



COMPENDIUM OF INDIAN STANDARDS ON

PLASTICS PACKAGING FOR FOOD CONTACT APPLICATION

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TABLE OF CONTENTS

Sl. no.	IS no.	Title
1.	IS 10840:1994	Blow moulded HDPE containers for Vanaspati
2.	IS 11352:2018	Flexible pouches for Vanaspati (up to 2 kg / 2 litres)
3.	IS 11584:2024	HDPE crates for milk pouches
4.	IS 11805:2024	Polyethylene pouches for liquid dairy products
5.	IS 12724:2004	Flexible pouches for refined edible oils (up to 5 kg / 5 litres)
6.	IS 12883:1989	PVC bottles for edible oils
7.	IS 12887:1989	PET bottles for edible oils
8.	IS 13289:2023	PPCP crates for milk pouches
9.	IS 14636:1998	Flexible packaging for edible oils, ghee, and Vanaspati
10.	IS 14764:2025	PET containers for solid/semi-solid foods including Vanaspati
11.	IS 15473:2004	Blow moulded HDPE containers for edible oils
12.	IS 14625:2015	Plastics Feeding Bottles- Specification
13.	IS 10171:1999	Guide on Suitability of plastics for Food packaging
14.	IS 14537:2025	PET bottles for alcoholic beverages
15.	IS 8688:1988	Plastic bottles for potable water
16.	IS 15410:2025	Plastic bottles/containers for mineral and packaged drinking water
17.	IS 15532:2004	Plastic crates for fruits and vegetables

INTRODUCTION

Plastics packaging is extensively used in the food industry due to its ability to preserve food quality, extend shelf life, and provide convenience for both manufacturers and consumers. It acts as a barrier to moisture, air, and contaminants, which helps in preventing spoilage and maintaining freshness. Various forms of plastic packaging, such as bottles, containers, films, and wraps, are designed to meet specific needs, from keeping beverages sealed to protecting fresh produce and ready-to-eat meals. Additionally, plastic packaging is lightweight, cost-effective, and can be moulded into various shapes and sizes, making it ideal for different food products.

Food requires protection from various environmental factors from the time of its production till it is consumed. Shelf life of the packaged foods may range from a day to more than a year. Indian Standards of Plastics packaging for food contact application plays crucial role in preserving the actual essence of food. Thanks to Plastics packaging which led to the enormous development in the field of food packaging.

This compendium aims at providing an overview of Indian Standards on plastics packaging for food contact applications.

1. IS 10840:1994 Blow moulded HDPE containers for Vanaspati

(Last reviewed in 2020)

Specifies requirements for blow-moulded containers made of High Density Polyethylene (HDPE) used for packing Vanaspati (hydrogenated oils).

Capacity Range: Typically includes containers of various standard sizes that are 1kg/litre, 2kg/litres, 5kg/litres, 10kg/litres and 15kg/litres.

Key Aspects: Requirements of food-grade HDPE, performance requirements are given.

Referred Standards: IS 7019, IS 7328, IS 10146, IS 9845, IS 9833, IS 7028 (Part 2), IS 4905, IS 10910, IS 10951

2. IS 11352 :2018 Flexible pouches for Vanaspati (up to 2 kg / 2 litres)

(Last reviewed in 2023)

Specifies requirements for flexible pouches made of thermoplastics film or their combinations with other flexible materials for packing Vanaspati.

Capacity Range: Includes capacity range of 50 g, 100 g, 200 g, 500 g, 1 kg and 2 kg

Key Aspects: Defines material, construction, and performance requirements, ensures sealing strength, leak-proof integrity, and use of food-grade, non-toxic materials.

Referred Standards: IS 2508: 2016, IS 2771 (Part 1): 1990, IS 2828 : 2001, IS 4261 : 2001, IS 7019 : 1998, IS 7028 (Part 2) : 2002, IS 8639 : 1977, IS 9845 : 1998, IS 10142 : 1999, IS 10146 : 1982, IS 10151 : 1982, IS 10910 : 1984, IS 11434 : 1985, IS 11704 : 1986, IS 10633 : 1999, IS 14534 : 2016, IS 14636 : 1998

3. IS 11584:2024 HDPE crates for milk pouches

Specifies requirements for HDPE crates used for storing and transporting milk pouches.

Key Aspects: Ensures structural strength, stackability, and durability under handling and load conditions.

