LOD

LODHA Acme Housing Manpada

Acme Ozone Sales Gallary

Contract Ref: 4630027499
Material Approval Submittal
MAS No: 01

Contractor: G Engineers

To LODHA Group:

Date: 02.03.2022

Discipline ☐ Architectural ☐ Structural ☐ HVAC ☐ Electrical ☐ Plumbing ☐ Facade Others (.....)

MATERIAL DETAILS (One Item Only Per Form)
Item description :- CPVC PIPES & FITTINGS (SDR 11)

Name of material :- CPVC Pipes & Fittings (SDR 11)

Remarks ☐ As per specifications ☐ Alternate submission

- Attach all relevant technical literature marked to identify relevant descriptions, current test certificate, samples etc.
- Highlight any element of contractual non-compliance in this submittal

Drawing Ref: -	**Planned Date for applicable submittal for: -**	**Date:**
Specification Ref: - **15 MM TO 50 MM**	1. O & M Manual	
BOQ Ref: - **1.02.1, up to 1.02.4**	2. Training Manual	
Indian/International Standards Ref: - **IS:15778**	3. Specified /recommended spare parts	
	4. Warranties and Guarantees	

Manufacturer / Supplier
Company Name: - **SUPREME**
Address: **612 Raheja Chamber, Nariman Point,**

Local Agent:

Locally Manufactured :
Production Period :
Delivery Ex-works :
Total Delivery Time :
Total Delivery Time :

Programme: -
Date required on Site: -
Expected date of arrival on Site: -

For G ENGINEERS
Proprietor

Contractor's Authorized Signature

LODHA Engineer's Comments ☐ sign ☐ . Mgmt (Civil). Cor ☐ gmt (MEP) Con. M ☐ nt (Facade) QA/QC ☐

Name/ Signature/ Date	Name/ Signature/ Date	Name/ Signature/ Date	Name/ Signature/ Date	Name/ Signature/ Date
QE	CM	Commercial/Contracts	Store	Co-Ordination

Consultant's Comments.

Name/ Signature/ Date	Name/ Signature/ Date
Architect	RCC Consultant

Status	Code 1	Code 2	Code 3	Code 4
	Work may proceed	Conditionally approved. Work may proceed and resubmit incorporating comments indicated	Revise & Resubmit. Work may not proceed	For information and records only. Work may proceed.

Vice President **Date: -**

CC: VP (QA/QC), VP (Purchase)

Code 1 – Work may proceed
Code 2 – Conditionally approved. Work may proceed and resubmit incorporating comments
Code 3 – Revise & Resubmit. Work may not proceed
Code 4 – For information and records only. Work may proceed

RECEIVED ON
NAME : _____
DATE : _____
SIGN. : _____

SR. No.	ITEM DESCRIPTION	HSN/SAC Code	UNIT	QTY	RATE	AMOUNT
1.02.1	Cold and hot water pipe work including valves fittings, supports, grooved flexible couplings, accessories, etc., in vertical shafts and all horizontal distribution network complete Domestic, Grey & Hot Water Supply pipes inside the Toilets, Main Downtakes & Sub Downtakes of CPVC SDR 11 / SCH 40 pipe in accordance to ASTM D 2846 / ASTM F441 for pipes, ASTM F 438 /ASTM F439 for fittings, ASTM - F 493 for the solvent cement 15 mm dia	995462	NOS	50,000	240,00	12.000,00
1.02.2	20 mm dia	995462	NOS	20,000	210,00	4.200,00
1.02.3	25 mm dia	995462	NOS	20,000	340,00	6.800,00
1.02.4	32 mm dia	995462	NOS	40,000	500,00	20.000,00
1.02.5	Cold water pipe work including valves, fittings, supports, accessories, etc., complete The following including all fittings, fixings, cover, valves frame accessories, etc., complete Brass material hose Bibtap with hose connector	995462	NOS	10,000	150,00	1.500,00
1.02.6	Full way lever operated forged brass ball valve -(PN RATING - PN 10) 15mm Dia	995462	NOS	3,000	550,00	1.650,00
1.02.7	20mm Dia	995462	NOS	4,000	750,00	3.000,00
1.02.8	25mm Dia	995462	NOS	3,000	1.050,00	3.150,00
1.02.9	32mm Dia	995462	NOS	6,000	1.500,00	9.000,00



PIPES

Pipe dimensions and pressure rating chart as per IS:15778 (CTS series)

