

**BUREAU OF INDIAN STANDARDS**

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**भारतीय मानक मसौदा**

**ड्रम में प्राकृतिक रबर लेटेक्स की पैकेजिंग का कोड**  
**(IS 5190 का दूसरा पुनरीक्षण)**

*Draft Indian Standard*

**CODE OF PACKAGING OF NATURAL RUBBER LATEX IN DRUMS**

*(Second Revision of IS 5190)*  
*(ICS 83.060)*

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Rubber and Rubber Products Sectional Committee,  
PCD 13

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**FOREWORD**

*(Formal clauses will be added later)*

The Standard was first published in 1969 and subsequently revised in 1993.

Preserved latex is susceptible to decomposition due to contamination, evaporation or loss of preservatives. It should, therefore, be packed in clean, air-tight and corrosion resistant strong container.

Currently, containers made of various materials and sizes, previously used for storing different substances, are in use. As a result, the cleaning processes and internal coatings for these containers vary from one to another. This standard attempts to establish a code for the appropriate selection of containers, as well as guidelines for their cleaning, packing, and marking.

In the first revision, The Committee responsible for its preparation declared to update the standard in light of expenses gained. Further in this version HDPE drums have also been included as packing drums.

This revision has been brought out to bring the standard in the latest style format of Indian Standards and to update the cross referred standards in the standard. Amendment no.1 issued to previous version of the standard has also been incorporated this revision.

## 1 SCOPE

This code prescribes the methods of packing and marking of natural rubber latex in clean, disinfected and painted drums.

## 2 REFERENCES

The standards given below contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreement based on this standard are encouraged to investigate the possibility of applying the most recent editions of these standards:

<i>IS No.</i>	<i>Title</i>
IS 158 : 2015	Ready mixed paint, brushing, bituminous, black, acid, alkali and heat resisting — Specification ( <i>fourth revision</i> )
IS 1783 (Part 1) : 2014	Drums large, fixed ends — Specification Part 1 Grade A Drums ( <i>fourth revision</i> )
IS 1783 (Part 2) : 2014	Drums large, fixed ends — Specification Part 2 Grade B Drums ( <i>fourth revision</i> )
IS 3321 : 1973	Formaldehyde solution ( <i>first revision</i> )
IS 5430 : 2017	Ammonia preserved concentrated natural rubber latex ( <i>second revision</i> )
IS 11001 : 1984	Double centrifuged natural rubber latex
IS 13101 : 1991	Ammonia preserved creamed natural rubber latex

## 3 PACKAGING DRUMS

### 3.1 Selection of Drums

Light duty mild steel drums conforming to the sizes and dimensions given in IS 1783 (Part 1) or IS 1783 (Part 2) free from rust and other contaminations or clean high density polyethylene drums of similar capacity should be used.

**3.1.1** If the latex is to be used for the production of baby teats, surgeon's gloves, condoms, and other medical applications, it will be essential to use new drums only.

### 3.2 Painting of the drums to provide an inert lining.

After thorough cleaning and drying, inside of the drums and the inside bottom surface of the bungs should be painted with two coats of an alkali resistant bituminous paint conforming to IS 158. However, painting is not necessary in the case of HDPE drums.

**3.2.1** In addition to the properties specified in IS 158, the paint should be resistant to ammonia preserved latex, and should be free from iron, copper and manganese.

**3.2.2** When the paint is perfectly dry, the cut side should be welded back. Charred paint, along the weld inside the drum, should be removed with a swab, and coated afresh with the paint, specified in **3.2** and **3.2.1**.

### **3.3 Disinfection**

The disinfected drums should be kept with bung holes closed, and opened only at the time of filling.

**3.3.1** Drums which have been kept in storage for long period, should be rinsed with water, drained and disinfected just prior to filling.

Note – One percent solution of formalin (*see* IS 3321) or chlorinated trisodium phosphate or 0.5 percent phenol based disinfectant (solution containing cresylic acid, orthohydroxydiphenyl and soap as active ingredient) may be used as disinfected.

## **4 FILLING PROCEDURE**

**4.1** latex may be filled into the drums by gravity from bulk storage tanks, following the procedure given in **4.1.1**.

**4.1.1** Both bung holes should be kept open. A suitable tube filled with funnel having detachable sieve (made from aluminium, polyvinyl chloride and polyethylene, etc.) be placed through the larger bung holes so as to reach the bottom of the drum to prevent frothing of latex inside, while filling.

**4.2** The drums should be filled to the desired net weight leaving an air space of 25 mm to 40 mm. Then both bung holes should be tightly closed and scaled.

**4.2.1** A suitable preservative should be added to the latex and well mixed before filling the drums.

NOTE – Raw natural rubber latex remains well preserved in presence of not less than 1 per cent ammonia or 0.025 percent TMTD, 0.025 percent zinc oxide and 0.50 percent ammonia concentration latex with 0.70 percent ammonia or with 0.013 percent TMTD and 0.013 percent zinc oxide and 0.30 percent ammonia.

## **5 PAINTING OUTSIDE**

In the case of mild steel, drums should be painted outside for protection against weathering action.

## **6 PACKING CAPACITY**

The material shall be packed in drums so as to contain  $(205 \pm 5)$  litres minimum of latex.

## **7 MARKING**

**7.1** The drum shall be marked with the following

- a) Name of the material;
- b) Indication of the source of manufacture;
- c) Type of latex, that is, whether centrifuged or creamed whether low, medium or high ammonia (*see* IS 5430, IS 11001 and IS 13101);
- d) Net, and gross mass in kg and volume in litres,
- e) Dry rubber content (DRC), and
- f) Date of packing.