Referred Standards: IS 2828: 2019/ ISO 472: 2013, IS 4905: 2015/ ISO 24153: 2009, IS 7019: 1998, IS 7328: 2020

4. IS 11805:2024 Polyethylene pouches for liquid dairy products

Scope: Covers polyethylene pouches for packaging liquid dairy products

Capacity Range: 200ml, 250 ml, 500 ml, 1000ml

Key Aspects: Ensures hygienic, leak-proof, and tamper-resistant packaging with adequate mechanical strength.

Referred Standards: IS 2828 : 2019/ ISO 472 : 2013, IS 3025 (Part 2) : 2019/ISO 11885 : 2007, IS 4905 : 2015/, ISO 24153 : 2009, IS 7019 : 1998, IS 7328 : 2020, IS 9833 : 2018, IS 9845 : 1998, IS 13360 (Part 5) (Sec 1) : 2021/ISO 527-1 : 2019, (Sec 3) : 2022/ISO 527-3 : 2018, (Sec 6) : 1999/ ISO 7765-1 : 1988, IS 14534 : 2023 IS 15495 : 2020, ISO 18856 : 2004

5. IS 12724:2004 Flexible pouches for refined edible oils (up to 5 kg / 5 litres)

(Last reviewed in 2020)

Specifies flexible pouches for packaging refined edible oils

Capacity Range: Upto 5 kg

Key Aspects: Ensures use of food-grade materials, with adequate seal strength and leak resistance.

Referred Standards: IS 1060 (Part 2) : 1960, IS 2508:1984, IS 2771 (Part 1) : 1990, IS 2828:1964, IS 4006 (Part 1) : 1985, IS 4261 : 1967, IS 7019 : 1998, IS 7028 (Pat 2) : 2002, IS 9845:1998, IS 14534:1998, IS 14636 : 1998

6. IS 12883:1989 PVC bottles for edible oils

(Last reviewed in 2024)

Specifies requirements for PVC bottles used in packaging edible oils

Capacity Range: 1 kg and 2 kg

Key Aspects: Ensures food-grade safety, dimensional stability, and resistance to leakage and deformation.

Referred Standards: IS 4905: 1968, IS 7028 (Part 2) : 1973, IS 7328 : 1974, IS 7408 (Part 1) : 1984, IS 8639 : 1977, IS 10151 : 1982

7. IS 12887:1989 PET bottles for edible oils

(Last reviewed in 2023)

Specifies PET bottles for packaging edible oils.

Capacity Range: 1kg and 2 kg

Key Aspects: Focuses on clarity, strength, leakage resistance, and use of non-toxic, food-grade material.

Referred Standards: IS 4905 : 1968, IS 7028 (Par 2) : 1973, IS 7328 : 1974, IS 7408 (Part 1) : 1984, IS 8639 : 1977, IS 10171 : 1986, IS 12229 : 1987

8. IS 13289:2023 PPCP crates for milk pouches

Scope: Specifies polypropylene/impact copolymer (PPCP) crates for carrying milk pouches

Capacity Range: ten 1litre pouches or twenty 500 ml

Key Aspects: Ensures durability, load-bearing strength, and resistance to impact and deformation during handling.

Referred Standards: IS 7019 : 1998, IS 10951 : 2020, IS 11584 : 1986, IS 2828 : 2019/ ISO 472 : 2013, IS 4905 : 2015/ ISO 24153 : 2009

9. IS 14636:1998 Flexible packaging for edible oils, ghee, and Vanaspati

(Last reviewed in 2023)

Scope: Specifies flexible packaging materials for edible oils, ghee, and vanaspati.

Key Aspects: Emphasizes barrier properties, seal integrity, and suitability for food contact.

Referred Standards: IS 1060 (Part 2): 1960, IS 2508 : 1984, IS 2828 : 1964, IS 4006 (Part 1) : 1985, IS 4261 : 1967, IS 7019 : 1998, IS 9845 : 1998, IS 14534 : 1998

10. IS 14764:2025 PET containers for solid/semi-solid foods including Vanaspati

Scope: Specifies PET containers for packaging solid and semi-solid foods, including vanaspati.

Key Aspects: Ensures food safety, mechanical strength, and moisture barrier properties.

