भारतीय मानक

Indian Standard

IS 7792 : 2023

प्लास्टिक कंटेनर — रखरखाव — रीति संहिता

(पहला पुनरीक्षण)

Plastics Containers — Handling — Code of Practice

(First Revision)

ICS 83.080

भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS
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September 2023 **Price Group 5**

Plastics Packaging Sectional Committee, PCD 21

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Plastics Packaging Sectional Committee had been approved by the Petroleum, Coal and Related Products Division Council.

This Indian Standard was originally published in 1975. This revision has been undertaken to update the standard by incorporating the amendment.

Plastics containers are manufactured indigenously in increasing quantities. Apart from the specifications for containers, broad guidelines for proper and safe handling of the containers shall assist their increasing use. It is felt that this standard code of practice, which includes the guidelineswill help the growth of plastics industry on sound lines.

The list of Indian Standards available for plastic containers are given in Annex A.

The composition of the Committee responsible for the formulation of this standard is given in Annex B.

In reporting the result of a test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS 2 : 2022 ‘Rules for rounding off numerical values (*second revision*)*’.*

Indian Standard

PLASTICS CONTAINERS — HANDLING — CODE OF PRACTICE

(First Revision)

1 SCOPE

This code of practice standard covers broadly the safe and proper transportation, handling and storage aspects of the plastics containers both filled and empty.

2 STORAGE OF CONTAINERS

2.1 Storage of Empty Containers

2.1.1 Containers of less than 5 litre capacity, as far as possible, shall not be stacked directly. They should be packed in cardboard cartons which can be stacked one above the other.

2.1.2 Containers over 5 1itre capacity may be stacked in a vertical position. The only limitation of height of stacking shall be to ensure that the bottom piece does not collapse due to the weight of the stack.

2.1.3 Containers shall not be stored in direct sunlight unless manufactured from the grade incorporating light stabilizer or carbon black well dispersed to the extent of minimum of 2.5 percent by weight.

2.1.4 Containers shall be stored away from naked flame.

2.2 Storage of Filled Containers

2.2.1 Smaller containers (5 litre capacity and below) shall be packed in cardboard boxes for storage. Alternatively, they shall be stored individually on shelves and protected from dust by a cover of polyethylene film.

2.2.2 Containers of over 5 litre capacity shall be stacked vertically one over the other up to a height of 5 stacks, depending on the design of the container and after ensuring that the bottom most container does not collapse because of the load.

2.2.3 The recommended practice for stacking of containers carrying liquid chemicals is given below:

Sl No.	*Capacity (litre)*	*Height of Stacks (m)*
(1)	(2)	(3)
i)	5 litre	5 m to 7 m
ii)	10 litre	5 m
iii)	20 litre	5 m
iv)	30 litre	3 m to 5 m
v)	60 litre and above	2 m to 2 m

2.2.4 Containers shall not be stored in the direct sunlight unless manufactured from stabilized grade. Containers containing volatiles should not be stored exposed to sunlight or any other source of heat.

2.2.5 Filled containers shall be stored at a safe distance from flame.

2.2.6 Filled containers shall be stacked on smooth surface.

3 TRANSPORT OF CONTAINERS

3.1 Transport of Empty Containers

3.1.1 Small containers (5 litre capacity and below) are transported in polyethylene bags and/or corrugated boxes. However, large containers (above 5 litre capacity) are transported on light duty one-way wooden pallet with shrink wrapping or strength wrapping the entire pallet load.

NOTE — The use of expendable pallet or paperboard pallet with slip sheet can also be considered.

3.1.2 Containers over 5 litre capacity shall be packed in polyethylene film bags to protect the containers from dust.

3.2 Transport of Filled Containers

3.2.1 Adequate care shall be taken to ensure that there is no leakage of contents during storage and transportation.

3.2.1 The handles may be used for lifting the containers up to a capacity of 100 litre. For containers which are to be rolled for handling, rolling over any sharp points or edges should be avoided. Adequate care is to be taken by providing metal pipes, wooden planks or thick ropes to prevent contact against ground. Alternatively, the same may be moved on a handcart, platform trolley or by a simpler way by means of hooks suspended from a bamboo carried by two people and the containers held by the suspended hooks.

