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उत्पाद मैनुअल
SPECIFICATION FOR POLYETHYLENE MATERIAL FOR MOULDING
AND EXTRUSION

IS 7328:2020 के अनुसार

PRODUCT MANUAL FOR
SPECIFICATION FOR POLYETHYLENE MATERIAL FOR MOULDING AND
EXTRUSION ACCORDING TO IS 7328:2020

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम, 2018 की योजना- I के तहत प्रमाणन के संचालन में एकरूपता और पारदर्शिता के लिए इस उत्पाद मैनुअल का उपयोग सभी क्षेत्रीय / शाखा कार्यालयों और लाइसेंसधारियों द्वारा संदर्भ सामग्री के रूप में किया जाएगा। दस्तावेज़ का उपयोग बीआईएस प्रमाणन प्राप्त करने के इच्छुक संभावित आवेदकों द्वारा भी किया जा सकता है।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure uniformity of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification.

1.	मानक संख्या IS No.	:	IS 7328:2020
	शीर्षक Title	:	SPECIFICATION FOR POLYETHYLENE MATERIAL FOR MOULDING AND EXTRUSION
	संशोधनों की संख्या No. of amendments	:	02
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	Not Applicable
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Please refer ANNEX – A

c)	नमूने का परिमाण Sample Size	: 1.For factory sample: (i) Approximately 1 kg (or higher quantity required for testing) of sample collected from 3 or more sealed bag/package to be taken and sealed in a clean plastic bag to have approx. 3 kg composite sample. (See Cl 8.2.1 of IS7328) ii) For compounded materials: a) 3 kg of the base polymer with additives and without fillers and reinforcing material to be drawn separately for density measurement, along with the PE composite sample as referred above for other tests. b) In case of compounded materials where the crosslinking agent used (e.g. peroxide) is such that the MFI test cannot be performed as per the test method since the agent causes cross linking to occur before the test temperature (190°C) is achieved, therefore, in such cases the PE composite sample consisting of all the ingredients except the crosslinking agent shall be drawn (qty. as in (i) above) along with 3 kg of the base polymer with additives and without fillers and reinforcing material for density measurement. 2.For market sample: Minimum 3 kg of sample
3.	परीक्षण उपकरणों की सूची List of Test Equipment	: Please refer ANNEX – B
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	: Please refer ANNEX – C
5.	एक दिन में संभावित परीक्षण Possible tests in a day	: Description, Melt Flow Index, Density
6.	लाइसेंस का दायरा /Scope of the Licence:	
	Licence is granted to use Standard Mark as per IS 7328:2020 with the following scope:	
	Name of the product	: POLYETHYLENE MATERIAL FOR MOULDING AND EXTRUSION
	Varieties	: Designation codes of material (e.g. IS 7328-2B-FBH-BDE-C05)
	Additional Requirements/Properties	: Including/excluding Coloured and/or Compounded material (Cl 5.4)
		: Including/excluding resin or grade used for blending application (Cl 5.2.1)
		: Suitable for/Not suitable for product used in contact with food stuff, Pharmaceuticals and drinking water(Cl. 5.5)

ANNEX A

GROUPING GUIDELINES

- 1) As per CI 4.1 of IS 7328:2020, Designation code of LDPE /LLDPE/HDPE and compounds shall be done based on four and five data block, respectively where data block 1 is the Indian Standard, and Data block 3 is for Intended application or method of processing, performance additives and supplementary information are to be declared by the manufacturer and are for the information of the buyer.. These aspects have no direct bearing on the performance of the product as per the standard which depends mainly on the type of materials and their density and MFI and the filler material.
- 2) The manufacturer shall declare, in their application for considering grant of licence and/or change in scope of licence, each designation code which they intend to cover in the scope of the licence.
- 3) For considering grant of licence and/or change in scope of licence, the following grouping shall be considered:

a) For LDPE/LLDPE/HDPE materials including resins/grades used for blending application (based on the Data blocks 2 to 4 as per 4.1.1):

