

Laboratory Plastic Testing Centre, Central Institute of Plastics Engineering and Technology, G Sector, Govindpura Industrial Area, J.K. Road, Bhopal, Madhya Pradesh

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6378

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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CHEMICAL TESTING

I.	PLASTIC & RESINS			
1.	Resin			
a.	PVC & Its Copolymer Resin	K-value	IS: 4669-68 (RA-2008) ASTM D 1755-15 ASTM D1243- 08	50 to 80
b.	PVC Resin	Sulphated Ash Content	IS: 4669: 1968 (RA-2003)	Up to 20 %
c.	Unsaturated Polyester Resin System	Viscosity	IS: 6476:1994	900 – 1600 MPa-s 10 – 50,000 CP
d.	Solvent Cement for Use with Un-Plasticized	Viscosity	IS: 14182:1994(RA-2010) Annex-B ASTM D1243-08 ASTM D1824-08	
e.	Unsaturated Polyester Resin System	Volatile content	IS: 6746:1994 (RA-2005) Annex-C	± 1% – 3 %
f.	Chlorinated PVC Compound Used for Pipes & Fittings	Chlorine Content	IS: 15225:2002 (RA-2008)	> 60%
g.	Chlorinated Polyvinyl Chloride Pipes for potable hot and cold water distribution supplies	Chlorine Content	IS: 15778:2007 Annex-B	
2.	Plastic Film			
a.	Low Density Polyethylene Film	Carbon Black Content	IS: 2508-2016 / IS: 2530-63 (RA-2008) ASTM D 1603-14	2% - 3%

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		Carbon Black Dispersion	IS: 2530-63 ASTM D 1603-06 IS: 7328-74 Annex. B	Qualitative
		Ash Content	IS: 14887:2014 Annex D IS: 2508:2016 (Black)	1% – 25 %
3.	Raw Material			
a.	Plastic Product and Granules	Melting point/ Identification of material	ASTM D 3418-15	Upto 400 °C
b.	Chlorinated PVC Compounds Used for Pipes and Fittings	Ash Content	IS: 15225:2002 (RA-2008)	0.1 % - 25 %
c.	HDPE Material for Moulding & Extrusion	Carbon black content	IS: 7328:1992 (RA-2008)	2% – 3 %
4.	Plastics and Polymers			
a.	HDPE Pipes for potable water supplies, Polyethylene Containers for The Transport Of Materials – Specification	Carbon Black Content	IS: 4984-2016	2 % – 3 %
b.	Polyethylene Containers For The Transport Of Materials – Specification		IS: 6312:1994 (RA-2010)	
c.	Textiles - Tarpaulines Made From High Density		IS: 7903:2011	

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	Polyethylene Woven Fabric			
d.	Roto Moulded PE Water Storage Tanks		IS: 12701-96 (RA-2006)	
e.	PE Pipes for Irrigation Laterals		IS: 12786-89 (RA-2009)	
f.	Irrigation Equipment – Emitting Pipe		IS: 13488:2008	
g.	PE Pipe for Sprinkler Irrigation System – Pipe		IS: 14151 (Part-1):1999 (RA-2009)	
h.	PE Pipe for Sprinkler Irrigation System – Coupler		IS: 14151 (Part-2) : 2008	
i.	HDPE Pipe for Sewerage		IS: 14333-96 (RA-2012)	
j.	Polyethylene Microtubes for Micro irrigation		IS: 14482-97 (RA-2009)	
k.	PE/AI/PE composite pressure pipes for hot and cold water supplies		IS: 15450-2004 (RA-2009)	
l.	Textiles- Laminated HDPE Fabric (Geo membrane) for Water proof lining		IS: 15351-2015	

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m.	High Density Polyethylene (HDPE) Geo-membranes for Lining		IS: 16352:2015	
n.	HDPE Pipes for Potable Water Supplies	Carbon Black Dispersion	IS: 4984:2016	Qualitative
o.	Irrigation Equipment – Polyethylene pipes for irrigation Laterals –specification		IS: 12786:1989 (RA-2009)	
p.	Sprinkler Pipes		IS: 14151 (Part 1): 1999 – (RA -2009)	
q.	PE Pipe for Sprinkler Irrigation System – Coupler		IS:-14151 (Part 2) : 2008	
r.	HDPE Pipe for Sewerage		IS: 14333-96 (RA-2012)	
s.	Polypropylene Random Copolymer Pipes for hot and cold water supplies Specification		IS: 15801-2008	
t.	High Density Polyethylene (HDPE) Geo-membranes for Lining		IS: 16352:2015	

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u.	PE/Al/PE composite pressure pipes for hot and cold water supplies		IS: 15450-2009	
v.	Polyethylene Micro tubes for Micro irrigation		IS: 14482-97 (RA-2009)	
w.	Textiles- Laminated HDPE woven Fabric (Geo membrane) for Water proof lining		IS: 15351-2015	
x.	HDPE Pipes for potable water supplies	Overall migration test	IS: 4984-2016	0.1 mg/l – 70 mg/l
y.	Roto Moulded PE Water Storage Tanks		IS: 12701-96 (RA-2006)	
z.	Polypropylene Random Copolymer (PPRC) Pipes for hot and cold supplies		IS: 15801-08	
aa.	Containers for packing of natural mineral water		IS: 15410:03 (RA-2009)	
ab.	PE/Al/PE composite pressure pipes for hot and cold water supplies		IS: 15450-04 (RA-2009)	

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ac.	Polyethylene Flexible pouches for the packing of natural mineral water and packaged drinking water		IS: 15609-05 (RA-2010)	
ad.	UPVC Pipes for potable water supplies	Sulphated Ash Content	IS: 4985:2000 (RA-2010) (Annex-B)	0.1 % – 25 %
ae.	UPVC Injection Moulded Fittings for SWR		IS: 14735:99 (RA-2015)	
af.	High Density Polyethylene (HDPE) / Polypropylene (PP) Woven Sacks For Packing 50 kg/ 25 Kg Food grains	Ash Content	IS: 14887:2014	0.1 % – 25 %
ag.	High Density Polyethylene (HDPE) / Polypropylene (PP) Woven Sacks for Filling Sand		IS: 14252: 2015	
ah.	HDPE/PP Woven Sacks for Packing 50 kg/ 25 kg Sugar		IS: 14968:2015	
ai.	High Density Polyethylene (HDPE)/ Polypropylene		IS: 16208:2015	

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aj.	(PP) Woven Sacks for Packaging 10 kg, 15 kg, 20 kg, 25 kg and 30 kg Food grains		ISO 3451 Pt.1-2008	
ak.	Determination of Ash for Plastic Resin & Products			
al.	Glass Reinforced Polyester Sheet Molding Compound(SMC)	Glass Content	IS: 13410:1992(RA-2008)/ IS: 13411:1992 Annex-A	10 % – 60 %
am.	Hot Press Moulded Thermosetting Glass Fibre Reinforced Polyester Resin (GRP) Sectional Water Storage Tank		IS: 14399:1996 (Pt. 1 & 2) (RA-2006) Annex-E	
an.	Compositional Analysis by Thermogravimetry		ASTM E 1131-08 (2014)	
ao.	UPVC Injection Moulded Fittings for SWR	Resistance to sulphuric acid	IS: 14735:99 (RA-2009) / IS: 12235 (Part 7): 2004	0.01 g - 5 g
ap.	Unplasticized Polyvinyl Chloride (PVC-U) pipes for soil and waste discharge systems inside	Resistance to sulphuric acid	IS: 13592:2013	0.01 g - 5 g

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	buildings including ventilation and rainwater system			
aq.	Polyethylene Containers For The Transport of Materials	Environmental stress cracking test	IS:6312-1994 (RA-2010) Annex-K	Qualitative
ar.	PE Pipes for Irrigation Laterals		IS: 12786-89 (RA-2009) Annex-D	
as.	Irrigation Equipments – Emitting pipe		IS:13488-2008	
at.	Polyethylene Microtubes for Micro irrigation		IS: 14482:1997 (RA-2009)	
au.	HDPE woven beds for vermiculture		IS: 15907:2010	
av.	Agro Textiles – HDPE laminated woven Lay Flat Tube for Irrigation Purpose – specification		IS: 16190:2014 Annex-D	
aw.	High Density Polyethylene (HDPE) Geo -membranes for Lining		IS: 16352:2015	
ax.	High Density Polyethylene (HDPE) Crates for Milk Sachets	Environmental stress cracking test	IS: 11584:1986 (RA-2009) Annex-A	Qualitative

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ay.	Containers for packing of natural mineral water	Water Potability Test	IS: 15410:2003 (RA-2009) Annex-B	Qualitative
az.	Polyethylene Flexible pouches for the packing of natural mineral water and packaged drinking water		IS: 15609:2005 (RA-2010) Annex-E	
ba.	PVC Geo membranes for lining	Volatile loss / Volatile content	IS: 15909:2015	± 1 % – 3 %
bb.	Polyethylene Pipes for the Supply of Gaseous Fuels		IS: 14885:2001 (RA-2012)	
bc.	PVC Geo membranes for lining	Water extraction	IS: 15909:2015 Annex-G	0.01 % - 0.15%
bd.	Cellular material made from olefin polymer		ASTM D 3575	
be.	Water Absorption of Plastics		ASTM D 570	
bf.	Thermosetting synthetic resin bonded laminated sheets		IS: 1998:1962 (RA-2008)	
bg.	Industrial Safety Helmet	Water Absorption	IS: 2925:1984 (RA-2015)	0.1% - 5 %