3.2.2 Containers less than 5 litre capacity, when transported in card board boxes, shall be separated by a flat cardboard in between the stacks.

4 HANDLING OF EMPTY CONTAINERS

While loading or unloading, the containers shall not be directly 'rolled' on the floor but shall be lifted and carried.

ANNEX A

(*Foreword*)

INDIAN STANDARDS ON PLASTIC CONTAINERS

IS No.	*Title*
IS 2798 : 1998	Methods of test for plastics containers (*first revision*)
IS 6312 : 1994	Polyethylene containers for the transport of materials — Specification (*second revision*)
IS 7019 : 1998	Glossary of terms in plastics and flexible packaging, excluding paper (*second revision*)
IS 7394 : 1984	Specification for plastic containers for reserve fuel (*first revision*)
IS 7408	Blow moulded polyolefin containers — Specification:
(Part 1)	Up to 5 litres capacity (*second revision*)
(Part 2)	Over 5 litres, up to and including 60 litres capacity (*first revision*)
(Part 3)	Closed head containers over 60 litres, up to and including 250 litres capacity (*first revision*)
IS 7803	Specification for plastic containers for pharmaceutical use:
(Part 1)	Other than parenteral and ophthalmic preparations
(Part 2)	Parenteral and ophthalmic preparations
IS 7959 : 1987	Specification for polyethylene containers for foam compounds (*first revision*)
IS 8747 : 1977	Methods of test for environmental stress-crack resistance of blow — moulded polyethylene containers
IS 9754 : 1981	Specification for high density polyethylene containers for packing of liquid pesticides (up to 1 litre capacity)
IS 10840 : 1994	Blow moulded HDPE containers for packing of vanaspati — Specification (*second revision*)
IS 12512 : 1989	HDPE containers — For liquid pesticides — Capacity over 1 and up to 5 litres — Specification
IS 14764 : 2000	Polyethylene terephthalate (PET) containers for packaging of *vanaspati* — specification
IS 15410 : 2003	Containers for packaging of natural mineral water and packaged drinking water — Specification
IS 15473 : 2004	Blow moulded HDPE containers for packaging of edible oils — Specification
IS 15749 : 2007	Fluorinated HDPE bottles and containers — Specification

ANNEX B

(*Foreword*)

COMMITTEE COMPOSITION

Plastics Packaging Sectional Committee, PCD 21

Organization	*Representative(s)*
Indian Institute of Packaging, Mumbai	DR BABU RAO GUDURI **(*Chairperson*)**
All India Food Processors Association, (AIFPA), New Delhi	SHRI MOHIT CHAUDHARY
All India Plastics Manufacturers Association (AIPMA), Mumbai	SHRI KAILASH B. MURARKA SHRI KISHORE SAMPAT (*Alternate*)
Bisleri International Pvt Ltd, New Delhi	SHRI K. GANESH SHRIMATI SALONI CHADHA (*Alternate*)
Central Institute of Plastics Engineering & Technology (CIPET), Chennai	DR S. N. YADAV DR SMITA MOHANTY (*Alternate*)
Chemco Plastic Industries Private Ltd, Mumbai	SHRI GAURAV SARAOGI SHRIMATI SRUPANDE SAMPAT (*Alternate*)
Chemicals & Petrochemicals Manufacturers Association, New Delhi	SHRI UDAY CHAND DR KANAK B. DAS (*Alternate*)
Coca-Cola India, Gurugram	SHRI VIRENDRA LANDGE SHRI RAJENDRA DOBRIYA (*Alternate*)
Confederation of Indian Food Trade & Industry (FICCI), New Delhi	SHRI MANOJ MEHTA
CSIR - Central Food Technological Research Institute (CFTRI), Mysuru	SHRI RAJESHWAR MATCHE DR ARUN KUMAR P. SELVAM (*Alternate*)
CSIR - Indian Institute of Toxicology Research, Lucknow	DR V. P. SHARMA DR A. B. PANT (*Alternate*)
Essel Propack Limited, Vasind	SHRI HARIHARAN K. DR GURUNATH (*Alternate*)
Federation of Indian Packaged Drinking Water Manufacturers Association (FIPMA), Mumbai	SHRI APURVA DOSHI
Food Safety and Standards Authority of India, New Delhi	SHRI B. S. ACHARYA SHRI HARISH KUMAR (*Alternate*)
Foundation for Innovative Packaging and Sustainability (FIPS), Mumbai	SHRI M. K. BANERJEE

