

**HINDUSTAN NEWSPRINT LIMITED  
NEWSPRINT NAGAR**

**SPECIFICATION OF BULK CHEMICALS & PACKING MATERIALS**

**PART - A: PROCESS ITEMS**

**15001 ACETIC ACID**

Acetic Acid Glacial filled in 25-35 Kgs. capacity non-returnable HDPE carbuoys (98% Purity)

**15002 ALUM - FERRIC**

**1.0 *Specification:* -**

<u>Property</u>	<u>Unit</u>	<u>Quantity</u>
1.1 Insoluble matter	mass%	Not more than 0.5
1.2 Soluble Iron compounds as Fe	mass %	Not more than 0.7
1.3 Water soluble aluminium compounds as Al <sub>2</sub> O <sub>3</sub>	mass %	Not less than 16.0
1.4 Colour	Should be cream brown but not deep brown	
1.5 Size	The material should be supplied in standard size blocks weighing 20-25 kgs. each.	

**15004 ALUM - NON FERRIC**

**1.0 *Specifications***

<u>Property</u>	<u>Unit</u>	<u>Quantity</u>
1.1 Insoluble matter	mass%	Less than 0.30
1.2 Soluble Iron compounds as Fe	mass%	Less than 0.03
1.3 Water soluble Aluminium Compounds as	mass %	More than 17.00
1.4 Colour	Should be cream white or gray white.	
1.5 Size	The material should be supplied in standard size blocks weighing 20-25 Kgs.	

**15005 BURNT SHELL LIME**

- a) Available lime as CaO : 75% by mass min.  
b) Acid insoluble by mass: max. 20%. To be supplied in non-returnable HDPE Bags

**15006 CAUSTIC SODA LYE**

Caustic Soda Lye Rayon Grade on 100% NaOH Basis Conforming to Current I. S.

*Specifications.* To be supplied in Tankers.

### 15007 LIQUID CHLORINE

Liquid Chlorine filled in 900 Kg. capacity returnable cylinders.

### 15008 DEFOAMER

#### Specification

The material should be water based dispersion type defoamer of 100% concentrate without any water dilution, suitable for using in pulp and paper system. It should be in the form of a free flowing liquid easily miscible with cold water. When diluted with coldwater there should not be separation of any particles. The material should be free from any mineral oils like kerosene. The material should be uniform in nature and should not separate out on storage under natural climatic conditions. The material should have shelf life of at least nine months under natural climatic conditions. It should be able to completely kill the foam in pulp and paper systems in the PH range of 4.0 to 10.0 when used in very small quantities.

### 15009 FELT CLEANING DETERGENT

*Specification:* - Dirt removal efficiency of 5% solution after 10 reins should be 60% minimum

Felt Cleaning Liquid Detergent in 50 Kg. Non-returnable HDPE Carbuoys

### 15010 HYDROGEN PEROXIDE

Specification: -

Physical appearance : Clear colourless liquid, free from turbidity

Purity : 50 % (w/w) Minimum

### 15011 KEROSENE OIL/MINERAL TURPENTINE

Superior quality kerosene oil/Mineral Turpentine oil

### 15012 MAGNESIUM SULPHATE

Physical state : Crystalline sold

Purity as Mg SO<sub>4</sub> : 98 % minimum

Iron as Fe : 0.002 Max.

Material shall be free from foreign particles.

Packed in 50 Kg capacity HDPE Bags

### 15013 RAW LIME SHELL

1.0 Specification:-

1.01 Shell size +20 mm : 30 % Minimum

-10 mm : 6 % Maximum

1.02 Calcium Carbonate : 93%. Minimum as CaCO<sub>3</sub>

1.03 Silica as SiO<sub>2</sub> : 0.5% Maximum

### 15014 FORTIFID ROSIN

Fortified Rosin IVAX 500 packed in MS Drums.

Colour : Brown PH - 10 ± 1

Ionic Character - Anionic Shelf Life - Unlimited

Solids - 50% ± 1%

**15015 SABAI STRING**

Sabai string free from foreign materials like sand, mud, grass, stone etc.

Moisture content: less than 10%

Min.length : 1.3Mtrs.

**15016 SLIMICIDES:****15017 SOAPSTONE/TALCUM POWDER**

1.0 *Specification:* The material shall be Hydrated Magnesium silicate conforming to:

	Property	Unit	Quantity		Property	Unit	Quantity
1.01	Colour	....	White	1.05	Sand & Girt	%	1.0 Max
1.02	Feel	...	Smooth	1.06	PH of 10% slurry	....	9.0 Max
1.03	Brightness	%(ELrepho)	Not less than 72.	1.07	Loss on ignition at 900° C.	%	5.0 Max
1.04	Retention of BSS 300 mesh	%	1.0 max	1.08	Carbonates as CaCo3	%	1.0 Max