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bh.	Glass Reinforced Polyester Sheet Molding Compound (SMC)		IS: 13410:1992 (RA-2008) / IS: 13411:1992 Annex-D (RA-2008)	0.01% – 1 %
bi.	Hot Press Moulded Thermosetting Glass Fibre Reinforced Polyester Resin (GRP) Sectional Water Storage Tank		IS: 14399:1996 (Pt. 1 & 2) (RA-2006) / IS: 6746:1994 (RA-2010)	
bj.	Glass fibre rovings for the reinforcement of polyester and of epoxide resin system	Moisture Content / Hygroscopicity	ASTM D6980-12	
bk.	Structured-Wall Plastics Piping Systems for Non-Pressure Drainage and Sewerage-specification, Part 1:Pipes and Fittings with Smooth External Surface Type A / with Non-Smooth External Surface, TypeB	Resistance to Dichloromethane	IS: 16098:2013 / IS: 12235:2004 (Part 11) (RA-2009)	Qualitative

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bl.	Unplasticized Polyvinyl Chloride (PVC-U) pipes for soil and waste discharge systems inside buildings including ventilation and rainwater system		IS: 13592:2013	
bm.	UPVC Injection Moulded Fittings for SWR	TiO ₂ Content	IS: 14735:99 (RA-2009) Annex-A	0.5% - 4.0 %
bn.	Fibre Ropes Polyamide 3-, 4-, 8- and 12-Strand Ropes		IS: 4572:1992 (RA-2014)	
bo.	Unplasticized Non-Pressure Polyvinyl Chloride (PVC-U) Pipes for use in Underground Drainage and Sewerage Systems		IS: 15328 (RA-2003)	
bp.	PVC Pipes for Potable Water Supplies	Effect on Water (Lead) (Dialkyl Tin) (Cadmium) (Mercury) (Other toxic	IS: 4985:2000 (RA-2010) / IS: 12235:2004 (Part 4,10, 11) (RA-2009)	< 1.0 mg/l < 0.02 mg/l < 0.01 mg/l

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		substances)		< 0.001 mg/l < 0.01 mg/l
bq.	Injection moulded PVC socket fitting with solvent cement joints for water supplies		IS: 7834:1987 (Pt.1) (RA-2008) Appendix-C	
br.	UPVC Screen and Casing Pipes for Bore / Tube Well		IS: 12818:2010	
bs.	Solvent cement for use with unplasticized PVC pipe and fitting– Specification		IS: 14182:1994 (RA-2010)	
bt.	Chlorinated Polyvinyl Chloride Pipes for potable hot and cold water distribution supplies		IS: 15778:2007	
bu.	Unsupported Flexible Polyvinyl Chloride Sheeting	Colour bleeding	IS: 2076:1981 Appendix-D (RA-2008)	Qualitative
bv.	Unsupported Flexible Polyvinyl Chloride Sheeting	Blocking Test	IS: 2076:1981 Appendix-J (RA-2008)	Qualitative
bw.	HDPE Pipes for potable water supplies	Water Content	IS: 4984:2016 Annex-D	10 mg/kg - 300 mg/kg
bx.	PE/AL/PE composite pressure pipes for	Thermal Stability to Oxidation	IS: 15450:2004 (RA-2009)	1 min - 90 min

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	hot and cold water supplies			
by.	Oxidation Induction time of poly olefins	OIT	ASTM D3895-14	
bz.	Structured-Wall Plastics Piping Systems for Non-Pressure Drainage and Sewerage -Specification, Pipes and Fittings with Smooth External Surface Type A & B	Thermal stability (Oxidation Induction Test)	IS: 16098:2013 Part-2 Annex-C	
ca.	HDPE Pipes for Potable Water Supplies	OIT	IS: 4984:2016 Annex-B	
cb.	Polyethylene pipe for supply of gaseous fuels-Specification	Thermal Stability to Oxidation	IS: 14885:2001 (RA-2012) Annex-D	
cc.	PVC Geo Membrane for lining	Volatile loss	IS:15909-2015/ IS: 3464-1986	1 % to 10 %
cd.	PE Pipes for the supply of Gaseous Fuel	Volatile matter content	IS: 14885-2001 (RA-2012)	
ce.	Polyvinyl Chloride (PVC) and It's Copolymers for Its Safe Use In Contact With	VCM Content	IS: 10151:1982 Annex. A (RA-2008)	0.5 ppm to 5 ppm

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	Foodstuffs, Pharmaceuticals and Drinking Water			
cf.	Specifications for UPVC Screen and Casing Pipes for Bore / Tube Well		IS: 12818-2010	
cg.	Specifications for UPVC Pipes for Potable Water Supplies		IS: 4985:2000 – (RA-2010)	

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MECHANICAL TESTING

I.	PLASTICS AND POLYMERS			
1.	Plastic Material & Products			
a.	Industrial Safety Helmets	Sizes Head band Cradle Chin Strap Nape Strap	IS: 2925:1984/2015 IS: 2925:1984/2015 Appendix D	520 mm – 600 mm 1 mm - 30 mm 1 mm - 19 mm 1 mm -19 mm 1 mm -115 mm
b.	High Density Polyethylene (HDPE) Crates for Milk Sachets	Length Width Height MFI at 5 kg at 190°C	IS: 11584:1986 (RA - 2009) IS: 11584-1986 (RA-2009) IS: 2530:1963 (RA-2008) IS: 7328:1992 (RA-2008) IS 13360:2000 (Part 4/Sec 1) (RA-2008) ASTM D 1238:2012	10 mm - 600 mm 0.4 – 1.10 g/10 min
c.	Industrial Safety Helmet	Heat Resistance	IS: 2925:1984, (RA-2015) Appendix K	Qualitative
d.	High Density Polyethylene (HDPE) Crates for Milk Sachets	Resistance to applied load Resistance to low temp drop	IS: 11584:1986, (RA-2009) Appendix B IS: 11584:1986, (RA-2009) Appendix C	Qualitative Qualitative
e.	Industrial Safety Helmet	Shock absorption resistance Flammability	IS: 2925:1984, (RA-2015) Appendix -E IS: 2925:1984, (RA-2015) Appendix G	Qualitative Qualitative
f.	Unsaturated	Flammability	IS: 13410:1992 (RA-2008)	Qualitative

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	Polyester resin systems			
g.	Industrial Safety Helmet Unsupported PVC rainwear	Penetration Resistance	IS: 2925:1984, (RA-2015) Appendix F IS: 4716:1968 (RA-2008) Appendix- B	Qualitative
h.	Pressure Sensitive Adhesive Tapes With Plastic Base	Resistance to penetration	IS:1362:1992 (RA-2008) / IS 8402:1987 (RA-2010)	Qualitative
i.	High Density Polyethylene (HDPE) Crates for Milk Sachets. Unsupported PVC Sheeting Polyethylene moulding material and compound	Colour Fastness to Artificial light	IS: 11584:1986, (RA-2009) / IS: 2454:1985 (RA-2010) IS: 2076:1981 – (RA 2008) Appendix. E2 IS: 2530:1963 Pt. 15 (RA-2008)	1-7
j.	Industrial Safety Helmet.	Mass	IS: 2925:1984 (RA 2010)	10 g - 1500 g
k.	High Density Polyethylene (HDPE) Crates for Milk Sachets		IS: 11584:1986 (RA-2009)	10 g - 1500 g
l.	Polyamide multifilament ropes (Hawser-laid and plaited)	Breaking strength	IS: 4572:2014 IS: 7071:1986 (Part 4) Method B	10 kgf – 100000 kgf
m.	Fibre Ropes - Polyethylene -3-	Breaking force	IS: 8674:2013	1.8 kN – 839 kN

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	and 4 -Strand Ropes			
n.	Polypropylene ropes (3-strand hawser-laid and 8-strand-plaited)	Breaking Force	IS: 5175:2014	2.52 kN – 3000 kN
o.	(Plastic Materials & Products)	Tensile stress at Break, Yield Point, Tensile strength, Tensile strain	IS: 13360 -1996 Part 5/Sec1 (RA-2008)	10 MPa – 300 MPa
p.	Plastics -Determination Of Tensile Properties (Plastic Materials & Products)	Stress at Break, Yield Point, Tensile strength, Nominal strain at Break	ISO 527-1: 2012	10 MPa – 300 MPa
q.	Standard Test Method For Tensile Properties Of Plastics (Plastic Materials & Products)	Tensile strength	ASTM D 638:2014	10 MPa – 300 MPa
r.	Compressive Properties Of Plastic (Plastic Materials & Products)	Compressive strength	ASTM D 695:2015	10.78 MPa -500 MPa
2.	Plastic Pipes and Accessories			
a.	HDPE pipes for potable water supply	Nominal Outside Dia. Ovality Width of strip Length	IS: 4984:2016	10 mm - 600 mm (Dia)
	UPVC Pipes for Potable Water Supplies	Mean outside diameter Outside diameter at any point	IS: 4985:2000 (RA-2010) / IS: 12235:2004 pt. 1 (RA-2009)	

