

Process Description Summary Report

Process: Dow's (Wolf, Bolnitz, 04) Prep of Alkali Cellulose Slurry, HP Ethn w/ MC & PO in Excess MC (MC/Cell=2) in 1 Train Autoclave Reactor, Steam/Water Stripping, 2 Hot Water Washings w/ Membrane Filtn Walocel HM F/P (DS=1.8, MS=0.15, AI=95%)

Product: Hydroxypropyl Methylcellulose (HPMC, Premium)
 [93.3-96.65%,DS=1.5-1.9,MS=0.25-0.3,Mw=0.8-0.9 MM]

Processing Steps

Cellulose Preparation, Shredding and Slurrying

Etherification

Neutralization

Steam Stripping

Separation

Cellulose Ether Washing

Separation

Cellulose Ether Washing

Filtration, membrane in two stages

Separation

Recovery

Drying, Rotary

Product Finishing and Packaging

Raw Material (s) 1b/lb

Cellulose, Wood Pulp (Sheet, 97.3% Alpha, DPw=1530) 0.8427

Hydrochloric Acid, 33% 0.0415

Methyl Chloride 1.1735

Propylene Oxide, Major Consumer 0.2020

Polyether Sulphone Membrane 0.0020

Sodium Hydroxide, 50%, Major Consumer 0.7972

Solvent (s) 1b/lb

Air 110.0000

Steam 3.9400

Water 15.8500

Process Description Summary Report

Product (s)	1b/1b
Hydroxypropyl Methylcellulose (HPMC, Premium)	1.0000
Recovered Byproduct (s)	1b/1b
Methyl Alcohol	0.1245

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Cellulose Preparation, Shredding and Slurrying

Etherification

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Cellulose Ether Washing

Separation

Cellulose Ether Washing

Filtration, membrane in two stages

Separation

Recovery

Drying, Rotary

Product Finishing and Packaging

Raw Material (s)	1b/lb
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Cellulose, Wood Pulp (Sheet, 97.3% Alpha, DPw=1530)	0.8129
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Hydrochloric Acid, 33%	0.0415
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Methyl Chloride	1.1949
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Propylene Oxide, Major Consumer	0.3248
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Polyether Sulphone Membrane	0.0020
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Sodium Hydroxide, 50%, Major Consumer	0.9096
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Solvent (s)	1b/lb
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Air	110.0000
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Steam	3.9400
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Water	15.8500
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Process Description Summary Report

Product (s)	1b/1b
Hydroxypropyl Methylcellulose (HPMC, Premium)	1.0000
Recovered Byproduct (s)	1b/1b
Methyl Alcohol	0.1459