Nominal size		Outer diameter (mm)		SDR - 9 (company standard) Wall thickness (mm)		Working pressure at 23°C	82°C	SDR - 11 Wall thickness (mm)		Working pressure at 27°C	82°C	SDR - 13.5 Wall thickness (mm)		Working pressure at 27°C	82°C
mm	inch	Min	Max	Min	Max	Kgf/cm²		Min	Max	Kgf/cm²		Min	Max	Kgf/cm²	
15	½	15.8	16.0	-	-	-	-	1.70	2.20	28.14	6.93	1.40	1.90	22.23	5.60
20	¾	22.1	22.3	2.50	3.00	35.20	8.80	2.00	2.50	28.14	6.93	1.70	2.20	22.23	5.60
25	1	28.5	28.7	3.20	3.80	34.20	8.80	2.60	3.10	28.14	6.93	2.10	2.60	22.23	5.60
32	1¼	34.8	35.0	-	-	-	-	3.20	3.70	28.14	6.93	2.60	3.10	22.23	5.60
40	1½	41.2	41.4	-	-	-	-	3.80	4.30	28.14	6.93	3.10	3.60	22.23	5.60
50	2	53.9	54.1	-	-	-	-	4.90	5.50	28.14	6.93	4.00	4.60	22.23	5.60

Pipe dimensions and pressure rating chart as per ASTM F-441 (IPS series)

Nominal size		Outer diameter (mm)		Schedule 40 Wall thickness (mm)		Working pressure at 23°C	82°C	Schedule 80 Wall thickness (mm)		Working pressure at 23°C	82°C
mm	inch	Min	Max	Min	Max	Kgf/cm²		Min	Max	Kgf/cm²	
65	2½	72.84	73.20	5.16	5.77	21.10	5.20	7.01	7.85	29.50	7.30
80	3	88.70	89.10	5.49	6.15	18.20	4.50	7.62	8.53	26.00	6.30
100	4	114.07	114.53	6.02	6.73	15.40	3.80	8.56	9.58	22.50	5.60
150	6	168.02	168.58	7.11	7.97	12.65	3.16	10.97	12.29	19.68	4.92
200	8	218.72	219.48	8.18	9.17	11.24	2.81	12.70	14.22	17.57	4.21
250	10	272.72	273.48	9.27	10.39	9.84	2.46	15.06	16.86	16.17	3.86

Note: When connected to gas water heater, C-PVC should not be located within 50cm of the flue. For water heaters lacking reliable temperature control, this distance may be increased up to 1m. A metal nipple or flexible appliance connector should be utilized.

FITTINGS

Item Code	Size in mm	Size in inch	SDR/ SCH	Box Qty.
MC1P9CPL002E	20	¾	9	600
MC1P9CPL003I	25	1	9	300
MC1P1CPL001I	15	½	11	150
MC1P1CPL002I	20	¾	11	600
MC1P1CPL003I	25	1	11	300
MC1P1CPL004I	32	1¼	11	80
MC1P1CPL005I	40	1½	11	55
MC1P1CPL006I	50	2	11	20
MC1P4CPL007I	65	2½	40	15
MC1P4CPL008I	80	3	40	10
MC1P4CPL009I	100	4	40	9
MC1P8CPL007I	65	2½	80	15
MC1P8CPL008I	80	3	80	8
MC1P8CPL009I	100	4	80	9
MC1P8CPL010I	150	6	80	3
MC1P8CPL011I	200	8	80	3



Coupler

Item Code	Size in mm	Size in inch	SDR/ SCH	Box Qty.
MC1P9ELB002I	20	¾	9	400
MC1P9ELB003I	25	1	9	200
MC1P1ELB001I	15	½	11	400
MC1P1ELB002I	20	¾	11	400
MC1P1ELB003I	25	1	11	200
MC1P1ELB004I	32	1¼	11	40
MC1P1ELB005I	40	1½	11	25
MC1P1ELB006I	50	2	11	15
MC1P4ELB007I	65	2½	40	8
MC1P4ELB008I	80	3	40	10
MC1P4ELB009I	100	4	40	5
MC1P8ELB007I	65	2½	80	8
MC1P8ELB008I	80	3	80	10
MC1P8ELB009I	100	4	80	4
MC1P8ELB010I	150	6	80	2
MC1P8ELB011I	200	8	80	1