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		Socket length Socket ID/OD (mouth/root) Wall thickness Overall length of the pipe Sealing rings	IS: 5382: 1985	0.5 mm – 300 mm (wall Thickness) 10 - 5000 mm (Length) Qualitative (Visual)
b.	UPVC Single Wall Corrugated Pipes for Drainage	Outside diameter Inside diameter Wall thickness Length of pipe	IS: 9271: 2004 (RA-2009)/ IS: 12235:2004 pt. 1 (RA-2009)	0.01 mm – 600 mm (Dia) 0.5 mm – 300 mm (Wall thickness) 10 mm - 5000 mm (Length)
c.	PVC Fitting for Potable Water Supplies	Socket Length Diameter at the midpoint of socket length Out of Roundness tolerances of Socket Inside Diameter Bend angle	IS: 7834:1987 (RA-2008) / IS:12235 Part 1 2004 (RA-2009)	10 mm - 600 mm 10 mm - 5000 mm 0.112 mm –2.205 mm 1° – 90°
d.	Polyethylene pipes for irrigation Laterals	Outside diameter Wall thickness Visual appearance	IS: 12786:1989 (RA-2009) / IS:12235 Part 1 2004 (RA-2009)	0.01 mm – 600 mm 0.5 mm – 300 mm Qualitative
e.	Irrigation Equipment – Emitting Pipe	Inside dia. of pipe Wall thickness of emitting pipe	IS: 13488:2008 /IS:12235 Part 1 2004 (RA-2009)	Qualitative (Using Gauges) 0.5 mm – 300 mm
f.	UPVC Pipes for Soil and Waste Discharge System inside building	Mean Outer dia. Outer dia. at any point Wall thickness	IS: 13592:2013 / IS:12235 Part 1 2004 (RA-2009)	10 mm - 600 mm 0.5 mm – 300 mm

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	ventilation & Rain Water	Length		10 mm - 5000 mm
g.	Irrigation Equipment Sprinkler Pipes (QCPE Pipes and Fittings)	Plain Pipe Nominal dia. sprinkler saddle Outside diameter Wall thickness Min. length of plain saddle Dimension of 90° Tees and Bends Reducers Ferrule reducers Pipe ends End caps	IS:14151 (Pt-1)-1999 (RA-2009) IS: 14151 (Pt-2) -2008 (RA-2009) IS: 8008:2008 (Part 2 and 3)/ IS: 8360:2008 (Part 3) IS: 8008:2008 (Part 4) IS: 8008:2008 (Part 5) IS: 8008:2008 (Part 6) IS: 8008:2008 (Part 9)	10 mm - 600 mm 0.5 mm – 300 mm 10 mm - 5000 mm
h.	HDPE Pipes for Sewerage	Outside diameter/Nominal dia. Ovality Wall thickness Min. length	IS: 14333-1996 (RA-2012) /IS:12235 Part 1 2004(RA-2009)	10 mm - 600 mm 0.5 mm – 300 mm 10 mm - 5000 mm
i.	Polyethylene Pipes for the Supply of Gaseous Fuels	Nominal dia. Wall thickness Length of pipe	IS: 14885:2001 (RA-2012 / IS:12235 Part 1 2004 (RA-2009)	10 mm - 600 mm 0.5 mm – 300 mm 10 mm - 5000 mm
j.	UPVC Screen and Casing Pipes for Bore / Tube Well	Mean Outer dia. Wall thickness Height of Rib Length Visual appearance	IS: 12818-2010/IS: 12235 Part 1 2004 (RA-2009)	10 mm - 600 mm 0.5 mm – 300 mm 10 mm - 5000 mm Qualitative
k.	Injection moulded PVC socket fitting with solvent	Nominal diameter/ Outside diameter Dimension for Solvent	IS:7834 (Pt-1 to 8)-1987 (RA-2008) /IS:12235 Part 1 2004 (RA-2009)	10 mm – 600 mm

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	cement joints for water supplies	Cement Fittings Socket Depth Mean I.D of Socket at Mid-Point Mean OD of Spigot Portion Out of roundness Socket and Spigot Dimension for Ring Seal Fittings Length of bending neck Neck of socket Length Beyond Bending Wall thickness Visual appearance Socket and Spigot Laying length		0.5 mm – 300 mm Qualitative 10 mm - 5000 mm
l.	Unplasticized PVC Pipes (Ducts) and Fittings for Underground Telecommunications	Outside dia/ Outside dia at any point Wall thickness Socket dia Socket length Insertion depth Length of pipe	IS: 14787-2000 (RA-2010) /IS:12235 Part 1 2004 (RA-2009)	10 mm - 600 mm 0.5 mm – 300 mm 10 mm - 5000 mm
m.	UPVC Injection Moulding fitting for Soil and Waste Discharge System	Nominal diameter Min. inside dia. of Socket Wall thickness	IS: 14735-1999 (RA-2009) /IS:12235 Part 1 2004 (RA-2009)	10 mm - 600 mm 0.5 mm – 300 mm
n.	Unplasticized Non-Pressure Polyvinyl Chloride (PVC -U) Pipes	Mean outside dia. Wall thickness	IS: 15328:2003/ IS:12235 Part 1 2004 (RA-2009)	10 mm - 600 mm 0.5 mm – 300 mm

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	for use in Underground Drainage and Sewerage	Length of the pipe Visual appearance / color		10 mm - 5000 mm Qualitative
o.	Polypropylene Random Copolymer Pipes for hot and cold water supplies Specification	Nominal diameter/ Outside diameter Ovality Wall thickness Length Visual appearance/ Workmanship/Finish	IS: 15801:2008 /IS:12235 Part 1 2004 (RA-2009)	10 mm - 600 mm 0.5 mm - 300 mm 10 mm - 5000 mm Qualitative
p.	UPVC Single Wall Corrugated Pipes for Drainage	Nominal diameter/ Outside diameter Dimension of corrugations Wall thickness/ Thickness Visual appearance	IS: 9271:2004 (RA-2009) /IS:12235 Part 1 2004 (RA-2009)	1 mm - 600 mm 0.5 mm - 300 mm
q.	Polyethylene Microtubes for Micro Irrigation	Nominal outside diameter Wall thickness Visual appearance	IS: 14482:1997 (RA-2009) /IS:12235 Part 1 2004 (RA-2009)	3 mm 0.5 mm - 30 mm Qualitative
r.	PE/Al/PE Composite Pressure Pipe for Hot and Cold Water Supplies	Outside diameter Wall thickness Thickness of PE layer Length Visual appearance	IS: 15450:2004 (RA-2009) /IS:12235 Part 1 2004 (RA-2009)	10 mm - 600 mm 0.5 mm - 300 mm Qualitative
s.	Chlorinated Polyvinyl Chloride Pipes	Nominal diameter/ Outside diameter Wall thickness Length Visual appearance	IS: 15778:2007/ IS:12235 Part 1 2004 (RA-2009)	10 mm - 600 mm 0.5 mm - 300 mm 10 mm - 5000 mm Qualitative
t.	Thermoplastic	Bore Size	IS:12585:1988 (RA-2008)	10 mm - 600 mm

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Hoses (Textile Reinforced) For water- General Purpose	Lining and cover thickness Length of Hose Visual appearance	IS: 443:1975 (RA-2012) / IS:12235 Part 1 2004 (RA-2009)	0.5 mm – 300 mm 10 mm - 5000 mm Qualitative
u.	Conduits for electrical installations General requirements	Nominal diameter/ Outside diameter Wall thickness Length	IS: 9537 (Pt.1& 3)-1983 (RA-2015) IS:12235 Part 1 2004 (RA-2009)	12.2 mm – 63 mm 0.5 mm – 300 mm 100 mm – 4000 mm
v.	Irrigation Equipment Sprinkler Pipes	Hydraulic proof test	IS: 14151 (pt-1) -1999 (RA-2009) / IS: 12235 Part 8 2004 (RA-2009)	0.5 kg/cm ² to 160 kg/cm ²
w.	HDPE Pipes for Potable Water Supplies	Internal Pressure, Creep Rupture Test (Type & Acceptance)	IS: 4984:2016	0.5 kg/cm ² to 160 kg/cm ²
x.	UPVC Pipes for Potable Water Supplies	Hydrostatic characteristics (Acceptance & Type)	IS: 4985:2000 (RA-2010) / IS: 12235 (Part 8/Sec 1): 2004 (RA-2009)	0.5 kg/cm ² to 160 kg/cm ²
y.	Injection moulded PVC socket fitting with solvent cement joints for water supplies Fabricated PVC Fitting for Potable Water Supplies	Short term Hydrostatic characteristics	IS: 7834:1987 (RA-2008) (part1 to 8) / IS: 12235 Part 8 2004 (RA-2009) IS: 10151-1982 (RA-2008)	0.5 kg/cm ² to 160 kg/cm ²
z.	Irrigation equipment- Rotating sprinkler Irrigation equipment-emitters	Resistance to hydrostatic pressure	IS: 12232:1996 (Pt 1 & 2) – (RA 2009) IS: 13487-1992 (RA-2009) IS: 12235 Part 8 2004 (RA 2009)	0.5 kg/cm ² to 160 kg/cm ²
aa.	Irrigation Equipment	Resistance to internal hydrostatic pressure	IS: 12785:1994 (RA 2009) IS: 12235 Part 8 2004 (RA	0.5 kg/cm ² to 160 kg/cm ²

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Strainer-type filters		2009)	
ab.	Fabricated PVC Fitting for Potable Water Supplies	Short term hydraulic test	IS: 10151: 1982 (RA-2008) IS: 12235: 2004 Part 8 Annex. A (RA 2009)	0.5 kg/cm ² to 160 kg/cm ²
ac.	Polyethylene pipes for irrigation Laterals	Hydraulic Test (Quality Test, Acceptance Test)	IS: 12786-1989 (RA-2009) Annex C	0.5 kg/cm ² to 160 kg/cm ²
ad.	Irrigation Equipment – Emitters	Resistance to Hydrostatic Pressure	IS: 13487:1992 (RA 2009)	1 kg/cm ² to 60 kg/cm ²
ae.	UPVC Pipes for Soil and Waste Discharge System inside building ventilation & Rain Water. Structured-Wall Plastics Piping Systems For Non-Pressure Drainage and Sewerage.	Water tightness of joint	IS: 13592-2013 IS: 16098:2013 Part 2 Annex. F	0.05 MPa
af.	HDPE Pipes for Sewerage	Hydrostatic characteristics (Acceptance & Quality)	IS: 14333-1996 (RA-2012) Annex B	0.5 kg/cm ² to 160 kg/cm ²
ag.	Polyethylene Pipes for the Supply of Gaseous Fuels	Hydraulic characteristics – (Type Test, Acceptance Test)	IS: 14485 Annex A 2001 (RA-2012) / IS: 12235 Part 8 2004 (RA-2009)	0.5 kg/cm ² to 160 kg/cm ²
ah.	Irrigation Equipment – Emitting Pipe	Resistance to Hydrostatic pressure at ambient & elevated temperature	IS: 13488- 2008	0.5 MPa - 3.5 MPa

