



उत्पाद मानुयल
मेग्नीशियम सल्फेट (संधा नमक)
2730: 1977 के अनुसार
Product Manual for Magnesium Sulphate (Epsom Salt)
According to IS 2730 :1977

भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम 2018 की स्कीम-1 के तहत यह उत्पाद मानुयल प्रमाणीकरणके प्रचलन में रीति और पारदर्शिता के सुसंगत 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 licence/certificate.

1.	उत्पाद Product	:	IS 2730 : 1977
	शीर्षक Title	:	मेग्नीशियम सल्फेट (संधा नमक) Magnesium Sulphate (Epsom Salt)
	संशोधन संख्या No. of Amendments	:	एक 01
2.	नमूनाकरण दिशा निर्देश Sampling Guidelines:		
a)	कच्चा माल Raw material	:	No raw material sample required to be drawn as there is no requirement indicated in the Indian Standard.
b)	समूहिकरण दिशा निर्देश Grouping guidelines	:	शून्य NIL.
c)	नमूनेका परिमाण Sample Size	:	500 g.
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	कृपया Annex-एदेखें Please see Annex – A
4.	निरीक्षण व परीक्षण स्कीम Scheme of Inspection and Testing	:	कृपया Annex-बदेखें Please see Annex – B

5.	एक दिन में संभावित परीक्षण Possible tests in a day :	
	All tests are possible to be carried out in a day	
6.	लाइसेन्स का कार्यक्षेत्र/Scope of the Licence:	
	IS 2730 : 1977 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 2730 : 1977 with the following scope:	
	उत्पाद का नाम Name of the product	मेग्नीशियम सल्फेट (सैंधा नमक) Magnesium Sulphate (Epsom Salt)
	ग्रेड Grade	शुद्ध/तकनीकी ग्रेड Pure/Technical grade

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ANNEX – A
TO THE PRODUCT MANUAL
FOR SPECIFICATION FOR
MAGNESIUM SULPHATE (EPSOM SALTS)
AS PER IS 2730 :1977

LIST OF TEST EQUIPMENT

Major test equipment essentially required to test as per requirements of IS 2730:1977

Sr. No.	Tests used in with Clause Reference	Test equipment
1.	Patton and Reeders' Indicator <i>which can be prepared using 2-hydroxy 1-(2 hydroxy-4-sulpho-1-naphthylazo)-3-naphthoic acid and sodium sulphate powder.</i>	Determination of magnesium sulphate as per A2 as per IS2730:1977
2.	Ammonium Hydroxide-Ammonium Chloride Buffer Solution — <i>which can be prepared using ammonium hydroxide and ammonium chloride.</i>	
3.	Calcium carbonate (CaCO ₃)	
4.	Dilute hydrochloric acid	
5.	Ethylenediamine Tetra-Acetate (EOTA) Solution <i>which can be prepared using disodium ethylenediamine tetra-acetate dihydrate</i>	
6.	Hot plate	
7.	Muffle furnace capable of maintaining temperature 300 C	
8.	Weighing balance	
9.	Nessler Cylinders — 50 ml capacity.	Test for chlorides as per A3 as per IS2730:1977
10.	Dilute Nitric Acid	
11.	Silver Nitrate Solution	
12.	Standard Sodium Chloride Solution.	
13.	Turbidity meter	
14.	Colorimeter	Test for Lead as per A4 as per IS2730:1977.
15.	Acetic Acid	
16.	Dilute Ammonium Hydroxide	
17.	Potassium Cyanide	
18.	Hydrogen peroxide	
19.	Lead nitrate	

20.	Concentrated nitric acid	Test for Iron as per A6 as per IS2730:1977
21.	Sodium Sulphide	
22.	Nessler Cylinders	
23.	Citric Acid	
24.	Thioglycollic Acid	
25.	Ammonium Hydroxide	
26.	Ferrous ammonium sulphate	
27.	Dilute sulphuric acid.	Test for Zinc as per A7 as per IS2730:1977
28.	Dilute Acetic Acid	
29.	Potassium Ferrocyanide Solution	Test for matter insoluble in water as per A8 as per IS2730:1977
30.	Tared filter paper/ Tared sintered glass crucible (G No. 4) / Gooch crucible	
31.	Hot air oven	
32.	Balance	
33.	Phenol Red Indicator	Test for acidity or alkalinity as per A7 as per IS 2730:1977
34.	Hydrochloric Acid.	
35.	Sodium Hydroxide	
36.	Lead Acetate	Test for arsenic as per Clause 5.1 of IS 2088:1983
37.	Lead Acetate Paper Strips	
38.	Absorbent Cotton Wool	
39.	Mercuric Bromide	
40.	rectified spirit	
41.	Sensitized Mercuric Bromide Paper	
42.	Dilute Sulphuric Acid	
43.	Concentrated Hydrochloric Acid	
44.	Potassium Iodide Solution	
45.	Stannous Chloride	
46.	Zinc granules, of size 0.5 to 1.0 mm.	
47.	arsenic trioxide	
48.	sodium hydroxide solution	
49.	Apparatus setup for Modified Gutzeit method)	
50.	vacuum oven	
51.	General glasswares • Pipettes • Measuring jars • Conical flask • Volumetric flasks (5 ml to 1000 ml) • Burettes • Beakers • Test tubes • Glass rod	

