upon request</u>		
Heavy metals (Pb)	20 ppm maximum	602.448
Color (30% aqueous solution)	500 APHA maximum	602.442
Odor (30% aqueous solution)	No NH_3 odor	602.249

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MS 88 1087. 02/80

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MONSANTO COMPANY ORGANIC CHEMICALS DIVISION RAW MATERIAL SPECIFICATION	MATERIAL CODE	58380	60-601.113 Approvals: <i>M. E. Gibbs</i> Mfg. Representative M. E. Gibbs <i>L. P. Bosanquet</i> Research Gr. Leader L. P. Bosanquet
	USING DEPT.	840.60	
	SUPPLIER	DuPont	
	MATERIAL TETRAHYDROFURAN CHEMICAL FORMULA C_4H_8O MOL WT. 72.1		
SUPERSEDES SPECS OF NEW		SAMPLE FOR ANALYSIS 1 x 8 ounce Bottle	

TEST	LIMITS	METHOD
<u>On each lot</u>		
Appearance	Clear liquid	602.432
Color	APHA 20 max.	602.442
Distilling range:		602.443
1st drop	65.5°C min.	
95% over	66.7°C max	
Specific gravity @ 25/25°C	0.880 to 0.883	602.444
<u>Upon request</u>		
Acetone	0.10% max.	602.447
Hydroxyl (as isopropyl alcohol)	0.25% max.	602.447
Moisture	0.03% max.	602.445
Peroxide (as THF-peroxide)	0.015% max.	602.446

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14-00 (REV. 12/68)

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MONSANTO COMPANY ORGANIC CHEMICALS DIVISION RAW MATERIAL SPECIFICATION		MATERIAL CODE 62300	60-601.114
		USING DEPT. 840.60	Approvals:
		SUPPLIER Dow	<i>M E Gibbs</i>
MATERIAL Vinyl Chloride			Mfg. Representative M. E. Gibbs
CHEMICAL FORMULA $\text{CH}_2 = \text{CHCl}$			<i>L P Bosanquet</i> Research Ct. Leader L. P. Bosanquet
MOL WT. 62.5			
SUPERSEDES SPECS OF New		SAMPLE FOR ANALYSIS 1 x 8 oz. glass sample bomb	

TEST	LIMITS	METHOD
Appearance	Clear, colorless, free of suspended matter	Visual observation
Acidity (as HCl), ppm by weight	1 max.	602.343 (WC)
Aldehyde, ppm by weight	5 max.	602.344 (WC)
Iron, ppm by weight	0.5 max.	
Non-Volatile matter, % by weight	0.1 max.	Dow 6
Phenol, ppm by weight	0.1 max.	602.639 (WC)
Sulfur (as S), ppm by weight	5 max.	Dow 10
Water, % by weight	0.03 max.	Dow 11
Hydrocarbons		
Acetylene, mol ppm	2 max.	602.628 (GC)
Butadiene, mol ppm	2 max.	
Total all others, mol ppm	10 max.	
Chlorinate Hydrocarbons		
Methyl Chloride, mol ppm	25 max.	602.626 (GC)
Ethyl Chloride, mol ppm	10 max.	
Total all others, mol ppm	10 max.	

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60-601.115

MONSANTO COMPANY Industrial Chem. Co. RAW MATERIAL SPECIFICATION		MATERIAL CODE
		USING DEPT. 840.60
		SUPPLIER CHEMLIME CORP.
MATERIAL LIME SLURRY (CHEMLIME)		
CHEMICAL FORMULA CALCIUM HYDROXIDE (95%)		
MOL WT.		
SUPERSEDES SPECS OF RMS-977-3 4/1/69		SAMPLE FOR ANALYSIS None

<u>PROPERTY</u>	<u>SPECIFICATION</u> (Typical)	<u>TESTS</u> None Normally Performed
Calcium Hydroxide	93 - 95%	
Calcium Oxide Equiv.	72%	
Calcium Carbonate	1.5%	
Magnesium Oxide	.25%	
R ₂ O ₃ (Fe ₂ O ₃ and Al ₂ O ₃)	1.6	
Insolubles	1.1	
Minimum Solid	35.0%	

Sieve Analysis:

Retained by No. 10 - 0% By Wt.
 " " No. 30 - .25% By Wt.
 " " No. 200 - .5% By Wt.
 Loss on Ignition - 23.4%