Data Block	Details of data block	Sample to be drawn/tested pertaining to each data block
Data Block 2	Material i.e. LDPE /LLDPE/HDPE and Co-monomer: Butene-1, Hexene-1, Octene-1, Propylene or other	Manufacturer shall declare each type of material manufactured and comonomer being used and intended to be covered in the licence as per CI 4.2.2 Samples of each type of material i.e. LDPE /LLDPE/HDPE material intended to be covered in the scope of licence shall be tested. However, sample of any one type of co monomer intended to be covered in the scope of licence shall be tested. e.g. If sample of LDPE with co-monomer Butene-1 is tested, LDPE with co monomers Butene-1, Hexene-1, Octene-1, Propylene can be covered.
Data block 3	Intended application or method of processing performance additives and supplementary information deemed to be of importance	Manufacturer shall also declare intended application or method of processing, performance additives and supplementary information deemed to be of importance by the producer with respect to the end

	by the producer with respect to the end applications	applications and intended to be covered in the licence as per 4.2.3 and 4.2.4. (This is only to be provided only as information to BIS and has no bearing on the testing)
Data Block 4	Density	Manufacturer shall declare the density range (at 23°C or at 27°C) as per table 1 being manufactured and intended to be covered in the licence One sample each of the designation code pertaining to the highest and lowest density range (at 23°C or at 27°C) intended to be covered in the scope of licence shall be tested
-do-	MFI	Manufacturer shall declare the MFI Ranges as per table 3 (and relevant test conditions as per table 2) being manufactured and intended to be covered in the licence One sample each of the highest, lowest and intermediate MFI range, may be tested (under any of the test conditions) to cover the ranges. E.g. to cover designation codes for A,B,C,D,E for MFI Range, only three samples i.e. one each of codes A, code E and any one of the codes among B,C or D may be tested under any of the test conditions as per table 2.

b) For Compounds thereof including resins/grades used for blending application **(based on the Data blocks 2 to 5 as per 4.1.1):**

Data Block	Details of data block	Sample to be drawn/tested pertaining to each data block
Data Block 2	Material and Co-monomer: Butene-1, Hexene-1, Octene-1, Propylene or other	Manufacturer shall declare each type of material manufactured and comonomer being used and intended to be covered in the licence as per CI 4.2.2 Samples of each type of material intended to be covered in the scope of licence shall be tested. However, sample of any one type of co monomer intended to be covered in the scope of licence shall be tested.
Data block 3	Intended application or method of processing, performance additives and supplementary information	Manufacturer shall also declare intended application or method of processing, performance additives and supplementary information deemed to be of importance by

	deemed to be of importance by the producer with respect to the end applications	the producer with respect to the end applications and intended to be covered in the licence as per 4.2.3 and 4.2.4. (This is only to be provided only as information to BIS and has no bearing on the testing)
Data Block 4	Density	Manufacturer shall declare the density range (at 23°C or at 27°C) as per table 1 being manufactured and intended to be covered in the licence One sample each of the designation code pertaining to the highest and lowest density range (at 23°C or at 27°C) intended to be covered in the scope of licence shall be tested
-do-	MFI	Manufacturer shall declare the MFI Ranges as per table 3 (and relevant test conditions as per table 2) being manufactured and intended to be covered in the licence One sample each of the highest, lowest and intermediate MFI range, may be tested (under any of the test conditions) to cover the ranges. E.g. to cover designation codes for A,B,C,D,E for MFI Range, only three samples i.e. one each of codes A, code E and any one of the codes among B,C or D may be tested under any of the test conditions as per table 2.
Data block 5	Filler details	Manufacturer shall declare the type of filler , reinforcing material and their physical form as per table 4 and their mass content range as per table 5 being used for manufacturing and intended to be covered in the licence Samples of material with <u>each type of filler or reinforcing material in any one physical form (see table 4) of the highest and lowest mass content range (see table 5)</u> intended to be covered in the scope of licence shall be tested. e.g. If one sample with carbon black filler (B) in the form of granules (G) having mass content range of <7.5% (code 05) and another sample with carbon black filler (B), in the form of granules (G) having mass content range of >27.5 to 32.5 % (code 30) is tested, material with filler codes B in physical forms B to S as per table 4 and mass content code 05, 10,15,20,25,30 as per table 5 may be covered.

