

Specialty Glass Division

Procurement Plan for next 3-5 years

(CONSUMABLES)

Procurement title (Name of the item/Service)	Type
Triethyl phosphate	100ml
Poly ethylene amine	100ml
Dihydrate alcohol	500ml*3
Poly ethylene glycol	500ml*3
Bromo benzene	250ml
Tri octyl phosphene	25g
Octadecane	250ml
1-Octadecyl amine	100ml
Tri ethyl borate	100ml
Terpineol	250ml
O-xynol	500ml
Mercapto undecanoic acid	25g
Poly (4-styrene sulfonic acid)	250
1,5-Pentanediol	250g
Thio-glyconic acid	100ml
Silicon oil	250ml*3
Fumaric acid	500ml*2
1-Phenyl ethanol	250ml
Tetra methyl ammonium hydroxide	250ml*2
Selenon urea	5g
Tri-fluoro acetic acid	25g
Thio-lactic acid	100g
Indium	10g
Ethyl acetate	500ml
Thionyl chloride	500ml*2
Titan isopropylate	500ml
Methacrylic acid	500g
Tri ethyl amine	500g
Iso-octane	1 L
Tetra ethyl ammonium hydroxide	250ml
2-butanol	500ml*3
Acetic acid	500ml
Di-ethylene tri-amine	500ml
Ethylene di-amine	500ml
2-methoxy ethanol	500ml
Ammonium solution	500ml
Toluene	500ml
n-hexane	500ml
1-butanol	250ml
Acetyl acetone	500ml*6
Isobutyl alcohol	500ml
2-Propanol	500ml*
PDMS (M.W- 1250)	250ml*2
Tri ethoxy methyl silane	250ml
Hydrazine hydrate	500ml
2-mercapto ethanol	100ml
Silicon elastomer	1 Kg
Formaldehyde	500ml
Dimethyl sulphoxide	500ml
Ethyl acetoacetate	500g
1-phenyl ethanol	500g
Amyl alcohol	500ml

Paraffin liquid	500ml
Zirconium propoxide	500ml
Benzyl alcohol	500ml
1,2-Di-Chloro benzene	1L*2
Tetra ethoxy silane	1L
Silica gel	500g*2
Iron chloride	500g
Titanium oxide	1 Kg
n-butyl methacrylate	500g
Alumina powder	500g
Titanium oxy-sulphate	100g
Bohemite P2	2 Kg
Iron oxide	100ml
Silicon di-oxide	25g
Titanium oxide	5g, 10g*2
Tin chloride	100g
Titanium di-oxide	250g, 100g
Resin	100g
Graphite	1Kg
Poly urethane diol	250ml
Span 20	1L
Rutile	100g
Zinc acetate dihydrate	500g
Zinc stearate	250g
Titanium oxy sulphate	500g
Magnesium chloride	550g
Aluminium acetyl acetone	100g
Thio urea	10g
Calcium chloride dihydrate	500g
Aluminium chloride	500g
Aluminium carbonate	500g
Calcium nitrate hydrate	500g
Di butyl tin oxide	250g
Potassium permanganate	500g
Cobalt chloride	100g
Sodium borohydride	100g
Hexamine	500g
Iron chloride tetra hydrate	250g
Sodium sulphite	500g
Vitamin C-pentanoic acid	100g
Antimony tin oxide	25g
Sodium powder	500g
Magnesium chloride	500g
Magnesium acetate	500g
Potassium carbonate	500g
Ammonium sulphate	500g
Potassium iodide	100g
Sodium thio-sulphate	500g
Lead acetate	100g
Cadmium chloride	100g
Cobalt chloride	50g
Cobalt acetate	50g
Methyl orange	25g
Titanium chloride	25g
Silver nitrate	25g
Tellurium powder	25g
Nickel chloride	500g
Indium tin-oxide	25g
Copper chloride	500g
Palladium chloride	10g
Zinc powder	500g

