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उत्पाद मानुयल
सामान्य ब्यूटाइल अल्कोहल, तकनीकी-विनिर्देश

IS 361: 2009 के अनुसार

PRODUCT MANUAL FOR

NORMAL BUTYL ALCOHOL, TECHNICAL-SPECIFICATION

ACCORDING TO IS 361: 2009

भारतीय मानक ब्यूरो)अनुरूपता मूल्यांकन (विनियम की स्कीम-I के तहत यह उत्पाद मानुयल प्रमाणीकरणके प्रचलन मे रीति और पारदर्शिता के सुसंगता सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों एवं लाइसेन्स धारियों द्वारा संदर्भ सामग्री के रूप मे उपयोग किया जाएगा। बीआईएस लाइसेन्स/प्रमाण पत्र प्राप्त करने के इच्छुक भावी आवेदकों द्वारा भी इस दस्तावेज़ का उपयोग किया जा सकता है।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence 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 licence/certificate.

1.	**उत्पाद** Product:	:	IS 361: 2009
	शीर्षक Title	:	**NORMAL BUTYL ALCOHOL, TECHINCAL SPECIFICATION**
	संशोधन संख्या No. of Amendments	:	NIL
2.	**नमुनाकरण दिशा निर्देश** Sampling Guidelines:		
a)	**कच्चा माल** Raw material	:	No specific raw material requirement
b)	**समूहिकरण दिशा निर्देश** Grouping guidelines		NA
c)	**नमूने का परिमाण** Sample Size		1Kg
3.	**परीक्षण उपकरणो की सूची निरीक्षण व परीक्षण स्कीम** List of Test Equipment		Please refer ANNEX – A

4.	**एक दिन में संभावित परीक्षण** Scheme of Inspection and Testing		Please refer ANNEX – B
5.	**लाइसेन्स का कार्यक्षेत्र** /Possible tests in a day		All tests can be done in a day
6.	**लाइसेंस का दायरा** / Scope of the Licence:		
	IS 361: 2009 के अनुसार मानक मुहर का उपयोग करने के लिए लाइसेन्स निम्नलिखित कार्यक्षेत्रके लिए प्रदान किया जाता है **"Licence is granted to use Standard Mark as per IS 361: 2009 with the following scope:**		
	Name of the product		**NORMAL BUTYL ALCOHOL, TECHNICAL**

BUREAU OF INDIAN STANDARDS

Manak Bhawan, 9,Bahadur Shah Zafar Marg, NewDelhi–110002

ANNEX A

TO THE PRODUCT MANUAL FOR

NORMAL BUTYL ALCOHOL, TECHNICAL- SPECIFICATION

AS PER IS 361:2009

List of Test Equipment

Major test equipment required to test as per the Indian Standard:

Sr. No	Test & Clause	Test Equipment
1.	**Description, Cl. 3.1**	Visual observation
2.	**Purity, Percent by mass, Cl. 3.2, Table-1, Annex-A**	Gas Chromatograph as per Cl. A-2.1 of IS 361, Detector, Oven, Injector, Carrier gas
3.	**Colour, Hazen, Cl. 3.2, Table-1, Annex-B**	Cobaltous Chloride hexahydrate, Hydrochloric acid, Chloroplatinic acid (Platinum & Aqua regia)
4.	**Relative Density at 20°C/20°C, Cl. 3.2, Table-1, Annex-C**	Relative Density Bottle, Water Bath (LC-0.1°C), Thermometer (LC-0.1°C or 0.2°C)
5.	**Distillation Range at 760mm Hg, Cl. 3.2, Table-1, IS 1448 (Part 18)**	Distillation flask, condenser tube, cooling bath, Metal shield or enclosure for distillation flask, heat source, flask support, Temperature measuring device, receiving cylinder to collect distillate, Gas burner, Electric heater, Electronic temperature measurement devices, Centering device, Barometer, Electronic Pressure measuring device
6.	**Residue on Evaporation, Cl. 3.2, Table-1, Annex-D**	Platinum or Silica or Borosilicate glass evaporating dish, Oven (LC-1°C), Desiccator, Hot water bath
7.	**Acidity (as CH_3COOH), Cl. 3.2, Table-1, Annex-E**	Phenolphthalein, Rectified spirit, Sodium hydroxide, Distilled water
8.	**Aldehydes & Ketones content (as Butyraldehyde C_3H_7CHO), Cl. 3.2, Table-1, Annex-F**	Sodium Hydroxide solution, Hydroxyammonium chloride, Distilled water, Ethanol, Hot water bath, 2,4-dinitrophenyl-hydrazine, Conc. Hydrochloric acid, Widmer of other suitable distillation column of size 300x25mm, pH meter
9.	**Water Content, Cl. 3.2, Table-1, Annex-G & IS 2362**	Methanol, Magnesium turnings, Iodine, Anhydrous Aluminium Sodium Silicate or activated silica gel, Ethylene Glycol Monomethyl ether, Pyridine, Acetic acid, Cholorform, Sulphur dioxide, Karl Fischer reagent, Sodium Tartarate- Crystalline, Silicon base grease, Automatic burette (10-25ml capacity), Titration vessel (100ml capacity), Reagent bottle for Karl Fischer reagent, Double Platinum electrode, Magnetic Stirrer

		with PTFE coated stirring bar, Electrometric end point detection device utilizing a micrometer, Glass syringe, Small glass tube
10.	**Sulphuric acid test, Cl. 3.2, Table-1, Annex-H**	Round Bottom flask of 250ml capacity with ground glass stopper, Burette, Sulphuric acid-96 percent (m/m)

The above list is indicative only and may not be treated as exhaustive.