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60-601.201

MONSANTO COMPANY
Texas City

**FINISHED PRODUCT
SPECIFICATION**

PRODUCT CODE	DEPT. OR JOB
USE	840.61
SALES CODE	

APPROVALS:

L. J. Hammann
R. T. Hammann
Mfg. Supervisor

J. L. Rasmussen
J. L. Rasmussen
Mfg. Superintendent

W. T. Flint
R. W. Flint
Guest Superintendent

M. E. Gibbs
M. E. Gibbs
Research Group Leader

L. D. Shand
L. D. Shand
Product Manager

PRODUCT (Trade Name)	TYPE
LATEX B	
PRODUCT (Chemical Name)	TYPE
ETHYLENE/VINYL CHLORIDE/ACRYLAMIDE LATEX	
CHEMICAL FORMULA	

MOL WT.

SUPERSEDES SPEC OF

8/9/71

SAMPLE FOR ANALYSIS

1 x 16 oz. WM Bottle

TEST	UNRESTRICTED SALES LIMITS	INTERNAL CONTROL LIMITS	METHOD
% Total Solids	48.0%, Min.	48.0 - 50.0	602.255
Viscosity (cp)	25-200	25-300	602.256
pH	7.0 - 8.5	7.0 - 8.6	602.257
% Grit	0.05%, Max.	0.05%, Max.	602.258
<u>Upon Request</u>			
Surface Tension (dyne/cm)		40-45	602.259
Tg (°C)		8-16	602.260
Intrinsic Viscosity		0.6, Min.	602.261
Particle Size, A°		650-900	602.262
Instron			602.263
Tensile Stress (lb/in ²)		800, Min.	
Elongation (%)		400, Min.	
100% Modulus (lb/in ²)		200, Min.	
% Acrylamide		2.7 - 3.2	602.264
% VCM		74 - 77	602.265
Film Clarity		Clear	602.266

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60-601.202

MONSANTO COMPANY Texas City		PRODUCT CODE	DEPT. OR JOB 840.62	APPROVALS: <i>L. T. Hammann</i> R. T. Hammann Mfg. Supervisor <i>J. L. Rasmussen</i> J. L. Rasmussen Mfg. Superintendent <i>R. W. Flint</i> R. W. Flint Guest Superintendent <i>M. E. Gibbs</i> M. E. Gibbs Research Group Leader <i>L. D. Shand</i> L. D. Shand Product Manager
FINISHED PRODUCT SPECIFICATION		USE		
		SALES CODE		
PRODUCT (Trade Name) LATEX BH		TYPE		
PRODUCT (Chemical Name) ETHYLENE/VINYL CHLORIDE/ACRYLAMIDE LATEX		TYPE		
CHEMICAL FORMULA				
MDL WT.				
SUPERSEDES SPECS OF 8/9/71		SAMPLE FOR ANALYSIS 1 x 16 oz. WM bottle		

TEST	UNRESTRICTED SALES LIMITS	INTERNAL CONTROL LIMITS	METHOD
% Total Solids	46.0% Min.	46.0 - 49.0	602.255
Viscosity (cp)	40 - 1500	40 - 1500	602.256
pH	9.5 - 11.0	9.5 - 11.3	602.257
% Grit	0.05% Max.	0.05% Max.	602.258

Upon Request

IGT

602.267

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60-601.203

MONSANTO COMPANY Texas City		PRODUCT CODE	DEPT. OR JOB 840.63	APPROVALS: <i>R. T. Hammann</i> R. T. Hammann Mfg. Supervisor <i>J. L. Rasmussen</i> J. L. Rasmussen Mfg. Superintendent <i>R. W. Flint</i> R. W. Flint Guest Superintendent <i>M. E. Gibbs</i> M. E. Gibbs Research Group Leader <i>L. D. Shand</i> L. D. Shand Product Manager
FINISHED PRODUCT SPECIFICATION		USE		
		SALES CODE		
PRODUCT (Trade Name) LATEX E		TYPE		
PRODUCT (Chemical Name) ETHYLENE/VINYL CHLORIDE/ACRYLAMIDE LATEX		TYPE		
CHEMICAL FORMULA				
MOL WT.				
SUPERSEDES SPECS OF 8/9/71		SAMPLE FOR ANALYSIS 1 x 16 oz. WM Bottle		