Mercapto benzoic acid	10g
Cesium chloride	100g
Cobalt sulphate	250g
Copper acetate monohydrate	250g
Cobalt aluminum oxide	100g
Iron sulphate	1Kg
Barium acetate	500g
1-Butanol	2.5L x 25
2-Propanol	2.5L x 10
n-hexane	2.5L x 3
Acetone	2.5L x 4
1-Propanol	2.5L x 1
Buatnol	2.5L x 3
Iso butyl Alcohol	500ml x 5
Acetic Acid	500ml x 1 2.5L x 1
Benzyl Alcohol	500ml x 1
Solution for Leishman's test	500ml x 1
Di Cholro Methane	2.5L x 1
n-heptane	2.5L x 2
Ammonium Sol	500ml x 1
Toluene	500ml x 1
1-methyl, 2 pyrrolidone	2.5L x 2
octane	500ml x 1
ethanol	500ml x 1
1,2-di chloro benzene	500ml x 2
Glymo	1L x 7
TEOS	1L x 8
HMDS	1L x 1
TEMS	500ml x 2
TTIP	500ml x 2
Aluminium Tri Sec butoxide	500ml x 1
Phenyl Tri methoxy Silane	500gm x 1
Tri methyl chloro silane	1L x 1 500ml x 1
Di chloro methyl Silane	500ml x 1
Tetra ethoxy silane	3kg x 1
Pluronic F127	1kg x 1
Pluronic P123	1kg x 1
Nitric Acid	2.5L x 6 1L x 1
Hydrofluoric acid	500ml x 2
Hydrochloric acid	2.5L x 1
Sulphuric acid	2.5L x 1
Perchloric acid	500ml x 1
Phosphoric acid	500ml x 2
Tri ethyl amine	500ml x 20
methanol	2.5L x 1
Tri ethanol amine	500ml x 5
2-ethyl hexanol	500ml x 1
2-butanol	500ml x 1 2.5L x 1
Maleic anhydride	3 kg
Oleic acid	1.5 L
Tartaric acid	1.5 Kg
Zirconium (IV) -oxychloride octahydrate	5 kg
Zinc acetate dihydrate	500 gm
Naphthalene	1 kg
Sucrose	2 kg
2-Methylimidazole	500 gm
Urea	2kg

Potassium Chloride	2 kg
Alamine	200 gm
Sodium nitrite	500 gm
MnO ₂	500 gm
Stearic acid	1kg
N-Methyl-2 pyrrolidinone	500 ml
Dibutylzinnoxide	200 ml
8-hydroxyquinoline	200 ml
Aluminium oxide	2 kg
Palladium Chloride	50 gm
Potassium carbonate	2 kg
Silver nitrate , extrapure	200gm
Rodamine 6G	100 gm
Biphenyl	200 gm
Zirconyl fluoromonomer	100 ml
Ascorbic acid	500 gm
Congo red	20 gm
Rodamine B	50 gm
Perfluorodecylmethyldichloro silane	100 gm
1-(3-Dimethyl aminopropyl 3 ethyl carbo-diimide hydrochloride	100 gm
1-hexyl 3 methyl imadazolium	50gm
Succinic anhydride	200 gm
Dextrose anhydrous	1 kg
M-phenyl diamine	200 gm
Ethylene diamine tetra acetic acid	500 gm
Benzyl	1 kg
Octadecyl trimethyl ammonium bromide	100 gm
Thio salicylic acid	500 gm
Dichlorohexylcarbodiimide	100 gm
Phenyl bromic acid	200 gm
Stearic cid	500 gm
Phenol	500 gm
Polyethylene oxide	200 gm
Methylene blue	100 gm
Iodobenzene	500 gm
Hexamine	1 kg
Zinc acetate	1 kg
1-butyl 3 methyl imidazolium chloride	200 gm
Tetra butyl benzol	500 gm
Copper sulphate	1kg
Sodium acetate	-500 gm
L-glutamine	100 gm
L-Lysine	200 gm
Phenyl boric acid	50 gm
Hydroxyl amine hydrochloride	500 gm
Trioctyl phosphene oxide	100 gm
Tetra acetate ammonium bromide	50 gm
4-bromo benzyl dihydride	100 gm
Methyl imidazole	500ml
Potassium perodisulphate	1 kg
Cobalt nitrate hexahydrate	500 gm
Praseodymium nitrate hexahydrate	200 gm
1-hexadecyl trimethyl ammonium bromide	1 kg.
P-Phenylene diamine	200 gm
4-benzyl pyriidide	500 gm
Polyethylene glycol	1 kg
Benzoin	500 gm
Tin chloride 2-hydrate	100 gm
Samarium Nitrate hexahydrate	500 gm
Neodymium nitrate hexahydrate	500 gm
Imidazole	500 gm