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
ai.	UPVC Injection Moulding fitting for Soil and Waste Discharge System	Water tightness of joints	IS: 14735-1999 (RA-2009) Annexure D	0.05 MPa
aj.	Unplasticized Non-Pressure Polyvinyl Chloride (PVC -U) Pipes for use in Underground Drainage and Sewerage	Resistance to internal hydrostatic pressure	IS: 15328:2003 (RA-2008) Annex D, Annex E	0.5 kg/cm ² to 160 kg/cm ²
ak.	Polypropylene Random Copolymer Pipes for hot and cold Water Supplies	Internal Creep rupture test	IS: 15801:2008 /IS: 12235 Part 8/Sec 1 2004 (RA-2009)	0.5 kg/cm ² to 160 kg/cm ²
al.	PE/Al/PE composite Pressure Pipe for hot and Cold Water Supplies	Minimum Burst Pressure, Hydraulic Pressure test	IS: 15450:2004 (RA-2009) Annex F & Annex G	0.5 kg/cm ² to 160 kg/cm ²
am.	Chlorinated Polyvinyl Chloride Pipes	Hydrostatic characteristics for pipe and Thermal stability	IS: 15778:2007 IS: 12235 Part 8/Sec 1 2004(RA-2009)	0.5 kg/cm ² to 100 kg/cm ²
an.	Structured-Wall Plastics Piping Systems for Non-Pressure Drainage and Sewerage – Specification Part 1&2 : Pipes and Fittings Type A & B	Resistance to Internal Hydrostatic pressure	IS: 16098:2013 / IS: 12235 Part 8/Sec 3 2004 (RA-2009)	0.5 kg/cm ² to 160 kg/cm ²

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ao.	Solvent cement for use with plasticized polyvinyl chloride plastic pipe and fittings	Hydrostatic Burst Strength	IS: 14182:1994 (RA-2010)	0.1 MPa to 2.8 MPa
ap.	Thermoplastic Hoses (Textile Reinforced) For water	Proof pressure/ burst Pressure Test	IS:12585: 1988 (RA-2008) / IS: 443-1975	0.96 MPa to 10 MPa
aq.	GRP pipes joints and fittings for use sewerage, industrial waste and water (other than potable)	Hydraulic Test	IS:14402:1996 (RA-2012) / IS: 12235 Part 8 2004 (RA-2009)	0.5 kg/cm ² to 160 kg/cm ²
ar.	Irrigation Equipment Micro sprayers	Resistance to hydrostatic pressure	IS:14605:1998 (RA-2009) / IS: 12235 Part 8 2004 (RA-2009)	0.5 kg/cm ² to 160 kg/cm ²
as.	HDPE Pipes for Potable Water Supplies. UPVC Pipes for Potable Water Supplies. Polyethylene pipes for irrigation Laterals. UPVC Pipes for Soil and Waste Discharge System inside building ventilation & Rain	Reversion Test	IS 4984:2016 Annex-C IS:4985:2000 (RA-2010) IS-12786-1989 (RA-2009) IS:13592:2013 / IS 12235 Part 5 2004 (RA-2009)	1% to 10 %

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	Water. Irrigation Equipment Sprinkler Pipes. HDPE Pipes for Sewerage.		IS 14151:1999 (RA 2009) IS: 14333:1996 (RA-2012) Annex. C IS:14787:2000 (RA-2010)	
	Unplasticized PVC Pipes (Ducts) and Fittings for Underground Telecommunications Cable Installation		IS:14885-2001 Annex C	
	Polyethylene Pipes for the Supply of Gaseous Fuels.		IS15328:2003 (RA-2008)	
	Unplasticized Non-Pressure Polyvinyl Chloride (PVC -U) Pipes for use in Underground Drainage and Sewerage.		IS-15778:2007	
	Chlorinated Polyvinyl Chloride Pipes for potable hot and cold		IS:15801:2008	

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	<p>water distribution supplies.</p> <p>Polypropylene Random Copolymer Pipes for hot and cold water supplies.</p> <p>Structured-Wall Plastics Piping Systems For Non-Pressure Drainage and Sewerage</p>		IS:16098:2013 (Part 1&2)	
at.	<p>HDPE Pipes for Potable Water Supplies.</p> <p>UPVC Pipes for Potable Water Supplies.</p> <p>UPVC Single Wall Corrugated Pipes for Drainage</p> <p>UPVC Screen and Casing Pipes for Bore / Tube Well</p> <p>Specifications for Sprinkler Pipes.</p>	Density	<p>IS:4984:2016 / IS:7328:1992 (RA-2008)</p> <p>IS:4985:2000 (RA-2010) IS: 13360 (Part 3/Sec 1)</p> <p>IS:9271:2004 (RA-2009) IS: 13360 (Part 3/Sec 1)</p> <p>IS:12818:2010 / IS: 12235 (Part 14)</p> <p>IS:14151:1999 (pt 1) (RA-2008) / IS:7328:1992 (RA-2008)</p> <p>IS:14333:1996 (RA-2008) / IS:7328:1992 (RA-2008)</p>	0.90 g/cc to 3.0 g/cc

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	<p>Specifications for HDPE Pipes for Sewerage.</p> <p>Specifications for Polyethylene Pipes for the Supply of Gaseous Fuel.</p> <p>PE/Al/PE Composite Pressure Pipe for Hot and Cold Water Supplies</p> <p>Chlorinated Polyvinyl Chloride Pipes for potable hot and cold water distribution supplies.</p> <p>Polypropylene Random Copolymer Pipes for hot and cold water supplies</p> <p>Structured-Wall Plastics Piping Systems For Non-Pressure Drainage</p>		<p>IS:14885:2001 (RA-2012) / IS:7328:1992 (RA-2008)</p> <p>IS:15450:2004 (RA-2009) / IS:7328:1992 (RA-2008)</p> <p>IS:15778:2007 IS: 12235: 2004 Part 14</p> <p>IS:15801:2008 / IS:7328:1992 (RA-2008) IS:13360 part-3/Sec 1995 (RA-2004)</p> <p>IS:16098:2013 (part1 & 2) / IS: IS:7328:1992 (RA-2008) ASTM D 792:13</p> <p>ASTM D 6683-14</p>	

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	and Sewerage Density / specific gravity Bulk density			
au.	Structured-wall plastics piping systems For non-pressure drainage and Sewerage Part 1 pipes and fittings with smooth external surface, Type A Pipes and fittings with Non - smooth external surface, Type B	Creep Ratio	IS: 16098 (Part 1): 2013 Annex E of part 1 IS: 16098 (Part 2):2013 Annex E of part 1	1 to 4 1 to 4
av.	Polypropylene Random Copolymer Pipes for hot and cold water supplies Specification.	MFI at 2.16 kg at 230 °C	IS: 15801:2008 / IS: 13360 Part 4/Sec I. – 1995 (RA-2004)	0.4 to 10 g/10min
aw.	CPVC pipes for hot & cold water supplies.	Flattening Test	IS: 15778:2007 IS: 12235:2004 Part 19 (RA-2009)	Qualitative
ax.	HDPE Pipes for Potable Water Supplies. Irrigation Equipment Sprinkler Pipes.	MFI at 5 kg at 190°C	IS: 4984:2016/ IS: 2530:1963 (RA-2008) IS: 14151:1999 (RA-2009) / IS: 7328:1992 (RA-2008)	0.4 to 10 g/10min

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	<p>HDPE Pipes for Sewerage.</p> <p>Polyethylene Pipes for the Supply of Gaseous Fuels.</p> <p>PE/Al/PE Composite Pressure Pipe for Hot and Cold Water Supplies.</p> <p>Structured-Wall Plastics Piping Systems for Non-Pressure Drainage and Sewerage - Specification, Part 1: Pipes and Fittings with Smooth External Surface Type A & B</p>	Melt flow rate	<p>IS:14333 :1996 (RA-2008) / IS: 13360 (Part 4/Sec 1)</p> <p>IS:14885:2001 (RA-2012) / IS:2530:63(RA-2008)</p> <p>IS:15450:2004 (RA-2009) IS:2530:63(RA-2008) IS:16098:2013 (pt-2) (RA-2008) / IS:2530:63(RA-2008)</p> <p>ASTM D 1238:2012</p>	
ay.	<p>UPVC Plain Screen and Casing pipes</p> <p>PE Pipe for Sprinkler</p>	Shore A Hardness	<p>IS: 12818-2010 / IS: 3400:2003 pt 23</p> <p>IS: 14151:1999 (Pt 1)</p>	20 to 90

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Irrigation System Coupler. Specifications for UPVC Injection Moulding fitting for Soil and Waste Discharge System		IS: 14735:1999	
az.	UPVC Pipes for SWR System Flexible PVC pipes or polymer reinforced Thermoplastic hoses for agriculture pumps.	Effect of sunlight	IS:13592:2013 / IS: 12235 (Part 13):2004 (RA-2009)	Qualitative
ba.	Structured-Wall Plastics Piping Systems for Non-Pressure Drainage and Sewerage - Specification, Part 1: Pipes and Fittings with Smooth External Surface Type A & B.	Effect of heating	IS: 16098:2013 part 2 Annex D	Qualitative
bb.	Irrigation Equipment –	Uniformity of emulsion rate and Range of Flow	IS: 13487-1992 (RA-2009) IS:13488-2008,	upto 50 kPa