		However, in case a type of filler and/or physical form which is not explicitly indicated in table 4 (code Z), the manufacturer shall declare the type of filler and/or the physical form which is intended to be covered in the licence (the types of filler and/or the physical form shall be explicitly mentioned in the scope of licence)
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- c) If coloured/compounded material is intended to be covered in the scope of licence, samples (s) selected for testing as para 3 above shall also be tested for additional requirements for coloured/compounded material as per CI 5.4.
- d) Further, if product used for moulding or extrusion articles in contact with foodstuffs, pharmaceuticals and drinking water is intended to be covered in the scope of licence, samples (s) selected for testing as para 3 above shall also be tested for Special Requirements of Polymer Used for Molding or Extrusion Articles in Contact with Food Stuffs, Pharmaceutical and Drinking Water as per CI. 5.5
- e) If resin or grade used for blending application (CI 5.2.1, 5.2.2) are to be intended to be covered in the scope of licence, samples shall be tested for and conform to the requirements specified for these grades.
- f) However, for the purpose of addition of new grades in the scope of licence, Licensees who already have Special Requirements of Polymer Used for Molding or Extrusion Articles in Contact with Food Stuffs, Pharmaceutical and Drinking Water covered in the scope of their licence need not submit evidence of conformity to these requirements again subject to confirmation that there is no change the chemical composition and manufacturing process.
- g) Scope of the licence shall be restricted based on the manufacturing and testing facilities available.
- h) During the operation of licence, samples of each variety covered in the scope shall be drawn in rotation.

ANNEX B

List of Test Equipment

(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sl. No	Test Equipment	Tests Used In With Clause Reference
1	Extrusion Plastometer, Cylinder, Standard Die, Piston, Temperature control system, timing device, Level, Go/No-Go Gauge, Funnel, Packing tool, Spatula, Balance, Weight Support, Die Plug, Micrometer	Melt Flow Index As per 5.2.1.2 of IS 7328:2020
2	Pycnometer, Thermometer, Constant temperature Bath, Analytical balance, immersion vessel, stationary support, wire, sinker, liquid bath, density gradient column, glass floats, siphon	Density As per 5.2.1.1 of IS 7328:2020
3	Exposer Case, Cutter, Wool Standards,	Optical Properties: Colour Fastness to daylight As per 5.4.2 of IS 7328:2020
4	Beaker, Cutter, Distilled Water, Air Oven	Optical Properties: Colour fastness to Water As per 5.4.3 of IS 7328:2020
5	Air Oven, Plate Glass Pieces, White Filter Paper, Plasticized chloride Sheet	Optical Properties: Colour Bleeding As per 5.4.1 of IS 7328:2020
6	Combustion Boat, Combustion tube, Gas Flow meter, Thermometer, Furnace, Nitrogen gas, Trichloroethylene	Carbon black Content for black Compound As per 5.4.5 of IS 7328:2020
7	Microscope Slides, Microscope, Hot plate	Dispersion of Carbon black for black compound As per 5.4.6 of IS 7328:2020

List of additional test equipment for typical additional properties to be measured along with recommended test methods as per CI 5.3.2 /Table 6 (this is only for guidance and availability of following test equipment is not mandatory)

Sl. No	Test Equipment	Test Clause
1.	Tensile Testing Machine, Grips, Humidity Chamber, Extensometer, Strain Gauges, Force indicator, Equipment for measuring the width and thickness of the test specimens	Mechanical Properties: Tensile Strength at yield, Tensile Strength at break, Elongation at break, Elongation at yield As per 5.3.2 of IS 7328:2020
2.	Testing Machine, Micrometre, Force and Deflection measuring System, Supports and loading edge, Equipment for measuring the width and thickness of the test specimens	Mechanical Properties: Flexural Modulus As per 5.3.2 of IS 7328:2020
3.	Test Machine Elmendorf type, Humidity Chamber	Tear Strength As per 5.3.2 of IS 7328:2020
4.	Specimen clamp, Rubber-like gaskets, 50 D garnet abrasive tape, Electromagnet, Positioning device, Micrometre, Cushioning and shielding devices Collar, Darts, incremental weights	Dart Impact Strength As per 5.3.2 of IS 7328:2020
5.	Testing Machine, Micrometer	Izod/Charpy Impact Strength As per 5.3.2 of IS 7328:2020
6.	Type A or Type D Shore Durometer	Shore A or D hardness As per 5.3.2 of IS 7328:2020
7.	Test device consisting of a horizontal test table, a sled, and a driving mechanism to produce a relative motion between the sled and the test table, regardless of which is the moving part, Humidity Chamber, Force measuring system	Coefficient of friction As per 5.3.2 of IS 7328:2020
8.	Apparatus for temperature deflection under with heating equipment, Weights, Temperature-measuring instrument, Deflection-measuring instrument, Micrometres	Thermal Properties: Heat Deflection Temperature As per 5.3.2 of IS 7328:2020
9.	Oil heating Bath equipped with means to raise the temperature at uniform rate of $50 \pm 5^\circ$, C/hr. with suitable stirrer. - Rod with loading plate, load and indenting tips - Micrometer dial gauge - Thermometer or temperature measuring equipment	Thermal Properties: Vicat Softening Temperature As per 5.3.2 of IS 7328:2020
10.	Test machine, Temperature-measuring system, Liquid or gaseous heat-transfer medium, Tank,	Thermal Properties: Brittleness Temperature

