



उत्पाद मैनुअल
एथिलीन डाईक्लोराइड की विशिष्टि
IS 869 : 2020 के अनुसार

PRODUCT MANUAL
FOR SPECIFICATION FOR ETHYLENE DICHLORIDE
ACCORDING TO IS 869 : 2020

भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम 2018 की स्कीम-I के तहत यह उत्पाद मैनुअल प्रमाणीकरण की संचालन रीति में सुसंगतता और पारदर्शिता सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों एवं लाइसेन्स धारियों द्वारा संदर्भ सामग्री के रूप में 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 license/certificate.

1.	उत्पाद Product	:	IS 869 : 2020
	शीर्षक Title	:	एथिलीन डाईक्लोराइड की विशिष्टि Specification for Ethylene Dichloride
	संशोधनों की संख्या No. of amendments	:	0 Nil
2.	नमूनाकरण दिशा निर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	No specific requirement
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Not applicable
c)	नमूने का आकार Sample Size	:	1500 ml minimum (see Annex B of IS 869 : 2020)

3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	कृपया Annex-A देखें Please refer Annex-A
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	कृपया Annex-B देखें Please refer Annex-B
5.	एक दिन में संभावित परीक्षण Possible tests in a day		
	All tests		
6.	लाइसेंस का दायरा /Scope of the Licence:		
	IS 869 : 2020 के अनुसार मानक मुहर का उपयोग करने के लिए लाइसेन्स निम्नलिखित कार्यक्षेत्र के लिए प्रदान किया जाता है Licence is granted to use Standard Mark as per IS 869 : 2020 with the following Scope :		
	Name of the product	Ethylene Dichloride	

ANNEX – A
TO PRODUCT MANUAL FOR
SPECIFICATION FOR ETHYLENE DICHLORIDE
ACCORDING TO IS 869 : 2020
LIST OF TEST EQUIPMENTS

Major test equipment required to test as per the Indian Standard

Sl. No.	Tests Used In With Clause Reference	Test Equipment/Chemical
1	Solubility, Cl. 3.1.1	Rectified spirit or methanol Flask Stirrer
2	Relative density at 15°C/15°C	<u>As per Annex A-2</u> Pyknometer or Relative Density Bottle — 25 ml capacity Water-Bath — maintained at $15.0 \pm 0.2^{\circ}\text{C}$ Distilled Water <u>As per ASTM D 4052</u> Digital Density Analyzer Arrangement for temperature control and sensing device Syringes (for manual injections) or Flow-through or pressure adapter or auto sampler Ultrasonic bath (optional) Reagent water Cleaning Solvent Acetone Dry Air
3	1,2 Dichloroethane (EDC),	Gas Chromatograph (see note under Table 1 of IS 869:2020)
4	Residue on evaporation	Analytical Balance Silica basin Water bath Fume hood Drying Oven capable of $105 \pm 2^{\circ}\text{C}$ Desiccator
5	Acidity (as HCl)	Analytical Balance Conical Flask - 300 ml capacity, glass-stoppered Micro-burette Measuring Cylinder Phenolphthalein, Rectified spirit or methanol, Standard Sodium Hydroxide Solution - 0.01 N Distilled water

6	Colour	As per method given in IS 8769 Colour Comparison Tubes Colour Comparator Spectrophotometer Spectrophotometer cells Analytical Balance Volumetric Flasks Measuring Cylinder Micro burette Reagents: Cobalt Chloride Hexahydrate, Hydrochloric Acid, Potassium Chloroplatinate or Chloroplatinic Acid (Prepared by dissolving platinum in aqua regia in glass/porcelain dish by heating on boiling water bath) Distilled Water As per Annex A-6 Nessler Cylinders, 100 ml capacity One-Mark Volumetric Flasks —250 and 500 ml capacities Cobaltous Chloride Hexahydrate Hydrochloric Acid Chloroplatinic Acid (Prepared by dissolving platinum in aqua regia in glass/porcelain dish by heating on boiling water bath) Distilled water Pipettes
7	Moisture content	As per Karl Fischer Method given in IS 2362:1993 Karl Fischer Titration Apparatus with electrometric end point detection (for direct electrometric titration or back titration) Analytical balance, thermometer, Stoppered glass flask, Volumetric flask and other laboratory glassware Reagents: For Preparation of Karl Fischer Reagent - Methanol, 2-Methoxyethanol (Ethylene Glycol Monomethyl Ether), Iodine, Pyridine, Sulphur Dioxide (Non- pyridine based Karl Fischer Reagents are available commercially and may be used after standardization). Sodium Tartarate crystalline, Aluminium Sodium Silicate/Activated Silica Gel Silicone Base Grease