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Emitters and Emitting pipe			
	First aid hose reel for fire fighting	Water Flow Test	IS: 884:1985 (RA-2015)	
bc.	Thermoplastic hoses for water	Minimum bend radius	IS: 12585:1998 (RA-2008) / IS: 12656-2014 Method A	Qualitative
bd.	Thermoplastic hoses for water	Low Temperature Flexibility	IS: 12585:1998 (RA-2008) / IS: 12657-2014	Qualitative
be.	Structured-Wall Plastics Piping Systems for Non-Pressure Drainage and Sewerage - Specification, Part 1: Pipes and Fittings with Smooth External Surface Type A & B	Resistance to heating	IS:16098:2013 (Pt-1 & 2) / IS: 12235 (Part 6) 2004 (RA-2009)	Qualitative
bf.	UPVC single wall corrugated pipes for drainage.	Joint Test / Load test	IS: 9271:2004, Annex-E	Qualitative
bg.	UPVC Pipes for SWR System. Specifications for UPVC Pipes for Soil and Waste discharge System inside building ventilation & Rain Water.	Axial shrinkage	IS: 13592: 2013 Annex B	1 % – 5 %
bh.	UPVC single wall	Bending Test	IS: 9271:2004 (RA-2009)	Qualitative

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	corrugated pipes for drainage. Conduits for Electrical Installations (Rigid plain conduits of insulating materials)		Annex-D IS: 9537 (Pt.3):1983 (RA-2015) & IS: 14930:2015	
bi.	CPVC pipes for hot & cold water supplies	Verification of the Malfunctioning Temp	IS: 15778:2007 Annex C	Qualitative
bj.	HDPE Pipes for Potable Water Supplies.	Tensile strength for butt fusion	IS: 4984:2016 Annex. G	Qualitative
bk.	HDPE Pipes for Potable Water Supplies.	Slow crack growth rate	IS: 4984:2016 Annex. E	Qualitative
bl.	Solvent cement for UPVC Pipes and Fittings.	Lap shear Strength	IS: 14182:1994 (RA-2010) Annex C	0.5 MPa to 6.2 MPa
bm.	Thermoplastic Hoses (Textile Reinforced) For water- General Purpose I PE/Al/PE composite pressure pipes for hot and cold water supplies.	Adhesion Test	IS:12585:1988 (RA-2008) IS:15450:2004 (RA-2009) IS:636:1988 (RA-2008) IS: 2076:1981 – (RA2008) Append. F	0.5 kN/m to 10 kN/m

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Non-Percolating Flexible Fire Fighting Delivery Hose. Adhesive for use for ceramic tiles and mosaics		IS: 15477:2004 (RA-2015) Annex.A & B	
bn.	Unplasticized Non-Pressure Polyvinyl Chloride (PVC -U) Pipes for use in Underground Drainage and Sewerage. UPVC Single Wall Corrugated Pipes for Drainage. Structured-Wall Plastics Piping Systems For Non-Pressure Drainage And Sewerage — Specification. GRP Pipes joints	Ring Stiffness / Pipe Stiffness	IS 15328:2003 Annex C (RA-2008) IS: 9271:2004 Annex A (RA-2009) IS: 16098:2013 Annex B IS: 14402:1996 Annex B (RA-2012)	Qualitative

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	and fittings GRP Pipes joints and fittings for use of portable water supplies		IS: 12709:1994 (RA-2009) Annex B	
bo.	Conduits for Electrical Installations (Rigid plain conduits of insulating materials).	Collapse Test Resistance to heat Resistance to burning	IS: 9537:2015 Part 1&3	Qualitative
bp.	Thermoplastic Hoses (Textile Reinforced) For water- General Purpose. Flexible PVC Pipes or Polymer Reinforced Thermoplastic Hoses For Agriculture Pumps.	Loss in mass on heating	IS: 12585-1988 – (RA 2008) Append. A IS:-15265:2003 – (RA 2008) Annex E	1% to 4%
bq.	UPVC Pipes for Potable Water Supplies. Unplasticized PVC Pipes (Ducts) and Fittings for Underground	Vicat Softening Temp.	IS: 4985:2000/ IS: 12235 Part 2 2004 (RA-2009)	50° C – 150° C

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	Telecommunications Cable Installation			
	Specifications for UPVC Screen and Casing Pipes for Bore / Tube Well		IS: 12818:2010	
	UPVC Pipes for Soil and Waste Discharge System inside building ventilation & Rain Water.		IS: 13592:2013	
	Specifications for UPVC Injection Moulding fitting for Soil and Waste Discharge System.		IS: 14735:1999	
	Chlorinated PVC Compounds Used for Pipes and Fittings.		IS:15225:2002 (RA-2008) / IS:13360 pt-6-1985 (RA-2008)	
	Chlorinated Polyvinyl Chloride Pipes.		IS:15778:2007	
	Unplasticized Non-Pressure		IS 15328: 2003 Annex. A	

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	<p>Polyvinyl Chloride (PVC -U) Pipes for use in Underground Drainage and Sewerage.</p> <p>Structured-Wall Plastics Piping Systems for Non-Pressure Drainage and Sewerage – Specification, Part 1: Pipes and Fittings with Smooth External Surface Type A Vicat Softening Temp. of plastic</p>		<p>IS:16098:2013 / IS 12235: 2004 Part 2 (RA-2009)</p> <p>ASTM D 1525:2009</p>	
br.	<p>UPVC Pipes for Potable Water Supplies.</p> <p>Injection moulded PVC socket fitting with solvent cement joints for water supplies.</p> <p>Fabricated PVC Fitting for Potable Water Supplies.</p>	Opacity	<p>IS 12235 Part 3 2004 R (2009)</p> <p>IS 7834:1987 Pt. 1</p> <p>IS:10151:1982 (RA-2008) / IS:12235:2004 pt-2 (RA-2009) IS 15778:201</p>	0.1% to 100%

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Chlorinated Polyvinyl Chloride Pipes. Polypropylene Random Copolymer Pipes for hot and cold water supplies.		IS:15801:2008	
bs.	Specifications for UPVC Pipes for Soil and Waste Discharge System inside building ventilation & Rain Water. Specifications for Injection moulded PVC socket fitting with solvent cement joints for water supplies. High Density Polyethylene (HDPE) Crates for Milk Sachets. Specifications for UPVC Injection Moulding fitting for Soil and Waste	Stress relief test	IS:13592:2013 / IS 12235 Part 6 2004 (RA-2009) IS: 7834:1987 (RA-2008) 11584:1986 Appendix. A IS:14735:1999 (RA-2009) IS:14757:2000 (RA-2010)	Qualitative

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Discharge System. Unplasticized PVC Pipes (Ducts) and Fittings for Underground telecommunications Cable Installation. Structured-Wall Plastics Piping Systems For Non-Pressure Drainage and Sewerage		IS:16098:2013 (pt 1 & 2) IS:12235:2004 pt-6 (RA-2009)	
bt.	Thermoplastic Hoses (Textile Reinforced) For water- General Purpose	Loss in mass on heating	IS-12585-1988 – (RA 2008) Append. A	1% to 4%
bu.	Polyethylene Pipes for Irrigation Lateral	Tensile Strength Elongation at Break	IS 12786:1989 (RA-2009)	0.5 MPa to 100 MPa 1% to 1500%
bv.	Unplasticized polyvinyl chloride (PVC-U) plain screen and casing pipes for bore/tubewell Chlorinated polyvinyl chloride	Tensile Strength	IS 12818:2010 /IS 12235:2004 pt 13 (RA-2009) IS 15778:2007 IS 12235:2004 (Part 13)	0.5 MPa to 100 MPa

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	(CPVC) pipes for potable hot and cold water distribution supplies		(RA- 2009)	
bw.	UPVC pipes for soil and waste discharge system inside buildings including ventilation and rain water system	Tensile Strength before and after exposure to sunlight	IS 13592:2013 / IS 12235:2004 pt 13 (RA-2009)	0.5 MPa to 100 MPa
bx.	Irrigation Equipment - Sprinkler Pipes - Polyethylene Pipes	Tensile strength Elongation	IS 14151:1999 (pt-1) / (RA-2009)	0.5 MPa – 100 MPa 1 % - 1500 %
by.	Polyethylene Pipes for the Supply of Gaseous Fuels	Tensile Strength Elongation at Break	IS 14885:2001 (RA-2012) Annex J ISO/DIS-6259-I-1994	0.5 MPa – 100 MPa 1% -350 %
bz.	Flexible PVC Pipes or Polymer Reinforced Thermoplastic Hoses for Suction and Delivery Lines of Agricultural Pumps.	Bend radius	IS 15265:2003 (RA-2008) / IS 12656:2014 Method A	Qualitative (Visual)
ca.	Conduits for electrical installations: Part	Compression Test	IS 9537:2015 (Pt-1&3) IS:9537:1980 (pt-1) (RA-2015)	0.5 % to 25 %