	Stirrer, Humidity Chamber	As per 5.3.2 of IS 7328:2020
11.	Differential thermal analyser or Differential Scanning Calorimeter, Aluminium Pans	Thermal Properties: Oxidation induction time As per 5.3.2 of IS 7328:2020
12.	DC Voltmeter, Galvanometer, Electrometer, Instrument for Measuring Dimension and Thickness	Electrical Properties: Surface Resistivity, Volume resistivity As per 5.3.2 of IS 7328:2020
13.	High Voltage Transformer, Voltage Control Gear, Protective Gear, Peak Voltmeter, Stopwatch	Electrical Properties: Dielectric Strength As per 5.3.2 of IS 7328:2020
14.	Voltage Source, Detector, Schering Bridge or Transformer Bridge or Parallel T Networks or Q Meter or Micrometer Electrode System,	Electrical Properties: Dissipation Factor and Relative Permittivity As per 5.3.2 of IS 7328:2020
15.	Balance, Oven, Container, Desiccator, Means for measuring dimensions	Permeation Properties: Water Absorption As per 5.3.2 of IS 7328:2020
16.	Formers, Clamps, Vessels, Micrometer, Conditioning Chamber	Permeation Properties: Resistance to environmental stress Cracking As per 5.3.2 of IS 7328:2020
17.	Drying Oven, Cylindrical Glass Weighing Cup, Desiccator, Analytical Balance	Permeation Properties : Volatile Content As per 5.3.2 of IS 7328:2020
18.	Metal Cell, Calibrated Mercury tube, U-Tube, Mercury Reservoir, Mercury Barometer, Thermometer, Mercury	Permeation Properties : Gas Permeability As per 5.3.2 of IS 7328:2020
19.	Air Oven	Ageing Properties: Oven Ageing As per 5.3.2 of IS 7328:2020
20.	Weatherometer	Ageing Properties: Natural/Artificial Weathering As per 5.3.2 of IS 7328:2020
21.	Any Suitable Haze meter, Conditioning Chamber	Optical Properties: Haze and/or Luminous transmittance As per 5.3.2 of IS 7328:2020
22.	Any Suitable glossmeter	Optical Properties: Specular Gloss As per 5.3.2 of IS 7328:2020
23.	Any Suitable Transmittance Meter, Conditioning Chamber	Optical Properties: Transparency As per 5.3.2 of IS 7328:2020
24.	Spectrophotometer, Conditioning Chamber	Optical Properties: Yellowness Index and/or Whiteness Index As per 5.3.2 of IS 7328:2020

ANNEX C

SCHEME OF INSPECTION AND TESTING

For the purpose of this scheme, there shall be two types of units

a) Manufacturing units:

- i) units which produce the polyethylene material, and/or
- ii) units which produce the polyethylene compounded material.

b) Repacking units:

Repacking units are those units which procure ISI Marked polyethylene material as per IS 7328 from a manufacturing unit holding a BIS licence for this product, repack it and dispatch it to the customer(s).

1. QUALITY ASSURANCE PLAN

1.1 It is expected that manufacturing units will implement a Quality Assurance Plan i.e. a plan of regular testing and in-process controls, designed to ensure that the product bearing the Standard Mark conforms to all requirements of the Indian Standard.

1.2 The manufacturing units shall define a Quality Assurance Plan defining the control unit (i.e. lot/batch etc.) and the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and submit the same to BIS Branch Office for information. They shall comply with the same and maintain test records in accordance with para 2.4.

1.3 RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT:

1.3.1 For the guidance of manufacturing units, the recommended definition of control unit is the entire quantity of material of same designation (and same additional properties) extruded continuously in a line over a period of one day or part thereof shall constitute a control unit.