		As per ASTM D 3401 Karl Fisher Titrator, Coulometric Titrator (for Test Method A only) Karl Fisher Titrator, Volumetric Titrator (for Test Method B only) Syringes Silicon Rubber Blocks or Silicon Rubber Septa Drying Oven Desiccator Analytical Balance REAGENTS Anode Reagents, for dual bath titrator (for Test Method A only) Cathode Reagents, for dual bath titrator (for Test Method A only) Single Bath Reagent (for test method A only) Karl Fischer Volumetric Titrant (for test method B only) – typically consists of a mixture of an organic amine, sulfur dioxide and iodine dissolved in non-hygroscopic solvents. Karl Fischer Solvent (for test method B only) – typically consists of a mixture of an organic amine and sulfur dioxide dissolved in anhydrous methanol.
--	--	---

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

ANNEX – B
TO PRODUCT MANUAL FOR
SPECIFICATION FOR ETHYLENE DICHLORIDE
ACCORDING TO IS 869 : 2020
SCHEME OF INSPECTION AND TESTING

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

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

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

3. PACKING AND MARKING – The Standard Mark as given in the Schedule of the licence, shall be incorporated legibly and indelibly on each container or printed on the label applied to it, provided that the product so marked conform to requirements of the specification. If the product is transported in bulk for example, through MS tank lorries, the Standard Mark as given in Schedule of the licence and Licence Number (i.e. CM/L.....) shall be incorporated on a test certificate/test report to be provided along with each consignment as per the format at **Appendix-1** enclosed, provided that the product thus marked conforms to all the requirement of the specification.

3.1 Packing, Storing and Marking shall be done as per Cl. 4 of the Indian Standard. In addition, the following details shall be marked on each container :-

- a) BIS Licence No. CM/L-----.
- b) BIS website details i.e. –“For details of BIS certification please visit www.bis.gov.in”.

3.2 All containers in which the material is stored or transported shall also be prominently and clearly marked with the legend FLAMMABLE along with the symbol given in Fig. 5 of IS 1260 (Part 1) and the legend AVOID PROLONGED BREATHING OF THE VAPOUR

4. CONTROL UNIT- For the purpose of this scheme, entire quantity of the material produced under similar conditions in a day shall be taken as one control unit.

5. LEVELS OF CONTROL :- The tests as indicate in Table 1 and at the levels of controls in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and records maintained in accordance with paragraph 2 above.

5.1 All the production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the Standard Mark.

6. REJECTION - Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act,2016.

TABLE 1
LEVELS OF CONTROL

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Methods Clause Reference			No. of Sample	Frequency	Remarks
3.1	Description	3.1	IS 869	R	Manufacturers shall ensure adequate inspection/ in process controls to ensure that product is complying the requirement of description.		
3.1.1	Solubility	3.1.1	IS 869	R	One	Each Control Unit	
3.2	Table 1 Requirements for Ethylene Dichloride						
i)	Relative density at 15°C/15°C	A-2	IS 869/ ASTM D 4052	R	One	Each Control Unit	
ii)	1,2 Dichloroethane (EDC)		ASTM D 6806 (see note 1 under Table 1 of IS 869)	R	One	Each Control Unit	
iii)	Residue on evaporation	A-3	IS 869	R	One	Each Control Unit	
iv)	Acidity (as HCl),	A-4	IS 869	R	One	Each Control Unit	

v)	Colour,	A-6	IS 869/ IS 8768	R	One	Once in a week	
vi)	Moisture content	A-5	IS 869/ ASTM D 3401	R	One	Each Control Unit	

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.

Appendix-1

TEST CERTIFICATE FORMAT

XYZ COMPANY

TEST CERTIFICATE FOR ETHYLENE DICHLORIDE

TEST CERTIFICATE NO. _____ DATED _____

SUPPLIED TO M/s _____ (Name and Address of Consignee), Supply date -

It is certified that the material described below fully conforms to IS 869 : 2020.

The properties of the product, as tested in accordance with the Scheme of Inspection and Testing contained in the BIS Certification Marks Licence No. CML _____ are as indicated below against each order no. etc.

(PLEASE REFER TO IS 869 : 2020 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

TEST RESULTS

Order no and date	Name of the material	Requirement	Observed Value	Control Unit/Batch Number	Month and Year of Packaging	Quantity	Remarks
		Enclose sheet containing requirement wise observed values of all requirements of the Indian Standards					

The material supplied conforms to specified requirements of IS 869 : 2020.

REMARKS:

TANK CAR/ TANK TRUCK NO/ VESSEL NO. –

MATERIAL SUPPLIED BY -

Name and Address of manufacturer:

Recognized Trade Mark if any:

BIS Licence Number:

“For details of BIS certification please visit www.bis.gov.in”