TEST	UNRESTRICTED SALES LIMITS	INTERNAL CONTROL LIMITS	METHOD
% Total Solids	49.0%, Min.	49.0 - 51.0	602.255
Viscosity (cp)	25 - 150	25 - 250	602.256
pH	7.5 - 9.0	7.5 - 9.0	602.257
% Grit	0.05%, Max.	0.05%, Max.	602.258
<u>Upon Request</u>			
Surface Tension		40 - 44	602.259
Tg (°C)		(-3) - (+2)	602.260
Intrinsic Viscosity		0.57 - 0.77	602.261
Particle Size (A°)		650 - 900	602.262
Instron			602.263
Tensile Stress (lb/in ²)		50 - 150	
Elongation (%)		2100 - 2500	
100% Modulus (lb/in ²)		20 - 60	
% Acrylamide		2.5 - 2.9	602.264
% VCM		66 - 71	602.265
Film Clarity		Clear	602.266

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SAMPLE SCHEDULE

Sample	Frequency	No. of Samples	Size	Lab	Analysis	Expected Range	Test Method
<u>RAW MATERIALS</u>							
Acrylamide	Each lot	1	8 oz.		Appearance	White pelletized solid	602.431
					Assay	96% min.	602.433
					Melting Range	83-86°C	602.244
					Solubility		602.245
					Color	APHA 30 max.	
					Turbidity	Essentially clear	
	Upon Request				Iron	40 ppm max	602.449
					Moisture	0.8% max.	602.246
					Sulfate (as SO ₄)	1.5% max.	602.247
Ammonia	Upon Request	1	16 oz.		NH ₃ %	99.5% min	
					Moisture	0.5% max.	
					Oil	0-5 ppm	
					Iron	0-0.5 ppm	
					Sulfur	Nil	
					Chlorides	0-1 ppm	
					Na ₂ O	0-1 ppm	
Ammonium Persulfate	Each Lot	1	8 oz.		Assay	98.0% min	602.435
					Active O ₂	6.8% min.	602.248

Butylated Hydroxy Toluene Accept Vendors Certificate of Analysis

60-602.10

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Sample	Frequency	No. of Samples	Size	Lab	Analysis	Expected Range	Test Method					
Ethylene	Upon Request	1			Ethylene	99.85% min.	602.016 (GC)					
					Acetylene	0.0002% max.	602.016 (GC)					
					Carbon dioxide	0.0005% max.	602.040 (GC)					
					Carbon monoxide	0.0002% max.	602.041 (GC)					
					DMF	0.0001% max.	602.332					
					Hydrogen	0.0100% max.	602.042					
					Methane	0.15% max.	602.016 (GC)					
					Ethane	0.15% max.	602.016 (GC)					
					Methanol	0.0005% max.	602.331 (GC)					
					Nitrogen	0.050% max.	602.041 (GC)					
Ferric Ammonium Sulfate	Each lot	1	8 oz.		Oxygen	0.0002% max.	602.041 (GC)					
					Propylene + Heavier	0.002% max.	602.043 (GC)					
					Sulfur	0.0001% max.	No Method					
					Appearance	Colorless to pale violet with some brown discoloration	602.431					
					Chloride	0.01% max.	602.440					
					Odor	Odorless	602.249					
					Assay	99% min.	602.436					
					Methanol	Upon Request				Methanol	99.85% min	
										Color	5 APHA max.	
										Acidity	0.003 wt. % max.	
Permanganate time	50 minutes max.											
Acetone	0.003 wt. %, max.											
Odor	Free of foreign odors											
Appearance	Clear and free of suspended matter											
Water	0.10 wt. %, max											
Monomethyl ether Hydroquinone												
Accept Vendors Certificate of Analysis												