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	3 Rigid plain conduits of insulating materials			
cb.	Polyethylene/ Aluminum/ Polyethylene Composite Pressure Pipes for Hot and Cold Water Supplies	Tensile strength Elongation	15450:2004 (RA-2009) Annex E	0.5 MPa to 100 MPa 1% to 1500 %
3.	Plastic Sheets			
a.	Unbacked flexible PVC flooring	Linear Dimension of Sheets/Rolls Thickness Width of the sheet or roll	IS:2076:1981 (RA-2008) / IS 3462:1986/2016	1 mm to 2000 mm 0.5 mm to 300 mm
b.	Thermosetting resin bonded laminated sheets	Proof test	IS 1998:1962 (RA-2008) Append – B	Qualitative
c.	Unbacked flexible PVC flooring.	Moisture Movement	IS 3462:1986 (RA-2016) Appendix. B / IS:3464:1986 (RA-2016)	0.1% to 0.4 %
d.	Thermosetting synthetic resin bonded laminated sheets	Resistance to hot oil	IS 1998:1962 (Part-11) (RA-2008)	Qualitative
e.	Unsupported Flexible Polyvinyl Chloride Sheetting	Blocking Test	IS 2076:1981 – Appendix J	Qualitative (Visual)
f.	Thermosetting synthetic resin bonded laminated	Impact Strength	IS 1998:1962 (Part- 9) (RA-2008)	10 J/m to 50 J/m

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g.	sheets HDPE Crates for milk sachets Unbacked flexible PVC flooring. Unsupported Flexible Polyvinyl Chloride Sheetting	Dimensional Stability	IS -11584:1986 Appendix D IS 3462:1986/2016 IS 2076:1981/R 2008 Appendix J	0.1 mm to 600 mm
h.	UPVC Single Wall Corrugated Pipes for Drainage. Conduits for electrical installations: Part 1 General requirements.	Impact Test	IS 9271:2004/2009 Annex. B (RA-2009) IS 9537 (Pt.1& 3)-1983 (RA-2015)	0.5 kg to 6.8 kg mass Qualitative (0.5 – 20 J)
i.	Textiles - Laminated High Density Polyethylene (HDPE) Fabric for Canal Lining	Puncture Resistance Breaking Load Impact Failure load Tear resistance	IS 15351:2015 Annex. D IS 13162 (Part 5) IS 15351:2015 Annex C IS 7016:1981 (RA-2008) (Pt-3) Method A1	10 N to 10,700 N 10 kgf to 4025 kgf
j.	Polyethylene Flexible Pouches for the Packing of Natural Mineral Water and Packaged Drinking Water	Tensile Strength Elongation at break	IS 15609:2005 (RA-2010)	10 MPa to 50 MPa 10% to 1500 %
k.	Agro Textiles - High Density Polyethylene	Breaking strength Elongation	IS 15907:2010 / IS 1969:2010/ IS 7016 (Part 3)	10 MPa to 100 MPa 10 % to 1500 %

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	(HDPE) Woven Beds for Vermiculture	Tear strength Puncture strength	IS 7016:1981 (RA-2008) (Pt-3) Method A2 IS 15907:2010 Annex C	10 N to 200 N
I.	PVC GEO - Membranes for Lining	Tensile strength Tear strength Puncture resistance Seam strength Peel strength	IS 15909-2015 / IS 2076:1981/(RA-2008) Annex B IS 15909-2015 Annex B IS 2076:1981/(RA-2008) Annex C. IS 15909-2015 Annex B IS 15909-2015 Annex E IS 3464:1986(RA-2016)	10 MPa to 100 MPa 10 N to 200 N
m.	Agro Textiles – HDPE laminated woven Lay Flat Tube for Irrigation Purpose.	Breaking Load Elongation Trapezoid tear strength Puncture Resistance	IS 16190:2014 Annex C IS 1969:2010 IS 14293:1995/(RA-2010)	10 MPa to 100 MPa 10 % to 500 %
n.	Standard Test Method for Tensile Properties of Thin Plastic Sheeting	Tensile Strength at Break, Tensile strength at Yield	ASTM D 882:2012	
o.	Pressure Sensitive Adhesive Tapes With Plastic Base	Tensile Strength Elongation	IS 13262:1992 (RA-2008) / IS 7703:1998 Pt-2 (RA-2010)	10 MPa to 100 MPa 10% to 500 %
p.	Polyethylene cane	Tensile strength at Break	IS: 5378:1995 (RA-2010) IS 7703(Part 2):1990/ (RA-2007) IS 2508:2016/ IS 13360	10 MPa to 100 MPa

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Low density polyethylene films		(Part 5/Sec 1) and IS 13360 (Part 5/ Sec 3)	
q.	Shade Nets for Agriculture and Horticulture Purposes.	Breaking Strength	IS 16008:2012/2016 (pt1 & 2) IS 1969:2010	20 N to 1200 N
r.	Textiles - Tarpaulins Made From High Density Polyethylene Woven Fabric	Puncture Resistance Breaking Strength	IS 7903:2011 Annex B/ IS 1969:1985/(RA-2010)(Pt 1)	20 N to 1200 N
s.	Multilayered cross laminated sheet	Strength of joint	IS 14611:1988/2016 Annex C IS 13360 (Part 5/Sec 1) and IS 13360 (Part 5/ Sec 3) /IS 1969 :2009	200 kg/cm ² to 250 kg/cm ²
t.	Thermoplastics Fumigation Cover	Tensile Strength Breaking Strength	IS:13217:1991 (RA-2012) IS 7016:1981 (Part 2)- 1981	20 N to 1200 N
4.	Packaging and Containers			
a.	Polyethylene Cane-Specs	Thickness Width	IS: 5378 -1994 (RA-2010)	0.5 mm to 300 mm
b.	Rotational Moulded Polyethylene Water Storage Tank	Overall Height Effective Height Overall Diameter Rim Height Internal Diameter Wall Thickness	IS: 12235 Part 1 2004	1 mm to 15000 mm
c.	Polyethylene Pouches for Packaging Liquid Milk	Thickness Width	IS 11805:2007	0.5 mm to 300 mm

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d.	Container for packaging of Natural Mineral Water & Packaged drinking water	Capacity	IS 15410:2003 (RA-2009) /IS 2798:1998 (RA-2009)	10 ml to 5000 ml
e.	PE Flexible Pouches for the packaging of Natural Mineral Water	Thickness Visual appearance	IS 15609:2005 (RA-2010) /IS 2508:2016 Annex A	1 mm – 15 mm Qualitative
f.	Roto Moulded PE Water Storage Tanks	Weight of tank	IS 12701:1996- (RA- 2006)	5 kg to 566 kg
g.	Polyethylene Containers for The Transport of Materials Rotational moulded polyethylene water storage tanks Container for packaging of Natural Mineral Water & Packaged drinking water	Brimful Capacity Nominal capacity	IS 6312:1994 (RA-2010) IS 12701:1996 (RA- 2006) IS 15410:2003 (RA-2009) / 2798:1998 (RA-2009)	10 ml to 5000 ml 10 l to 20,000 l 10 ml – 5000 ml
h.	Polyethylene Containers For The Transport Of Materials. Polyethylene	Closure leakage test Leakage Test	IS:6312-1994 – (RA-2010) Annex D IS:11805:2007	Qualitative

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Pouches for Packaging Liquid Milk. Container for packaging of Natural Mineral Water & Packaged drinking water PE Flexible Pouches for the packaging of Natural Mineral Water	Resistance to Leakage	IS 15410:2003 (RA-2009) / IS 2798:2009 (Pt.6) IS 15609:2005 (RA-2010) Annex D	
i.	Polyethylene Cane-specification Polyethylene Containers for the Transport of Materials Rotational Moulded Polyethylene Water Storage Tank	Density	IS:5378:1999 (RA-2010) / IS:2530:1963 (RA-2008) IS:6312:1994 (RA-1999) / IS:7328:1992 (RA-2008) IS 12701:1996- (RA- 2006) IS 7328:1992 Annex. A	0.5 g/cc to 3.0 g/cc
j.	Polyethylene Containers For The Transport of Materials.	Hydrostatic Test	IS 6312-1994 – R 2010) Annex G	10 kPa to 110 kPa
k.	Polyethylene cane – specification	Denier	IS:5378:1999 (RA-2010) IS 7071(Parts 1 to 3) : 1989	1000 g to 14000 g
l.	Polyethylene	MFI at 5 kg at 190°C	IS:5378:1999 (RA-2010) /	0.2 to 10 g/10 min

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Cane-Specification. Specifications for Rotational Moulded Polyethylene Water Storage Tank.		IS:2530:1963 (RA-2008) IS 12701:1996- (RA- 2006) IS 7328:1992 Annex. A	
m.	Roto Moulded PE Water Storage Tanks	Top load resistance	IS:12701-1996 (RA- 2006)	Qualitative
n.	Polyethylene Flexible pouches for the packing of natural mineral water and packaged drinking water	Stack Load Test	IS 15609:2005 Annex F	Qualitative
o.	Containers for packing of natural mineral water.	Transparency	IS 15410:2003 Annex A	10% to 95%
p.	Polyethylene Flexible pouches for the packing of natural mineral water and packaged drinking water	Ink adhesion test	IS 15609:2005 Annex -H	Qualitative
q.	Polyethylene Containers For The Transport Of Materials – Specification.	Drop Test	IS: 6312-1994/2010 Annex. E	Qualitative

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	<p>High Density Polyethylene (HDPE) Crates for Milk Sachets.</p> <p>Polyethylene Pouches for Packaging Liquid Milk.</p> <p>Containers for packing of natural mineral water.</p> <p>Polyethylene Flexible pouches for the packing of natural mineral water and packaged drinking water</p>		<p>IS: 11584:1986/ (RA 2009) Appendix C</p> <p>IS 11805:2007 Annex. A</p> <p>IS:15410:2003 (RA-2009)/ IS 2798:1998 (RA-2009) IS 15609:2005 (RA-2010) Annex- G IS 2798-1998, (RA-2009)</p>	
r.	<p>Polyethylene Pouches for Packaging Liquid Milk.</p> <p>Specifications for Rotational Moulded Polyethylene Water Storage Tank</p> <p>Polyethylene Flexible pouches</p>	Dart Impact	<p>IS 11805:2007</p> <p>IS:12701:1996 (RA-2006)</p> <p>IS 15609:2005 (RA-2010) / IS 2508:2016</p>	Qualitative