**15018 SODIUM SILICATE (NEUTRAL GRADE)****1.0 Specification**

	Property	Unit	Quantity
1.02	Insoluble in water	% by weight	0.2 max
1.03	Density	Tw 30° C	80 min
1.04	Total soluble silicate	%	38 min
1.05	Total Alkali as Na <sub>2</sub> O	%	9 min
1.06	Silica as SiO <sub>2</sub>	%	29 min
1.07	Ratio as Na <sub>2</sub> O: SiO <sub>2</sub>	---	1:3.2 <sub>+0.1</sub>
1.08	Iron as Fe	%	0.02 max
1.09	Viscosity at 30°C	cps	400 max
1.10	Adhesive property	---	good

**15019 ANHYDROUS SODIUM SULPHATE (SALT CAKE)****1.00 Specification**

- 1.01 Materials shall be free flowing
- 1.02 Purity as Na<sup>2</sup>SO<sub>4</sub> : 99 % minimum (Na<sub>2</sub> SO<sub>4</sub>)
- 1.03 Moisture 0.5% maximum
- 1.04 Insoluble 0.1 % maximum
- 1.05 chloride as NaCl 0.15% maximum



## PART – C: PACKING MATERIALS

### 15201 PLASTIC CORE PLUGS (As per specification)

- a) Re-Processed quality: - Plastic core plug made out of good quality re-processed Gr-I plastic.  
Colour BLACK or any other colour.
- b) Virgin Quality: - same as above but made out of Virgin plastic – White colour only.

### 15202 DOUBLE SIDED TAPE (REPULPABLE)

Specification: Double sided tape

Repulpable quality size: 2.5 cm width Rolls

### 15203 GREY BOARD REELS 450 GSM

#### *1.0 Specifications.*

	Property	Unit	Quantity
1.01	Basis weight	GSM	450 ± 5%
1.02	Real width	mm	1500/1260/1060
1.03	Reel Dia	850-900	850-900
1.04	Core ID	mm	76
1.05	Thickness	M	Not less than 680
1.06	Burst Factor	“	Not less than 12

	Property	Unit	Quantity
1.07	Tear factor in MD	--	Not less than 50
1.08	Cobb(60sec)Topside wire side	g/m2 g/m2	Less than 40 Less than 50
1.09	Moisture content	%	Less than 8

### 15204 GREY BOARD ROUND DISC 550 GSM – 98 CMS Dia.

#### *Specifications*

	Property	Unit	Quantity
1.01	Basis weight	GSM	500-550
1.02	Sheet Dia	Min.	980
1.03	Thickness	Min.	not less than 680
1.04	Burst factor		not less than 6

	Property	Unit	Quantity
1.05	Tear factor in MD	----	Not less than 35
1.06	Moisture content	...	Less than 8.0%
1.07	Cobb (60sec) Top Side	...	Less than 80
	Wire side	...	Less than 100

**15206 MG/MF PLAIN KRAFT PAPER REELS 190 GSM 1.00 Specification**

	Property	Unit	Quantity		Property	Unit	Quantity
1.01	Basis weight	GSM	190+/-10	1.06	Tearing strength in CD	MN	Not less than 1400
1.02	Real width	mm	70/1100/1350/1930	1.07	Burst Factor	...	Not less than 22
1.03	Reel Dia	mm	850-900	1.08	Folding endurance (MIT) MD	...	Less than 20
1.04	Core ID	mm	76		CD	...	Less than 15
1.05	Breaking length in MD	meters	Not less than 3000	1.09	Cobb(60sec)Topside	g/m <sup>2</sup>	Less than 40
					Bottom side	g/m <sup>2</sup>	Less than 50

**Special Note**

Core crushing strength shall be a minimum of 2800 kgs.

**15207 MF PLAIN KRAFT REELS 270 – 300 GSM**

**Specification:**

Property	Unit	Quantity	Property	Unit	Quantity
Reel Diameter	mm	850-900	Burst factor	..	More than 20
Reel length	mm	1500/1260/1390/1030	Breaking lenth	Km	Min 5
Core I.D	mm	76	Cobb 60 sec.Top side	g/m <sup>2</sup>	40
Basis weight	gsm	270-300	Wire side	g/m <sup>2</sup>	50
Moisture	%	Less than 8	Caliper	Microns	Vendor to specify

**15208 MG/MF PLAIN KRAFT PAPER SHEET/ROUND DISCS 190 GSM**

**1.00 Specification**

	Property	Unit	Quantity		Property	Unit	Quantity
1.01	Basis weight	GSM	190+/-10	1.05	Burst factor	...	Not less than 22
1.02	Sheet Size	CM	98 cm dia	1.06	Folding endurance (MIT) MD	...	Not less than 20
1.03	Breaking length in MD	meter	not les than 3000		CD	...	Not less than 15
1.04	Tearing strength in CD	Mn	Not less than 1400	1.07	Cobb(60sec) Topside	g/m <sup>2</sup>	Less than 40
					wire side	g/m <sup>2</sup>	Less than 50
				1.08	Moisture content	%	Less than 8.0