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Sample	Frequency	No. of Samples	Size	Lab	Analysis	Expected Range	Test Method
7/30/71 -3-	Sodium Formaldehyde Sulfoxylate	Each lot	1	8 oz.	Appearance Ash Assay Odor	White Solid Report (16.5% typical) 97.0 - 101.1% Odorless to faint garlic-like odor	602.431 602.434 602.437 602.249
	Caustic	Upon Request	1	8 oz.	Appearance Assay Iron Chlorides Sulfates Carbonates Color	Clear, free of sus- pensions 24% min. 3 ppm max. 0.6 wt. % max. 0.02% max. 0.15% max. 100 APHA max.	602.212 602.063 602.257 602.659 602.660 602.658 602.009
	Sodium Lauryl Sulfate	Each lot	1	8 oz.	Appearance Assay (Alkly Sulfate) pH (10% solution)	Clear liquid, free of sediment 29.0% min. 8.0	602.432 602.438 602.250
		Upon Request			Free fatty alcohol Inorganic salt Iron Cloud point	1.0% max. 1.0% max. 1.0 ppm max. 12°C	602.251 602.440 & 602.247 602.449 602.441
	Tetrasodium Ethylene diamine Tetraacetate	Each lot	1	8 oz.	Appearance Chelation value pH (10% Aq)	White Solid 215 mg CaCO ₃ /gram minute 10.5-11.5	602.431 602.439 602.250
		Upon Request			Heavy metals Color (30% Aq. Sol.) Odor (30% of sol.)	20 ppm max. 500 APHA max. No NH ₃ odor	602.448 602.442 602.249

RSV 0014945

60-602.10

Sample	Frequency	No. of Samples	Size	Lab	Analysis	Expected Range	Test Methods
Tetrahydrofuran	Upon Request		8 oz.		Appearance Color Distilling Range 1st drop 95% over Specific gravity @ 25°C/25°C	Clear liquid APHA 20 max. 65.5°C min. 66.7°C max. 0.880 to 0.883	602.432 602.442 602.443 602.444

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RSV 0014946

7/30/71	Sample	Frequency	No. of Samples	Size	Lab	Analysis	Expected Range	Test Methods
	FINISHED PRODUCT IN PROCESS							
	Latex B	Upon Request (interim)	1	16 oz.		% Solids Viscosity pH Surface Ten Tg Intrinsic Vis. Part. Size % Acrylamide % VCM Film Clarity Instron Tensile elongation 100% modulus	47.5-50.5 (%) 25-200 (Cp) 7.6-8.6 40-45 dyne/cm 11-19 °C 0.6 min. 650-850 Å 2.7-3.2 % 74-77 % Clear 800 lb/in ² min. 400 % min. 200 % min.	602.255 602.256 602.257 602.259 602.260 602.261 602.262 602.264 602.265 602.266 602.263
-5-	Latex B	Each Batch (final prod) and Each Packout Lot	2 x 1	16 oz.		% Solids Viscosity pH Grit	48.0-50.0 25-200 7.6-8.6 0.05% max.	602.255 602.256 602.257 602.258
	Latex BH	Upon Request (interim #1)		16 oz.		% Solids Viscosity pH Surface Ten Tg Intrinsic Vis. Part. Size % Acrylamide % VCM Instron Tensile Elongation 100% modulus	47.5-50.5 (%) 25-200 (Cp) 7.6-8.6 40-45 (dyne/cm) 11-19 (°C) 0.6 min. 650-850 Å 2.7-3.2% 74-77% 800 lb/in ² min. 400 % min. 200 % min.	602.255 602.256 602.257 602.259 602.260 602.261 602.262 602.264 602.264 602.263

RSV 0014947

60-602.10

Sample	Frequency	No. of Samples	Size	Lab	Analysis	Expected Range	Test Methods
7/30/71 Latex BH	Upon Request (interim #2)	1	16 oz.		Viscosity pH Solids	40-60 cp 10.2-11.2 46.0-49.0 %	602.256 602.257 602.255
Latex BH	Each Batch (final prod) and Each Packout Lot	2 x 1	16 oz.		Solids pH Viscosity Grit	46.0-48.0 % 10.2-11.2 40-1000 cp 0.05% max.	602.255 602.257 602.256 602.258
	Upon Request	1	16 oz.		IGT	200-260	602.267
Latex E	Upon Request (interim)	1	16 oz.		Solids Viscosity pH Surface Ten Tg Intrinsic Vls. Part. Size % Acrylamide % VCM Film Clarity Instron Tensile Elongation 100 % Modulus	48.0-51.0 % 25-150 8.0-9.0 40-44 (-2)-(+3)°C 0.55-0.77 650-850 Å 2.5-2.9 % 66-71 % Clear 50-150 lb/in ² 2100-2500 % 20-60 lb/in ²	602.255 602.256 602.257 602.259 602.260 602.261 602.262 602.264 602.265 602.266 602.263
Latex	Each Batch (final prod) and Each Packout Lot	2 x 1	16 oz.		Solids Viscosity pH Grit	48.5-50.5% 25-150 cp 8.0-9.0 0.05% max.	602.255 602.256 602.257 602.258