1.3.2 For the guidance in preparing the Quality Assurance Plan, recommended levels of control for manufacturing units and repacking units are given in Table 1 and Table 2 respectively.

1.3.3 The manufacturer shall ensure inspection and testing as per the Quality Assurance Plan submitted by them on the whole production of the factory which is covered by this plan. Alternatively, the manufacturer has the option of adherence to the quality plan as per levels of control recommended in column 3 of Table 1.

1.4 However, all manufacturing units shall ensure compliance of their products to all the requirements of the Indian Standard.

2. ENSURING COMPLIANCE THROUGH TESTING- It is expected that manufacturing units (licensees/applicants) will establish a suitably equipped and staffed in house laboratory (In house testing facility) for testing at least those parameters of the Indian Standard which require routine testing for ensuring quality of the product. This includes in-process controls as may be defined and put in place by the manufacturer and testing parameters/requirements which can only be performed in the factory.

2.1 For the guidance of manufacturing and repacking units, Table 1 and Table 2 giving the recommended levels of control are given below. Column 2 of Table 1 indicates routine tests where test equipment is required in house as "R" or other tests which can be subcontracted as "S". Subcontracting is permitted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.1.1 For Manufacturing units, the tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this

plan and appropriate records maintained in accordance with paragraph 2 above.

2.1.2 The units which produce the polyethylene compounded material only shall ensure that the polyethylene material used for compounding, conforms to IS 7328. Appropriate records shall be maintained for the same.

2.1.3 For repacking units, since the product is inert and its properties are not affected in the process of transportation and repacking, the repacking units shall not be required to test the product again, i.e. the levels of control as per Table 1 shall not be applicable, however, repacking units shall maintain the records of repacking in such a way as to ensure traceability of the repacked material to the product manufactured by the manufacturing unit. (see Table 2). Copies of test certificates issued by the manufacturing units shall be maintained.

2.2 For MSME manufacturing units, the requirement of maintaining a laboratory/in-house testing facility for routine tests (indicated as “R” in Column 2 of Table 1) is also optional.

2.2.1 MSME manufacturers may utilize common cluster based facilities as per guidelines for the utilization of cluster based test facilities by MSMEs or the provisions of Sharing of testing facilities or get testing done from BIS recognized/empaneled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.3 Large Scale manufacturing units shall maintain an in-house laboratory equipped at least with test facilities for routine tests (indicated as “R” in Column 2 of Table 1), where different tests given in the specification shall be carried out in accordance with the method given in the specification. They shall also implement a calibration plan for the in-house test equipment.

2.3.1 Alternatively, in lieu of an in-house laboratory, large scale manufacturing units can also utilize the provisions of Sharing of testing facilities as per the Guidelines for Grant of Licence available on BIS website www.bis.gov.in. (Under Conformity Assessment>Product Certification Process). Even for subcontracted tests, provisions for sharing of testing facilities can be utilized.

2.4 TEST RECORDS- The manufacturing units maintaining an in-house laboratory or utilizing common cluster based facilities or shared test facilities shall maintain test records for the tests carried out to establish conformity. For the tests being subcontracted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025, test reports issued by the laboratories shall be available for inspection by BIS.

3. PACKING AND MARKING - The Standard Mark as given in the Schedule of the licence shall be incorporated legibly and indelibly on each package of polyethylene material provided provided always that the material so marked conforms to each requirement of the specification.

3.1 The material shall be packed in suitable form of packing as agreed to between the purchaser and supplier.

3.2 Manufacturing units shall mark each bag and/or unit package whichever is smallest in size that is being delivered to the customer and the test certificate with the following

- a) Name and type of the material,
- b) Designation Code,
- c) Net Mass of the material
- d) Batch Number/Lot Number
- e) Month and year of manufacture of the material and
- f) Name of the manufacturer and trade mark; if any
- g) BIS Licence Number CM/L—and

3.3 Repacking units shall mark each bag and/or unit package whichever is smallest in size that is being delivered to the customer with the following

- i) Name and type of the material,
- j) Designation Code,

- k) Net Mass of the material
- l) Batch Number/Lot Number
- m) Month and year of manufacture and month and year of repackaging of the material
- n) Manufactured by: Name, trade mark (if any) and BIS Licence Number CM/L—of the manufacturing unit
- o) Packaged by: Own Name, trade mark (if any) and BIS licence number (i.e. of the repackaging unit)