Referred Standards: IS 2798 : 1998, IS 3025 (Part 2) : 2019/ISO 11885 : 2007, IS 4664 : 2024, IS 4905 : 2015/ ISO 24153 : 2009, IS 7019 : 1998, IS 7328 : 2020, IS 8970 : 1991, IS 9833 : 2018, IS 9845 : 1998, IS 10142 : 1999, IS 10151 : 2019, IS 10910 : 1984, IS 10951 : 2020, IS 11434 : 2023, IS 11704 : 2023, IS 12247 : 2024, IS 12252 : 2017, IS 13193 : 1992, IS 14534 : 2023, IS 15495 : 2020, IS 18856 : 2024/ ISO 19007 : 2018, ISO 18857-2 : 2009

11. IS 15473:2004 Blow moulded HDPE containers for edible oils

(Last reviewed in 2020)

Scope: Specifies blow moulded HDPE containers for packaging edible oils.

Capacity Range: 1kg, 2kg, 5 kg, 10 kg and 15kg

Key Aspects: Ensures leak-proof design, food-grade material, and suitability for transport and storage.

Referred Standards: IS 2798:1998, IS 4905:1968, IS 7019:1998, IS 7328: 1992/ ISO 1872-1: 1997, IS 7408 (Part 1): 2000, (Part 2): 2000, IS 8747:1977, IS 9833:1981, IS 9845:1998, IS 10146:1982, IS 10951:1984, IS 13360 (Part 9/Sec 4):1997/ISO 183: 1976, IS 14534:1998

12. IS 14625:2015 Plastics Feeding Bottles

(Last reviewed in 2020)

Scope: Specifies requirements for plastic feeding bottles used for infants.

Key Aspects: Ensures safety, hygiene, chemical resistance, and use of non-toxic, food-grade plastics.

Referred Standards: IS 249 : 1979, IS 266 : 1993, IS 1070 : 1992, IS 1699 : 1995, IS 2798 : 1998, IS 3025 (Part 37) : 1988, (Part 41) :1992, (Part 47) : 1994, (Part 48) : 1994, (Part 52) : 2003, (Part 56) : 2003, IS 3565 : 1966, IS 4905 : 1968, IS 7019 : 1998, IS 8747 : 1977, IS 9833 : 2014, IS 9845 : 1998, IS 10909 : 2001, IS 10910 : 1984, IS 14534 : 1998, IS 15303 : 2003,

13. IS 10171:1999 Guide on Suitability of plastics for Food packaging

(Last reviewed in 2020)

Scope: Provides a guide on the suitability of plastics for use in food packaging applications.

Key Aspects: Provides a general guidance to the food packer in selecting the specific thermoplastic material, singly or in combination, to design an acceptable food packaging system.

Referred Standards: IS 2828 : 1964, IS 7019 : 1998, IS 9845 : 1998

14. IS 14537:2025 PET bottles for alcoholic beverages

Scope: Specifies requirements and testing methods for PET bottles used in packaging alcoholic beverages.

Key Aspects: Ensures safety, strength, and chemical resistance to maintain product quality and consumer safety.

Referred Standards: IS 2798 : 1998, IS 3025 (Part 2) : 2019/ISO 11885 : 2007, IS 4664 : 1986, IS 4905 : 2015/ ISO 24153 : 2009, IS 7019 : 1998, IS 7328 : 2020, IS 7408 (Part 1) : 2000, IS 8970 : 1991, IS 9833 : 2018, IS 9845 : 1998, IS 10142 : 1999, IS 10151 : 2019, IS 10910 : 1984, IS 10951 : 2020, IS 11434 : 2023, IS 11704 : 2023, IS 12247 : 1988, IS 12252 : 2017, IS 13193 : 1992, IS 13360 (Part 8/ Sec 8) : 2021/ISO 3451-1 : 2019, IS 14534 : 2023, IS 15495 : 2020, ISO 18856 : 2004, ISO 18857-2 : 2009

15. IS 8688:1988 Plastic bottles for potable water

(Last reviewed in 2020)

Scope: Specifies material, design, and performance requirements for plastic bottles used for potable water.

Key Aspects: Ensures safety, non-toxicity, and durability for safe storage and handling of drinking water.