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	for the packing of natural mineral water and packaged drinking water.			
s.	Rotational moulded polyethylene water storage tanks	Tensile strength	IS:12701:1996 (RA-2006) IS 8543 part 4/Sec 1 1984 (RA-2004)	10 MPa to 300 MPa
5.	Others			
a.	Textiles Monoaxially oriented HDPE tapes Tarpaulins Made From High Density Polyethylene Woven Fabric	Width Thickness Width Length Lamination Film (Coating thickness) No of layer of fabric (sandwich lamination thickness) Eyelet size Line/cord bending Construction Panel i) Length and width ii) Width of hem Cross joint Bonding (overlap distance)	IS 6192 :1994 (RA-2010) IS 7903:2011 IS 4084:1978 (RA-2007)	0.5 mm to 300 mm 10 mm to 5000 mm
b.	Polyethylene Films and Sheets	Nominal Width Nominal Thickness	IS 2508:2016	10 mm to 15000 mm
	HDPE Woven	Thickness of the loose	IS 8069:1989 (RA-2007)	0.5 mm to 50 mm

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	sacks for packing pesticides	liner Length Liner Width of Sack Width of gusset Mouth		
c.	HDPE /PP Woven Sacks For Packing Fertilizers	Length Width Ends/dm, Picks/dm	IS 9755:2016 / IS 1954:1990 (RA-2009)	100 mm to 1000 mm
d.	HDPE/PP Woven Sacks for Filling Sand	Outside length Outside width End/dm Picks/dm	IS 14252:2015 Annex. B	10 mm to 2000 mm
e.	Woven Sacks for Packing Cement -HDPE/PP.	Length of the sack Width of the sack Width of gusset Width of the valve Depth of the valve Ends/dm , Picks/dm	IS 11652:2000 (RA-2010)	10 mm to 2000 mm
f.	HDPE/PP Woven sacks for packaging of 50 kg food grains.	Inside Length Inside width Ends/dm Picks/dm	IS 14887:2014 Annex. B	10 mm to 2000 mm
g.	HDPE/PP Woven Sacks for Packaging Sugar	Inside Length Inside width Ends/dm Picks/dm	IS 14968:2015 Annex B	10 mm to 2000 mm
h.	Pressure Sensitive Adhesive Tapes	Width Length	IS 13262:1992 (RA-2008)	10 mm to 1000 mm

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	With Plastic Base			
i.	Laminated HDPE woven fabric for water proof lining	Length Width Thickness Visual appearance	IS 15351:2015 IS 13162 (Part 3) Method A	1 mm to 6 m 0.5 mm to 50 mm
j.	PVC GEO - Membranes for Lining	Length/Width Thickness Visual appearance/Workmans hip/Finish/Shape/color	IS 15909:2015	1 mm to 6 m 0.5 mm to 50 mm
k.	Agro Textile High Density Polyethylene (HDPE) woven Beds for Vermiculture	Length/Width Thickness Visual Appearance	IS 15907:2010	1 mm to 6 m 0.5 mm to 50 mm
l.	Polyamide multifilament ropes Poly ethylene ropes Polyolefin's copolymer ropes Poly propylene ropes	Length/ pitch,	IS 7071 (Part 2):1989 IS 4572:1992 (RA-2014) IS 8674:2013 IS 14929:2001 (RA-2007) IS 5175:2014	10 mm to 15000 mm
m.	Agro Textiles – HDPE laminated woven Lay Flat Tube for Irrigation Purpose	Internal diameter Length	IS 16190:2014	10 mm – 200 mm
n.	Shade Nets for Agriculture and	Length Width	IS 16008:2016 / IS 1954:1990 (RA-2007)	1 mm – 6000 mm

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	Horticulture Purposes			
o.	HDPE / PP Woven Sacks For Packing Fertilizers	Capacity / Nominal capacity	IS-9755:2003	25 kg – 50 kg
	Woven sacks for packing Cement-high Density HDPE/PP		IS 11652:1992	50 kg
	HDPE/PP Woven Sacks for packing 50kg food grains		IS 14887:2014	50 kg
	(HDPE)/ (PP) Woven Sacks for packing 50kg/25 kg Sugar		IS 14968:2015	25 kg – 50 kg 10 kg – 30 kg
	(HDPE) / (PP) woven sacks for packaging 10 kg, 15 kg, 20 kg, 25 kg and 30 kg food grains		IS 16208:2015	
p.	Tarpaulin made from High Density Woven Fabric	Water proofness / Water Repellency	IS 7940:1976 / IS 7941:1976	Qualitative
q.	PVC GEO -	Water extraction	IS 15909:2010 Annex. G	0.1% to 0.5%

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Membranes for Lining			(Qualitative)
r.	Agro Textile High Density Polyethylene (HDPE) woven Beds for vermiculture	Water proofness / Water Repellency	IS 7940:1976 / IS 7941:1976	Qualitative
s.	Shade Nets for Agriculture and Horticulture Purposes.	Bursting pressure	IS:16008:2016 (Pt 1 & 2) / IS 1966-1976 (Part 1 & 2)	1 kg/cm ² to 9 kg/cm ²
t.	Thermoplastics Fumigation Cover.	Burst Strength	IS: 13217:1991 (RA-2012) / IS 7016 (Pt. 6) 1987	1 kg/cm ² to 50 kg/cm ²
	Laminated High Density Polyethylene (HDPE) Fabric for Canal Lining.		IS:15351:2015	1 kg/cm ² to 20 kg/cm ²
	Agro Textile High Density Polyethylene (HDPE) woven Beds for Vermiculture.		IS:15907:2010	1 kg/cm ² to 20 kg/cm ²
	Specifications for Agro textiles- Insect Nets for Agriculture and		IS:16513:2016 IS 1966: (Pt 1 & 2)	1 kg/cm ² – 20 kg/cm ²

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u.	<p>Horticulture Purposes.</p> <p>Fibre Ropes Polyamide 3-, 4-, 8- and 12 Strand Ropes. Polypropylene ropes.</p> <p>Textiles Monoaxially oriented HDPE tapes.</p> <p>High density polyethylene (HDPE) Woven sacks for packing pesticides.</p> <p>High Density Polyethylene (HDPE)/Polypropylene (PP) Woven Sacks For Packing Fertilizers.</p> <p>Monoaxially oriented polypropylene tapes.</p>	Linear Density	<p>IS 4572:1992 (RA-2014)</p> <p>IS 6192:1994 (RA-2010) /</p> <p>IS 6193:1971 (RA-2007)</p> <p>IS:8069:1989 (RA-2007)</p> <p>IS:11197:1985 (RA-2010)</p> <p>IS:9755:2016</p>	100 Tex – 15000 Tex

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Textiles - Woven Sacks for Packing Cement - High Density Polyethylene (HDPE)/Polypropylene (PP).		IS:14252:2015	
	Specifications for Textiles-High Density Polyethylene (HDPE)/ Polypropylene (PP) Woven Sacks for Filling Sand.		IS:14887:2014	
	Textiles-High Density Polyethylene (HDPE) / Polypropylene (PP) Woven Sacks For packing 50kg food grains.		IS 8543 1977	
	Textiles High strength polyolefin's copolymer ropes.			
	Textiles -High Density		IS:14968:2015	

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	<p>Polyethylene/Polypropylene (PP) Woven Sacks for Packing 50 kg/25 kg Sugar.</p> <p>Specifications for Shade nets for Agriculture and Horticulture Purposes-Part1: Shade nets made from Tape.</p> <p>Agro Textiles- HDPE laminated woven Lay Flat Tube for Irrigation Purpose.</p> <p>Specifications for high density polyethylene (HDPE)/polypropylene (PP) woven sacks for packaging 10 kg, 15 kg, 20 kg, 25 kg and 30 kg food grains.</p> <p>Specifications for Agro textiles-</p>		<p>IS:16008:2016 (pt-1)</p> <p>IS:16190:2014</p> <p>IS:16208:2015</p> <p>IS:16513:2016</p>	

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Insect Nets for Agriculture and Horticulture Purposes.			
v.	Specifications for Low Density Polyethylene Films (Black)	MFI at 5 kg at 190°C	IS 2508:2016 / IS:13360 part-4 /sec1 – 1995 (RA-2008)	0.30 g/10 min to 10 g/10 min
w.	Agro Textiles- HDPE laminated woven Lay Flat Tube for Irrigation Purpose.	Denier	IS 16190:2014 / IS 7071(Parts 1 to 3) : 1989	5 Tex to 5000 Tex
x.	PVC GEO - Membranes for Lining.	Specific gravity	IS 15909:2015 Appendix A	0.30 to 1.40
y.	Plastic Film For Greenhouses.	MFI at 2.16 kg at 230 °C	IS:15827:2009 / IS:13360 part-4 /sec1 – 1995 (RA-2008)	0.3 to 10 g/10min
z.	Shade Nets for Agriculture and Horticulture Purposes – Specification (Pt. 1 & 2)	Shading percentage	IS 16008:2016 Annexure C	30 % to 95 %
aa.	Plastic Film for Greenhouses	Haze percentage	IS:15827:2009 / IS:13360 part-5 /sec1 – 1995 (RA-2008)	30% - 60 %
ab.	PVC Geo membranes for lining	Low temperature crack resistance	IS 15909-2015 Annex C	Qualitative
ac.	Low Density Polyethylene	Ageing Test	IS:2508: 1984 of IS 7016 (Part 8)	Qualitative