3.2 Additional Marking requirements: The material shall also be marked with the following additional requirement on each bag and/or unit package:

- a) “For BIS certification details please visit www.bis.gov.in”

4. REJECTION - All the production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the Standard Mark. Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions

Table 1
(Only for Guidance Purpose)

(1)				(2)	(3)		
Test Details				Test equipment requirement R:required (or) S:Subcontracting permitted	Levels of Control		
Cl.	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
5.1	Description	5.1	IS 7328	R	Firm to have adequate in-process controls to check compliance of this parameter as given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity		
5.2.1.1	Density		IS 13360 (Part 3/Sec 10)/IS 13360 (Part 3/Sec 11)/ASTM D 1505 / ASTM D 792/ASTM D 4703.	R	One	Each Control Unit	For LDPE/LLDPE/HDPE/Compounds
5.2.1.2	Melt Flow Index		IS 13360 (Part 4/Sec I)/ ASTM D 1238	R	One	Each Control Unit	For LDPE/LLDPE/HDPE/Compounds
5.4	Additional requirement for Compounded Material						
5.4.1	Colour Bleeding	12	IS 2530	S*	One	Once in a month	For coloured/compounded material
5.4.2	Colour fastness to water	13	IS 2530	S*	One	-do-	-do-
5.4.3	Colour fastness to daylight		IS/ISO 105-B01, 15 of IS 2530	S*	One	-do-	-do-
5.4.5	Carbon Black Content for Black Compound	10	IS 2530	S*	One	-do-	-do-
5.4.6	Dispersion of Carbon Black for Black Compound		IS 2530/ISO 18553	S*	One	-do-	-do-

5.5	Special Requirements of Polymer Used for Molding or Extrusion Articles in Contact with Foodstuffs, Pharmaceutical and Drinking Water						
(i)	Pigments and Colourants		D-1 of IS 7328, IS 9833(IS 1699/ IS 3025 (Part 56)/ 15303/ IS 14816/ 13428)	S*	One	When there is any change in manufacturing process or chemical composition	For coloured material used for food-packaging application
(ii)	Overall Migration		D-2 of IS 7328, IS 9845	S*	One	-do-	

In case of additional/special requirements, testing needs to be done only for only those additional/special requirements which are to be covered in the scope of licence. Accordingly, where S is appearing in column (2), testing is to be done (through subcontracting) only for those additional/special requirements which are to be covered in the scope of licence.

ANNEXURE-I

TEST CERTIFICATE
(PARA 5 OF SCHEME OF INSPECTION AND TESTING)
TO BE ISSUED BY MANUFACTURING UNITS ONLY

ABC LIMITED
(REGISTERED OFFICE ADDRESS AND WORKS ADDRESS)
CM/L-

TEST CERTIFICATE FOR POLYETHYLENE MATERIALS FOR MOULDING AND EXTRUSION

TEST CERTIFICATE NO. _____ DATE: _____

TO M/S: _____ (NAME AND ADDRESS OF CONSIGNEE)

We certify that the material described below fully conforms to the requirement of IS 7328:2020

Properties of the product as tested in accordance with Scheme of Inspection and Testing contained in the BIS Certification Marks Licence CM/L No. _____ Are as indicated below against each order
(PLEASE REFER TO IS 7328:2020 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

TEST RESULTS

Name and Type of material	Designation Code	Net Mass	Batch Number/Lot Number and Month/year of Manufacture	Density	MFI	Addl requirement for Coloured/Compounded material (if applicable)	Requirements for Polymer Used for Molding or Extrusion Articles in Contact with Food Stuffs, Pharmaceutical and Drinking Water (if applicable))	Resin or grade used for blending application (Yes/No)

REMARKS

WAGON NO./TRUCK NO.

(for BIS certification details www.bis.gov.in)

For ABC Company

TABLE 2
RECORD OF REPACKING OF POLYETHYLENE MATERIAL

Sl. No.	Name of the manufacturing unit with licence no.	Particulars of test certificates received with C.U/Batch no.	Date of manufacture	Quantity received	Date of receipt	Date of repacking	Batch no.	Details of repacking		Total quantity repacked	Details of dispatch (date and customer details)
								Size of Packi ng	No.		
1	2	3	4	5	6	7	8	9	10	11	12