Elbow 90°

Pipes and fitting offered upto 50mm (2") are as per CTS standards where as 65 to 200mm (2½" to 8") are in SCH 40 & 80 which are as per IPS pipe size (inch series like aqua Gold®). SCH-Schedule (Pressure class), SDR-Standard dimension ratio (Pressure class)

2.1 CPVC/uPVC/ Composite Pex piping

A. CPVC Piping:

Chlorinated Polyvinyl Chloride pipes (CPVC) up to 50mm dia SDR.11, CTS, as per IS 15778/D2846, and 50mm dia above CPVC schedule 40 ASTM F441,IPS. Fittings up to 50mm dia SDR.11 ASTM D2846, and Fittings above 50mm dia shall be SCH 80 ASTM F-439 . Where connection with metal is to be made in such case the fittings and specials such as tees, elbows, couplers, bends, enlargers etc, shall have brass threaded (male/ female), brass coupling, Brass FPT, Brass male adaptor etc confirming to ASTM D2846.
The piping works shall be supported with proper metal/CPVC clamps, Tee holders, elbow holders and supports etc., Include necessary drilling holes, chasing walls and making the same good in cement mortar 1:1 restore the same original condition neatly as directed by the Engineer in-charge.

Joints to be made with CPVC solvent cement up to 50mm dia as per ASTM F-493 and above 50mm dia primer P-70, and solvent confirming to ASTM F-493 / CPVC 724.

All exposed pipes to be painted with one coat of desired shade of enamel paint as per architect/client representative requirement.

All termination points for installation of faucets shall have brass termination fittings.

CPVC ASTM D2846, SDR 11 Plastic Pipe							
Nominal Size		Outside Diameter, in. (mm)		Wall Thickness, in. (mm)		Pressure Rating. PSI (Kg/Cm^2)	
(in.)	(mm)	Average	Tolerance	Minimum	Tolerance	(23°C)	82°C
½	(15)	0.625 (15.9)	±0.003 (±0.08)	0.068(1.73)	+0.020 (+0.51)	(28.1)	(7.0)
¾	(20)	0.875 (22.2)	±0.003 (±0.08)	0.080(2.03)	+0.020 (+0.51)	(28.1)	(7.0)
1	(25)	1.125 (28.6)	±0.003 (±0.08)	0.102(2.59)	+0.020 (+0.51)	(28.1)	(7.0)
1 ¼	(32)	1.375 (34.9)	±0.003 (±0.08)	0.125(3.18)	+0.020 (+0.51)	(28.1)	(7.0)
1 ½	(40)	1.625 (41.3)	±0.004 (±0.10)	0.148(3.76)	+0.020 (+0.51)	(28.1)	(7.0)
2	(50)	2.125 (54.0)	±0.004 (±0.10)	0.193(4.90)	+0.023 (+0.58)	(28.1)	(7.0)

S.No	Details of Materials / Equipment	Manufacturer's Name
10	SFRC Covers	-L.K.Conkk -K.K. Plastics -Jain -Pragati
11	RCC pipes	-Jain Spun Pipes -Indian Hume Pipes -Pranali -Pragati
12	DWC HDPE (double wall Corrugated)Pipes	-Rex -Duraline -GEMINI
13	GI / M.S Pipes (IS : 1239 and IS : 3589)	-AST pipes -Jindal -Tata Steel -Zenith
14	GI pipes fittings	-Jainsons (JSI) -Unik -Zoloto-m -VS
15	GI pipe sealent	-Henkel - LOCTITE 55
16	Pipe clamp & supports	-Diamond (Hira technologies Pvt.ltd.) -Hitech Supports & Hangers Pvt. Ltd
17	D. I. Pipes & fittings	-Electro Steel -Jindal -Kejriwal castings
18	DI Valves and Fittings	-Kartar Valves and Fittings -Sir Valves -Kejriwal castings -AVK India
19	uPVC Pipes & fittings including multi floor trap, P trap etc.	-Astral -Ashirwad -Ajay -Supreme
20	CPVC pipe	-Astral -Ashirwad -Ajay -Supreme
21	UPVC Pressure pipes	-Astral -Ashirwad -Ajay -Supreme
22	Pex Pipe	-Giacomini -Cosmoplast
23	HDPE – Indian	-Jain PE -Darshan pipes -Sangir -Time technoplast
24	PVC - SWR Low noise silent pipes	-Ashirwad -Supreme