The above list is indicative only and may not be treated as exhaustive
ANNEX B TO THE
PRODUCT MANUAL FOR
SPECIFICATION FOR MAGNESIUM SULPHATE (EPSOM SALTS) AS PER IS
2730:1977

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 will be carried out.

1.1 The manufacturer shall prepare a calibration plan for the test equipments.

2. **Test Records -** The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. **Labelling and Marking-** The material shall be packed in suitable airtight containers as agreed to between the purchaser and the supplier.

The Standard Mark as given in the Schedule of the licence shall be applied on each container/bag of Magnesium Sulphate, provided always that the material in the container or the bag to which this mark is thus applied conforms to every requirement of the specification.

In addition, the following information shall be given on labels affixed on each container/bag:

1. Name of the material
 2. Grade (Pure or technical)
 3. A statement if the material is intended for use in leather industry
 4. Manufacturer's name and recognised trademark, if any,
 5. Mass of the material
 6. Date of manufacture
 7. Batch No. in code or otherwise to enable the date of manufacture to be traced back from the records and
 8. Made in India , if required.
3. **Control Unit-** For the purpose of this scheme the quantity of finished material processed from the concentrated liquor, pumped into the crystalliser in a single operation shall constitute a batch /one control unit
 4. **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.

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

- 5. Rejections**—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. A separate record shall be maintained giving information relating to rejection of the production not conforming to the requirements of the specification and the method of its disposal. Such material, in any case shall not be stored together with that of conforming to the requirements of the specification.

Table 1 Levels of control
(Para 4 of the Scheme of Inspection and Testing)

TEST DETAILS (1)				TEST EQUIPMENT REQUIREMEN T (2)	LEVELS OF CONTROL (3)			
Clause		Requirements	Test method reference		R: required (or)S: Sub- contracting permitted	No. of samp les	Frequency	Remarks
3.1		Description of material	3.1	IS 2730: 1977	R	One	Each batch/contr ol unit	A representative sample shall be taken from a batch and tested. If the sample fails in the requirement, the entire material represented by the sample may be suitably reprocessed and the defects rectified. Such reprocessed material when tested again shall satisfy all the above requirements before it is used for marking.
Table 1	i	Magnesium Sulphate, Percent by mass	3.2 and Appendix A2	IS 2730: 1977	R	Two	Each batch/contr ol unit	Two representative samples from a batch shall be tested for magnesium sulphate (percent by mass). The test results on both the samples shall satisfy the corresponding specification requirement given in

								Table 1 of IS 2730-1977. In case of any failure, the entire material in the batch any be suitable reprocessed and the defect, rectified. Such reprocessed material when tested again as in 5.2 above shall satisfy the requirement of magnesium sulphate by mass, before it is used for marking.
Table 1	ii	Chlorides ,Percent by mass	3.2 and Appendix A3	IS 2730: 1977	R	One	Each batch/ contr ol unit	A representative sample shall be taken from a batch and tested. If the sample fails in the requirement, the entire material represented by the sample may be suitably reprocessed and the defects rectified.
Table 1	iii	Lead ,Parts per million (for pure grade only)	3.2 and Appendix A4	IS 2730: 1977	R	One	Each batch/ contr ol unit	
Table 1	iv	Arsenic, Parts per million (for pure grade only)	3.2 and Appendix A5	IS 2730: 1977 IS 2088	R	One	Each batch/ contr ol unit	Such reprocessed material when tested again shall satisfy all the above requirements before it is used for marking
Table 1	v	Iron , percent by mass	3.2 and Appendix A6	IS 2730: 1977	R	One	Each batch/ contr ol unit	
Table 1	vi	Zinc (for pure grade only)	3.2 and Appendix A7	IS 2730: 1977	R	One	Each batch/ contr ol unit	
Table 1	vi i	Matter insoluble in water (for technical grade only)	3.2 and Appendix A8	IS 2730: 1977	R	One	Each batch/ contr ol unit	
Table 1	vi ii	Acidity or alkalinity (For pure grade only)	3.2 and Appendix A9	IS 2730: 1977	R	One	Each batch/ contr ol 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 empaneled 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.

(or)

~~The control unit and levels of control as decided by the Bureau are obligatory to which the licensee shall comply with.~~