Yttrium nitrate penta hydrate	500 gm
1-hydroxy cyclo hexyl phenyl ketone	200 gm
Zonylfluro monomer	100 ml
Benzonitrilfluride	200 gm
Mercapto succinic acid	500 gm
O-Phynyl diamine	500 gm
Triethoxy vinyl silane	500 gm
Antimony butoxide	200 gm
1-methyl immidazole	500 ml
Methyl orange	100 gm
Tin tetra butoxide	100 gm
Paraffin Liquid-	1kg
Aluminium chloride hexahydride	500 gm
Aluminium nitrate	1 kg
Sodium borohydrate	500 gm
Lithium carbonate	1 kg
Petroleum Jelly, white	1kg
Fused silica	2 kg
Potassium Hydroxide	1 kg
Sodium acetate	1 kg
Hexamine	1 kg
Aluminium hydroxide	1 kg
Thio-urea	1 kg
Citric acid	1 kg
Benzyl alcohol	1 kg
Magnesium carbonate	500 gm
Cerium oxide	10 kg
Bismuth oxide	1 kg
Polymethyl methacrylate	1 kg.
Boric acid, powder	1 kg.
Barium carbonate	1 kg.
Polyvinyl pyrrolidone	500 gm
Mesitylene	500 ml
Folic acid	500 gm
Brij 700	1 kg
Sodium hydroxide	2 kg
Brij 56	1 kg
PVA-water solution	200 gm
Hexadecyl trimethyl ammonium chloride	100 gm
Arsenic trioxide	1 kg
Brij 98	500 gm
Strontium carbonate	1 kg
Polyvinyl pyrrolidone	1 kg
Polyvinyl alcohol	1kg
Brij 72	1 kg
Polyethylene glycol	2 kg
Zinc oxide	2 kg
Zinc sulphate	2 kg
Brij 52	1 kg
Bismuth oxide	1 kg
Cetyl trimethyl ammonium bromide	1 kg
Pluronic F127	5 kg
Calcium hydroxide	100 gm
Methoxy acetic acid	100 gm
Bismuth Oxide	500 gm
Arsenic tri Oxide	500 gm
Antimony (III) Oxide	500 gm
Sodium Carbonate	500 gm
Barium Carbonate	500 gm
Boric acid	500 gm
Cerium Oxide	500 gm

Magnesium Carbonate	500 gm
Aluminium hydroxide di hydrate	500 gm
Lithium Carbonate	500 gm
Aluminium nitrate nonahydrate	500 gm
Oxalic Acid	500 ml
Ammonium hydroxide	2.5 ltr
Extran Sol	5 Ltr
Sodium bicarbonate	500 gm
Uria	1 Kg
Red lead	10 Kg
Silica	10 Kg
Potassium Nitrate	5 Kg
Hexamethyldisilazane ($\geq 99\%$)	10 Litre
Tetraethyl orthosilicate ($> 99.5\%$)	15 Litre
3-Glycidyloxypropyl trimethoxysilane ($> 97\%$)	15 Litre
Zirconium (IV) propoxide (70% in 1-propanol)	10 Litre
3-Aminopropyltrimethoxysilane (97%)	10 Litre
Aluminum-tri-sec-butoxide (97%)	6 Kg
Tri-ethoxy ethylsilane (96%)	12 litre
6-(chloromethyl)-N-(3-methylphenyl)-1,3,5-triazine-2,4-diamine (Analytical grade)	500 ml
Polydimethylsiloxane (Mw 770, 2000, 4000) (Analytical grade)	2 Litre in each Mw
Titanium (IV) isopropoxide ($\geq 97\%$)	5 litre
Glycerol ($\geq 95.0\%$ (NT))	3 Litre
Aluminum-tri-isopropoxide (99.99%)	6 Kg
Titanium nitride ($> 99.0\%$)	1 Kg
Titanium (IV) butoxide (97%)	5 Litre
Octadecyltriethoxysilane (Technical grade, 90%)	500 ml
Titanium carbide (Powder, particle size ≤ 200 nm)	500 g
Chloroform (HPLC grade)	2 Litre
Ethyltrimethoxysilane (97%)	3 Litre
3-Mercaptopropyl trimethoxysilane (95%)	500 ml
N,N-dimethyl formamide ($> 99\%$)	7.5 Litre
Trichloroethylene (ACS reagent, $\geq 99.5\%$)	7.5 Litre
Acetonitrile ($\geq 99.9\%$)	7.5 Litre
Ethyl acetate ($\geq 99.5\%$)	5 Litre
Ethylene glycol (Analysis EMSURE [®] Reagent)	5 Litre
Poly(Propylene glycol)bis (2 Aminopropyl) (Mn-400,2000 and 4000) ($> 99\%$)	500 ml
Trimethoxymethylsilane ($> 99\%$)	500 ml
Triethoxymethylsilane ($> 99\%$)	500 ml
Ethoxytrimethylsilane ($> 99\%$)	500 ml
Diethoxydimethylsilane ($> 99\%$)	500 ml
Silica	1 kg
Lithium carbonate	10 kgs