ANNEX B

TO THE PRODUCT MANUAL FOR

NORMAL BUTYL ALCOHOL, TECHNICAL-SPECIFICATION

AS PER IS 361: 2009

Scheme of Inspection and Testing

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare and implement a calibration plan for the test equipment.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. **LABELLING, MARKING, PACKING** - The Standard Mark as given in schedule of the licence and Licence Number (i.e. CM/L) shall be incorporated on the container with product and on the test certificate accompanied along with each consignment, and the marking and packing shall be done as per the provisions of the Indian Standard, provided always that the product thus marked conform to all the requirements of the specification. Each container shall also be marked with the minimum cautionary notice worded as 'FLAMMABLE'. The Container shall also bear the corresponding symbol for labelling of dangerous goods as per Fig. 5 of IS 1260 (Part 1).

4. CONTROL UNIT – For the purpose of this scheme, the quantity of the material produced from the same consignment of raw material in a day shall constitute a control unit.

5. LEVELS OF CONTROL - 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.

5.1 All the production which conforms to the Indian Standards and covered by the licence should be marked with Standard Mark.

6. TEST CERTIFICATE - For each consignment of BIS Certified material conforming to IS 361:2009 there shall be a test certificate which shall contain the Standard Mark, the Control Unit number and the corresponding test results (as given in Annexure-I enclosed)

7. REJECTIONS – Disposal of non-conforming product shall be done in such a way to ensure that there is no violation of provisions of BIS Act, 2016.

Table 1

(Levels of Control)

(Para 5 of Scheme of Inspection and Testing)

Sl No.	**(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**				
1	3.1	Description	3.1	IS 361	**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		
2 (i)	3.2, Table 1	Purity	3.2	Annex-A to IS 361	**R**	One	Each Control Unit	-
(ii)	3.2, Table 1	Colour	3.2	Annex-B to IS 361	**R**	One	Each Control Unit	-
(iii)	3.2, Table 1	Relative density at 20°C/20°C	3.2	Annex-C to IS 361	**R**	One	Each Control Unit	-
(iv)	3.2, Table 1	Distillation range at 760mm Hg	3.2	IS 1448 (Part 18)	**R**	One	Each Control Unit	-
(v)	3.2, Table 1	Residue on Evaporation	3.2	Annex-D to IS 361	**R**	One	Each Control Unit	-
(vi)	3.2, Table 1	Acidity (as CH_3COOH)	3.2	Annex-E to IS 361	**R**	One	Each Control Unit	-
(vii)	3.2, Table 1	Aldehydes & Ketones content	3.2	Annex-F to	**R**	One	Once every week	-

		(as Butyraldehyde C_3H_7CHO)		IS 361				
(viii)	3.2, Table 1	Water content	3.2	Annex-G to IS 361	**R**	One	Each Control unit	-
(ix)	3.2, Table 1	Sulphuric acid test	3.2	Annex-H to IS 361	**R**	One	Each Control unit	Applicable only when the product is to be used for manufacture of Plasticizers

Note-1: Whether test equipment is required or sub-contracting is permitted in column 2 shall be decided by the Bureau and shall be mandatory. Sub- contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-2: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/ lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.

ANNEXURE I

(Para 6 of the Scheme of Inspection andTesting)

XYZ COMPANY

(Registered office Address and works address)

TEST CERTIFICATE

Normal Butyl alcohol, Technical- Specification as per IS 361: 2009

BIS STANDARD MARK

TEST CERTIFICATE No.

DATE_____

To M/s_____

We certified that the material described below fully conforms to IS **361: 2009.** Chemical composition and properties of the product, as tested in accordance with the Scheme of Testing and Inspection contained in the BIS Certification Marks Licence No.CM/L_____are as indicated below against each order No.

(PLEASE REFER TO IS **361: 2009** FOR DETAILS OF SPECIFICATION REQUIREMENTS)

TEST RESULTS

Order No.& Date	Control Unit No.	Quantity in tonnes	Description	Requirements									
				Purity	Colour	Relative Density	Distillation range	Residue on evaporation	Acidity (as CH_3COOH)	Aldehydes & Ketones content	Water content	Sulphuric acid test (Optional)	Remark

REMARKS

WAGON NO.

TRUCK NO.

FOR XYZ COMPANY

(It is suggested that size A4 paper be used for this test certificate)