**15209 PAPER CORE**

*Specification:* - ID = 76 MM      a) Crushing Strength = 2800 Kg/Mtr  
                          OD = 103 MM      b) Crushing Strength = 3500 to 4000 Kg/Mtr  
                          Length tolerance = Plus or Minus 0.5 mm

**15210 PAPER TAPE:**      Self Adhesive Paper Tape roll of 37.5 mm width.

**15211 SINGLE SIDED TAPE**

SINGLE SIDED TRANSPARENT TAPE SIZE: 36 MM Width Rolls

**15212 YELLOW DEXTRINE.** Yellow dextrine packed in 50 kg non-returnable polythene bags

**PART - D: OTHER ITEMS**

**15301 CASHEW NUT SHELL:**

DE - OILED AND CRUSHED

Size	less than 10 mm	
Moisture	less than 15%	Materials to be supplied in loose condition without packing
Ash	less than 4%	
Allowable limit of below 3 mm – 15 %		
Volatile matter	60-70%	
Calorific value	above 4200 Kcal/Kg	

**15302-CRUSHED COCONUT SHELL:**

Size:	less than 10 mm
Calorific value:	more than 4000 k cal/kg.
Moisture:	less than 12%
Ash:	4 to 6%

Note: - The material to be supplied in loose condition without packing

**15303 DAP (FOR INDUSTRIAL USE)**

Di - Ammonium Phosphate (DAP) packed in 50 Kg capacity HDPE Bags.

**15304 FERROUS CHLORIDE – LIQUID**

*Specifications:* -

		Min.	Max.
1.01	Special Gravity	: 1.20	1.40
1.02	Free Acidity	: 3%	8%
1.03	Ferrous Chloride	: 18%	28%
1.04	Ferric Chloride	: 1%	9%
1.05	Suspended Solid as Hydrated TiO <sub>2</sub>	: 20gpl	70gpl

### 15305 HYDRAZINE HYDRATE

Hydrazine hydrate 80% as per IS 12086 -1987 packed in 100/200 kg. Capacity HDPE carboys as per the following specifications

Ammonia	-	0.5% max
Nonvolatile	-	0.5% max
Specific gravity	-	1.03 average
Boiling range	-	115 °c –119°c
Flash point	-	91 °c
Solubility	-	soluble in water
Appearance	-	colourless liquid

### 15306 HYDROCHLORIC ACID (HCL)

Material	-	Hydrochloric acid commercial grade
As per IS	-	265/1993
Strength	-	30 - 32%

### 15307 POLY - ELECTROLYTE:

### 15308 SULFAMIC DESCALENT

Sulfamic Descalent SR Grade  
Sulfamic Acid SR grade in 5 kg HDPE Bags.

***Metal Solubility: -***

Mild Steel	-	0.02727 gms/cm/24 hours
SS 304	-	0.00055
SS 316	-	0.00076

### 15309 TRI -SODIUM PHOSPHATE

#### SPECIFICATIONS CONFORMING TO IS-573/1992 (4TH REVISION)

Trisodium Phosphate technical dodecahydrate grade having 17.5% P<sub>2</sub>O<sub>5</sub> content minimum as per IS: 573/1992 (4th revision) packed in alkathone-lined gunny bags/silver fiber bags of 50 Kg net.

1. Phosphate (as P <sub>2</sub> O <sub>5</sub> ) percent by mass, min:	17.5
1. Carbonate alkalinity (as NaOH): percent by mass, max	3.0
3. Total alkalinity (as NaOH) percent by mass, max.	4.5
4. Soluble Iron compounds (as Fe) percent by mass, max.	0.009
5. Matter insoluble in water, percent by mass max.	0.20





**15406 CALCIUM CHLORIDE**

Grade	: Anhydrous
Purity as CaCl <sub>2</sub>	: 90 % minimum
Iron as Fe	: 0.01% maximum
Chloride as NaCl	: 1.60% maximum

**5407 DE-INKING CHEMICALS:**

I. This is to achieve the desired brightness across the flotation cell out let. The brightness gain from purifier inlet to flotation outlet should be minimum 7.5 Elrepho or flotation outlet brightness should be minimum 53 Elrepho.

**II. Flocculants at De-inking plant: -**

This is for the sludge dewatering in DIP. The flocculants are dosed at the inlet of rotary screen thickener (RST) along with the sludge.

RST outlet consistency of minimum 12% and sludge dryness of minimum 45% at the discharge of screw press is required to be achieved.

**III. Retention Aid (Dual Polymers), consisting of coagulant and flocculent).**

This is for application as wet End Additive for improving the Head Box First Pass Retention and to control linting of Newsprint in high-speed printing presses. The Retention Aid should improve the Head Box First Pass Retention to 70-72% from a blank value of 64-65% at an ash content of approximately 5% in Newsprint without adversely affecting machine run ability and other paper qualities.

**NOTE:** All the above chemicals shall be selected based on plant trials.

Bidders should agree for a one week free plant trial followed by a one month performance based plant trial, for which payment will be made only if the trials are proved to be successful.

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