Alumina	20 kgs
Magnesium carbonate	10 kgs
Boron trioxide	2 kgs
Yttrium oxide	0.5 kgs
Hydrochloric acid, Nitric Acid, Hydrofluoric acid, acetone, iso-propyl alcohol, crucibles and etc	10 ltems each
Phosphorus(V) oxide	0.5 kgs
Zinc oxide	0.1 kgs
Potassium carbonate	2.5 kgs
Sodium carbonate	2.5 kgs
Antimony (III) oxide	0.05 kgs
Zirconia	0.5 kgs
Titania	1 kg
Rubidium Chloride	0.1 kgs
Cesium chloride	0.2 kgs
Silver Chloride	0.2 kgs
Heating elements	6 nos
Conducting paste	50 gm
Calcium carbonate	2.5 kgs
Ion exchange chamber consumables, glass wares and other miscellaneous items	1 pack each
AMC of clean room for laser glass and optical glass plant	Service
AMC for PerkinElmer FTIR with Diffuse Reflection Accessories [Frontier MIR/FIR DTGS / KBr (Serial No: 000000000000089995) & Frontier Diffuse Reflectance Accy (Serial No: PODL1111141)]	Service
AMC for PerkinElmer UV-VIS-NIR Spectrophotometer [LAMBDA950 (Serial No: 950L1211273)]	Service
AMC for HSM and Optical Dilatometer [ELS-MD (1750°C) (Serial No: JN 12)]	Service
Red Lead (Pb ₃ O ₄)	Chemical
Silica (SiO ₂)	Chemical
Sodium carbonate (CaCO ₃)	Chemical
Potassium carbonate (K ₂ CO ₃)	Chemical
Potassium carbonate (KNO ₃)	Chemical
Arsenic trioxide (As ₂ O ₃)	Chemical
Cerium oxide (CeO ₂)	Chemical
Bismuth oxide (Bi ₂ O ₃)	Chemical
Zinc oxide (ZnO)	Chemical
Neodymium oxide (Nd ₂ O ₃)	Chemical
Dysprosium oxide (Dy ₂ O ₃)	Chemical
Acetone	Chemical
Alcohol	Chemical
Hydrofluoric acid	Chemical
SS Mold for casing of molten glass	Chemical
Fused quartz rod	Miscellaneous
Asbestos hand gloves	Miscellaneous
Porcelain bowls	Miscellaneous
Stainless steel tongues	Miscellaneous
Plastic containers	Miscellaneous
Tissue paper	Miscellaneous
Sticker tag	Miscellaneous
Zip packet	Miscellaneous
Butter paper	Miscellaneous
Distilled water	Miscellaneous
SiO ₂ (≥99%)	Foreign
H ₃ BO ₃ (≥99%)	Foreign
BaCO ₃ (≥99%)	Foreign