Organization	*Representative(s)*
Gas Authority of India Ltd, (GAIL), Noida	SHRI MANISH KHANDELWAL SHRI NITIN GUPTA (*Alternate*)
Haldia Petrochemicals, Kolkata	SHRI RAJ K. DATTA SHRI SRIKANTH RAMANI (*Alternate*)
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Indian Centre for Plastics in the Environment (ICPE), Mumbai	SHRI T. K. BANDOPADHYAY
Indian Oil Corporation Limited (IOCL), R&D, Faridabad	SHRI DHANANJAY SAHOO SHRI SUMIT BASU (*Alternate* I) SHRI PONNUSWAMY K. (*Alternate* II)
IIT Roorkee-Saharanpur Campus, Roorkee	DR YUVRAJ SINGH NEGI
Ministry of Food Processing Industries, New Delhi	SHRI ANAND KISHORE
National Association for Feeders and Nipples Industries (NAFNI), Mumbai	SHRI HARISH SHROFF SHRI ASHOK ANEJA (*Alternate*)
National Dairy Development Board, Anand	SHRI P. K. PUNDIR SHRI S. K. GOSWAMI (*Alternate*)
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PET Packaging Association for Clean Environment (PACE), New Delhi	DR VIJAY HABBU SHRI PANKAJ UPPAL (*Alternate*)
Pigeon India, Grater Noida	SHRIMATI SIMPLE BAJAJ SHRIMATI SNEHA GUPTA (*Alternate*)
Reliance Industries Ltd, Mumbai	SHRI S. V. RAJU DR SHREERAM WADEKAR (*Alternate* I) DR SUNIL MAHAJAN (*Alternate* II)
Shriram Institute for Industrial Research, New Delhi	SHRI N. A. HASHMI DR A. K. TYAGI (*Alternate*)
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Sumitomo Chemical India Ltd, Mumbai erstwhile Excel Crop, Mumbai	SHRI PRASAD GHATE
Sun Pharmaceutical Industries Ltd (Sun Pharma), Gurugram	SHRI SHANTANU CHOWDHARY
Uflex, Noida	SHRI RAHUL DUBEY SHRI JEEVRAJ PILLAI (*Alternate*)

Organization	*Representative(s)*
Voluntary Organization in Interest of Consumer Education (VOICE), New Delhi	SHRI M. A. U. KHAN SHRI H. WADHWA (*Alternate*)
BIS Directorate General	SHRIMATI MEENAL PASSI, SCIENTIST 'F'/SENIOR DIRECTOR AND HEAD (PETROLEUM, COAL AND RELATED PRODUCTS) [REPRESENTING DIRECTOR GENERAL (*Ex-officio*)]

Member Secretary
KUMARI ANMOL AGARWAL
SCIENTIST B/ASSISTANT DIRECTOR
(PETROLEUM, COAL AND RELATED PRODUCTS), BIS

Bureau of Indian Standards

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Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the website-www.bis.gov.in or www.standardsbis.in.

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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