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
ad.	films. Multilayered Cross Laminated Sheets and Tarpaulins / Covers Thermoplastics Fumigation Cover.	Flex Test	(RA-2012) IS:14611: 2016 / IS 7016 Part. 4 (RA-2003)	50000 Cycles
ae.	High Density Polyethylene /poly propylene (PP) Woven Sacks for Filling Sand. Specifications for Multilayered Cross Laminated Sheets and Tarpaulins / Covers. Textiles -High Density Polyethylene (HDPE)/Polypropylene (PP) Woven Sacks for Packing 50 kg/25 kg Sugar Textile Materials made from Polyolefin's. Shadenets for Agriculture and	Exposure to UV radiation and weathering / UV Resistance	ASTM G154:2016 IS 14252:2015 IS:14611:2016 IS:14968:2015 IS:16008:2016	Qualitative

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	<p>Horticulture Purposes-Part1: Shade nets made from Tape Yarns.</p> <p>HDPE/PP Woven sacks for packaging of 50 kg food grains</p> <p>HDPE) / (PP) woven sacks for packaging 10 kg, 15 kg, 20 kg, 25 kg and 30 kg food grains</p> <p>High Density Polyethylene (HDPE)/Polypropylene (PP) Woven Sacks For Packing Fertilizers</p>		<p>IS:14887:2014</p> <p>IS:16208:2015</p> <p>IS:9755:2016</p>	
af.	Methods of Test for PVC Resins	Sieve analysis	IS:4669:1968/2008 (Part. 6)	Qualitative
ag.	Specifications for Low Density Polyethylene Films (Black).	Tear Resistance	IS 2508:2016 Annex B IS 7016:1981 (RA-2008) (Part-3)	10 – 8100 N
	Textiles -			

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	Laminated High Density Polyethylene (HDPE) Fabric for Canal Lining. Specifications for High Density Polyethylene(HDPE) Geo-membranes for Lining		IS:15351:2015 / IS:7016-1981 p-3 (RA-2008) IS 16352:2015 Annex. C	
ah.	Textiles Monoaxially oriented HDPE tapes. Textiles - Tarpaulines Made From High Density Polyethylene Woven Fabric. Monoaxially oriented polypropylene tapes. HDPE woven beds for vermiculture Specifications for Shadenets for	Colour Fastness to Artificial light	IS 6192 :1994 (RA-2010) IS:7903:2011 IS:11197:1985 (RA-2010) IS 2530:1963 Pt. 15 IS 2454:1985 IS:15907:2010 IS:16008:2016 (pt 1 & 2)	1 -7 (Grey Scale No)

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	Agriculture and Horticulture Purposes-Part1: Shade nets made from Tape Yarns.			
ai.	Polyamide Multifilament ropes	Mass of the coil	4572:1992 (RA-2014)	1 kg – 1250 kg
aj.	Textiles – Tarpaulines Made From High Density Polyethylene Woven Fabric	GSM	IS 7903:2011	10 GSM - 1000 GSM
ak.	High density polyethylene (HDPE) Woven sacks for packing pesticides.	GSM	IS 8069:1989 – R 2007	10 GSM - 1000 GSM
al.	Textiles - High Density Polyethylene (HDPE)/Polypropylene (PP) Woven Sacks For Packing Fertilizers	GSM	IS 1964:2001 (RA-2010)	10 GSM - 1000 GSM
am.	Thermoplastics Fumigation Cover	GSM	IS 13217:1991/ (RA-2012) IS 1964:2001 (RA-2010)	10 - 1000 GSM
an.	Multilayered Cross Laminated Sheets and	GSM	IS:14611:2016 / IS 7016:2008 (Part 1)	10 - 1000 GSM

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	Tarpaulins / Covers			
ao.	HDPE/PP Woven sacks coated with paper	Mass	IS: 11651:1986 (RA-2002)	10 mg – 710 g
ap.	Textiles - Woven Sacks for Packing Cement - High Density Polyethylene (HDPE)/ Polypropylene (PP)	Mass	IS 11652:2000 (RA -2010) Annex.B	10 mg – 710 g
aq.	Textiles-High Density Polyethylene (HDPE)/ Polypropylene (PP) Woven Sacks for Filling Sand	Mass	IS 14252: 2015 Annex E IS 1964:2001 (RA-2010)	55 g – 550 g
ar.	Textiles-High Density Polyethylene/Polyp ropylene (PP)Woven Sacks For packing 50kg food grains- specification	Mass	IS:14887:2014 / IS 1964:2001 (RA-2010)	135 g - 350 g
as.	Textiles - Composite Synthetic Fibre Ropes	Mass	IS: 14928:2001 (RA-2007) IS 7016:2008 Pt. 1	0.5 kg – 150 kg
at.	Textiles High		IS 8543:1977	0.5 kg – 150 kg

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	strength polyolefin's copolymer ropes			
au.	Textiles -High Density Polyethylene (HDPE)/Polypropylene (PP) Woven Sacks for Packing 50 Kg/25 Kg Sugar	Mass	IS 14968:2015 / IS 7016:2008 Pt. 1	65 g – 1600 g
av.	Textiles - Laminated High Density Polyethylene (HDPE) Fabric for Canal Lining Agro Textile High Density Polyethylene (HDPE) woven Beds for Vermiculture Specifications for Shadenets for Agriculture and Horticulture Purposes-Part1: Shade nets made from Tape Yarns.	Mass /GSM	IS:15351:2015 IS:15907:2010 IS:16008:2016 (pt-1) IS 1954:1990 (RA-2007)	10 GSM - 1000 GSM

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	Shade nets for Agriculture and Horticulture Purposes-Part 2: Shade nets made from Monofilament yarns.		IS:16008:2016 (pt-2)	
	Agro Textiles- HDPE laminated woven Lay Flat Tube for Irrigation Purpose.		IS:16190:2014 /IS 1964:2001 (RA-2010)	
	High density polyethylene (HDPE)/polypropylene (PP) woven sacks for packaging 10 kg, 15 kg, 20 kg, 25 kg and 30 kg food grains.		IS:16208:2015	
	Agro textiles- Insect Nets for Agriculture and Horticulture Purposes.		IS:16513:2016	
	Polyolefin Ropes		IS:14929:2001 (RA-2007)	
			IS 5175:1992/ R 2014IS	

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	Polypropylene ropes.		7071:1989/ R 2008 Pt. 2	
aw.	Low Density Polyethylene Films (Black)	Dart Impact	IS:2508:2016 / Method A & B of IS 13360 (Part 5/Sec 6) -1995 (RA-2008)	0.4 N – 3.2 N
6.	Fibre Reinforced Plastic Product			
a.	Synthetic Resin Bonded Glass Fiber for Electrical Purposes	Length Width Thickness	IS 10192:1982/ (RA-2015)	10 mm -1000 mm
b.	Hot Press Moulded Thermosetting Glass Fibre Reinforced Polyester Resin (GRP) Sectional Water Storage Tank	Flange of panel Length Width Thickness	IS 14399:1996 (Pt- 1 & 2) (RA-2006)	45° & 90° 10 mm - 1000 mm 0.5 mm - 300 mm
c.	GRP pipes joints and fittings for use sewerage, industrial waste and water (other than potable)	Inside dia./Outside dia. Thickness Visual appearance	IS 14402:1996 Annex A	10 mm -1000 mm
d.	Glass-fibre reinforced plastic (GRP) pipes joints	Nominal diameter/ Outside diameter Wall Thickness Length of pipe	IS 12709:1994 Annex A	10 mm -1000 mm

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	and fittings for use for potable water supply	Out of square ness of pipe		
e.	Hot Press Moulded Thermosetting Glass Fibre Reinforced Polyester Resin (GRP) Sectional Water Storage Tank	Barcol Hardness	IS 14399:1996 (Part 1-2) Annex F IS 6746:1994 Annex J ASTM D 2583:2013	30-100
f.	Glass fibre rovings for the reinforcement of polyester and of epoxide resin system.	Loss on Ignition	IS 11320-1997 Annex E (RA-2010)	1% - 20 %
g.	Unsaturated Polyester Resin System Molded & Sheet Materials Glass Reinforced Polyester Sheet Molding Compound (SMC).	Heat Deflection Temperature	IS 13411-1992 Annex H (RA-2008) ASTM D 648:2016	40 ⁰ C – 250 ⁰ C
h.	Glass reinforced polyester sheet moulding compounds	Tensile strength Flexural strength	IS 13410-1992 / IS 8543 (part 4/Sec 1) 1984 Annex F of IS 13411: 1992/ (RA-2008)	10 MPa –500 MPa

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			IS 1998:1962/ (RA-2008)	10 MPa – 500 MPa
i.	Glass fibre rovings for the reinforcement of polyester and of epoxide resin systems	Tensile breaking load	IS 11320:1997/ R2010 Annex F IS 1998:1962/ (RA-2008)	10 N to 940 N
j.	Thermosetting synthetic resin bonded laminated sheets	Electrical Strength Insulation Resistance	IS 1998:1962 (RA-2008)	10 kV to 50 kV
k.	Glass Reinforced Polyester Sheet Molding Compound (SMC)	GSM	IS 13410:1992 (RA-2008)	10 GSM to 1000 GSM
l.	Flexible PVC Pipes or Polymer Reinforced Thermoplastic Hoses for Agriculture Pumps	Mass	IS:15265:2003 (RA-2008) / IS 7071:2008 (Part 1-3)	1 kg to 150 kg
m.	Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials	Flexural strength	ASTM D 790 :2015	10 MPa to 500 MPa