Na ₂ CO ₃ (≥99%)	Foreign
K ₂ CO ₃ (≥99%)	Foreign
TiO ₂ (≥99%)	Foreign
Nb ₂ O ₅ (≥99%)	Foreign
WO ₃ (≥99%)	Foreign
Sb ₂ O ₃ (≥99%)	Foreign
CaCO ₃ (≥99%)	Foreign
La ₂ O ₃ (≥99%)	Foreign
Al ₂ O ₃ (≥99%)	Foreign
ZnO (≥99%)	Foreign
Y ₂ O ₃ (≥99%)	Foreign
ZrO ₂ (≥99%)	Foreign
Li ₂ CO ₃ (≥99%)	Foreign
Red Lead (Pb ₃ O ₄)	Chemical
Silica (SiO ₂)	Chemical
Sodium carbonate (CaCO ₃)	Chemical
Potassium carbonate (K ₂ CO ₃)	Chemical
Potassium Nitrate (KNO ₃)	Chemical
Arsenic trioxide (As ₂ O ₃)	Chemical
Cerium oxide (CeO ₂)	Chemical
Bismuth oxide (Bi ₂ O ₃)	Chemical
Antimony (III) oxide	0.05 kgs
Alcohol	Chemical
SS Mold for casing of molten glass	Chemical
Fused quartz rod	Miscellaneous
Fused quartz tube	Miscellaneous
Ceramic Fibre paper	Miscellaneous
Asbestos hand gloves	Miscellaneous
Porcelain bowls	Miscellaneous
Stainless steel tongues	Miscellaneous
Abrasive powder	Miscellaneous
Heating elements	6 nos
63A Thyristor	Elect. consumables
32A Thyristor	Elect. consumables
Flexible K-Type Thermocouple with control box	Elect. consumables
Thyristor fuse	Elect. consumables
Push button emergency switch	Elect. consumables
Push button start switch	Elect. consumables
Push button stop switch	Elect. consumables
Indicating lamp	Elect. consumables
Contactors (Different rating)	Elect. consumables
Proximity switch	Elect. consumables
HRC fuse (Different rating)	Elect. consumables
Rust cleaner	Elect. consumables
Ceramic Thermocouple tube	Elect. consumables
Compensating cable for K-Type and R-Type Thermocouple	Elect. consumables
Voltmeter-500V	Elect. consumables

(EQUIPMENTS)

Procurement title (Name of the item/Service)	Type
Upgradation of Clemex hardness tester	Upgradation of existing equipment
Computer controlled Ball Drop impact Tester	New equipment for impact resistance testing
1800°C bottom pouring Induction furnace for glass melting	Machine for high temperature glass melting
Platinum Rhodium crucible of 5 litre capacity	Crucible for high temperature glass melting
Controlled atmosphere resistive heating muffle furnace (1600°C)	Equipment
Prism goniometers/ refractometer at standard wavelengths	Equipment
Interferometer	Equipment
Planetary Ball Mill	Equipment
Temperature Infrared pyrometer	Equipment
Leakage current detector	Equipment
Digital vernier callipers	Equipment
Air-Conditioner	Equipment
Flatness measurement instrument (Monochromatic light source and 30 mm diameter glass grade)	Equipment
LASER based light transmission measurement device (@589 nm)	Equipment
Dual Chamber Physical vapor deposition instrument	Equipment
Supercomputing Cluster Specification of Master Node (quantity 1): Processor - 2x Intel Xeon Gold 6326 (2.9GHz, 16 cores, 24M Cache) or higher, Memory - Minimum 128GB DDR4 RDIMMS, 3200 MHz or better, Storage - 2 x 960GB SSD Minimum 96 TB usable space in RAID 6 Specification of CPU compute Node (quantity 4): Processor - 2x Intel Xeon Gold 6338 (2.0GHz, 32 cores, 48M Cache) or higher, Memory - Minimum 256GB DDR4 RDIMMS, 3200 MHz or better. Specification of GPU compute Node (quantity 1): Processor - 2x Intel Xeon Gold 6338 (2.0GHz, 32 cores, 48M Cache) or higher, Memory - Minimum 256GB DDR4 RDIMMS, 3200 MHz or better.	Equipment