Sample	Frequency	No. of Samples	Size	Lab	Analysis	Expected Range	Test Methods
<u>MAKEUP SAMPLES</u>							
Aqueous Solution	Upon Request	1	8 oz.		SLS Conc.	0.095-0.125 %	602.268
ACRYL-SLS Solution	Upon Request	1	8 oz.		% ACRYL % SLS	20-35% 8.5-13.5%	602.253 602.254
Spent Solvent (THF)	Upon Request	1	8 oz.		Peroxides % water % solids	None 6-9% 0-2%	602.446 602.445 602.255
20% Caustic	Upon Request	1	8 oz.		% NaOH	18-22%	602.252
Vinyl Chloride	Upon Request	1	8 oz.	Mon. Lab.	Acidity, wt. Aldehyde, wt. Iron, wt. Non-volatiles, wt% Phenol, wt. Sulfur, wt. Water, wt. % Hydrocarbons Acetylene, mol Butadiene, mol Total all others, mol Chlorinated Hydrocarbons Methyl Chloride, mol Ethyl Chloride, mol Total all others, mol	1 ppm max. 5 ppm max. 0.5 ppm max. 0.1 max. 0.1 max. 5 max. 0.03 max. 2 ppm max. 2 ppm max. 10 ppm max. 25 ppm max. 10 ppm max. 10 ppm max.	602.343 (WC) 602.344 (WC) Dow 6 602.639 (WC) Dow 10 Dow 11 602.628 (GC) 602.626 (GC)

60-602.10

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60-602.20

602.20 TEST METHODS

Index of Test Methods

<u>Raw Materials</u>	<u>Method No.</u>
Color-caustic	602.009 (WC)
CH ₄ , C ₂ H ₂ , C ₂ H ₄ , C ₂ H ₆	602.016 (GC)
CO ₂ in ethylene	602.040 (GC)
CO in ethylene	602.041 (GC)
H ₂ in ethylene	602.042 (GC)
Propylene and heavier	602.043 (GC)
NaOH assay	602.063 (WC)
Appearance - caustic	602.212 (WC)
Melting Range	602.244
Solution Appearance	602.245
Moisture - Karl Fischer	602.246
Sulfate	602.247
Active oxygen	602.248
Odor	602.249
pH (raw materials)	602.250
VCM Overhead Composition	602.251
Caustic Composition by Gravity	602.252

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60-602.20

602.20 (cont'd)

<u>Raw Materials</u>	<u>Method No.</u>
Percent Acrylamide - Bromination	602.253
Percent Alkyl Sulfate	602.254
SLS Concentration	602.268
Iron in VCM	602.289-A
Methanol in ethylene	602.331 (GC)
Appearance of Solids	602.431
Appearance of Liquids	602.432
Assay - Acrylamide	602.433
Ash	602.434
Assay - APS	602.435
Assay - FAS	602.436
Assay - SFS	602.437
Assay - SLS	602.438
Chelation Value	602.439
Chlorides	602.440
Cloud Point	602.441
Color of Liquids, Melts, and Solutions	602.442

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60-602.20

602.20 (cont'd)

<u>Raw Material</u>	<u>Method No.</u>
Distilling Range	602.443
Specific Gravity	602.444
Moisture - THF	602.445
Peroxide - THF	602.446
Carbonyl and Hydroxyl Compounds - THF	602.447
Heavy Metals	602.448
Iron	602.449
Iron - caustic	602.657 (WC)
Carbonates - caustic	602.658
Chlorides - caustic	602.659
Sulfates - caustic	602.660 (WC)
VCM Heavy End Impurities	602.626 (GC)
VCM Light End Impurities	602.628 (GC)
Phenol in VCM	602.639 (WC)
Acidity in VCM	602.343 (WC)
Aldehydes	602.344 (WC)
<u>Product</u>	
Percent total solids	602.255
Latex Viscosity	602.256
Latex pH	602.257

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60-602.20

602.20 (cont'd)

<u>Raw Material</u>	<u>Method No.</u>
Percent Grit	602.258
Surface Tension	602.259
Gears Transition Temperature	602.260
Intrinsic Viscosity	602.261
Particle Size	602.262
Instron Tests	602.263
Percent Acrylamide - Kjeldahl	602.264
Percent VCM	602.265
Film Clarity	602.266
IGT Test	602.267

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