Referred Standards: IS 2798 : 1998, IS 4905 : 1968, IS 7019 : 1982, IS 7408 (Part 1) : 2000, IS 7511 (Part 4) : 1986, IS 9833 : 1981, IS 9845 : 1986, IS 10146 : 1982, IS 10151 : 1982, IS 10910 : 1984, IS 12252 : 1987, IS 14534 : 1998

16. IS 15410:2025 Plastic bottles/containers for mineral and packaged drinking water

Scope: Specifies requirements and test methods for plastic bottles and containers used for mineral and packaged drinking water.

Key Aspects: Ensures hygiene, strength, and chemical safety to protect water quality during storage and distribution.

Referred Standards: IS 2798 : 1998, IS 3025 (Part 2) : 2019/ ISO 11885 : 2007, (Part 4) : 2021, (Part 5) : 2018, (Part 8) : 2023, (Part 65) : 2022, IS 4905 : 2015/ ISO 24153 : 2009, IS 7019 : 1998, IS 8747: 2025, IS 8970 : 1991, IS 9833 : 2018, IS 9845 : 1998, IS 10146 : 1982, IS 10171 : 1999, IS 10910 : 1984, IS 12252 : 2017, IS 13428 : 2024, IS 14534 : 2023, IS 14535 : 1998, IS 14543 : 2024, IS 14971 : 2001, ISO 18856 : 2004

17. IS 15532:2004 Plastic crates for fruits and vegetables

(Last reviewed in 2020)

Scope: Specifies design, material, and performance requirements for plastic crates used in handling fruits and vegetables.

Key Aspects: Ensures durability, ventilation, and safe stacking for effective storage and transportation.

Referred Standards: IS 4905:1968, IS 7328:1992, IS 9833:1981, IS 10951:2002, IS 14534:1998

Referred Standards

IS no.	Title	Scope
IS 7019	Glossary of terms in plastics and flexible packaging, excluding paper	This standard defines the packing terms used in plastics and flexible packaging excluding paper.
IS 9833	List of Colourants for Use in Plastics in Contact with Foodstuffs and Pharmaceuticals	This standard lists permitted colorants for use in plastics that may be regarded as safe for use in contact with foodstuff and pharmaceuticals.
IS 9845	Determination of overall migration of constituents of plastics materials and articles intended to come in contact with foodstuffs - Method of analysis	This standard prescribes the methods of analysis for determination of overall migration of constituents of single or multi-layered heat-sealable films, single homogenous non-sealable films, finished containers and closures for sealing as lids, in the finished form, preformed or converted form.
IS 14534	Plastics - Recovery and recycling of plastics waste - Guidelines	This standard prescribes guidelines for the recycling of plastics waste/scrap by different techniques based on technological trends and policy directives issued for the plastics waste management in India.
IS10951	Specification for polypropylene (pp) materials for moulding and extrusion	This standard prescribes the designation system, requirements, methods of sampling and tests for polypropylene (PP) thermoplastics material.
IS 2798	Methods of test for plastics containers	This standard prescribes the methods of test for plastics containers.
IS 12252	Polyalkylene Terephthalates (PET and PBT), Their Copolymers and List of Constituents in Raw Materials and End Products for Their Safe Use in Contact with Foodstuffs and Pharmaceuticals	This standard prescribes the positive list of constituents of polyalkylene terephthalates (PET and PBT), namely the polymers and necessary additives, which will be regarded as safe for use in contact with foodstuffs and pharmaceuticals, when properly processed and when present in the prescribed limits of concentration.
IS 2828	Plastics — Vocabulary	This International Standard defines terms used in the plastics industry, including terms and definitions appearing in plastics standards (of ISO/TC 61) and general terms and definitions of polymer science used in all aspects of plastics technology.
IS 7328	Specification for Polyethylene	This standard prescribes the requirements, methods

	Material for Moulding and Extrusion	of sampling and tests for low density polyethylene (LDPE), linear low density polyethylene (LLDPE), high density polyethylene (HDPE) materials and their compounds.
IS 4905	Random Sampling and Randomization Procedures	This International Standard defines procedures for random sampling and randomization. Several methods are provided, including approaches based on mechanical devices, tables of random numbers, and portable computer algorithms.
IS 10146	Specification for polyethylene for its safe use in contact with foodstuffs, pharmaceuticals and drinking water	This standard specifies the requirements and methods of sampling and test for polyethylene plastic materials for the manufacture of plastic items used in contact with foodstuffs, pharmaceuticals and drinking water.
IS 3565	Teats for Feeding Bottles — Specification	This standard prescribes the requirements for reusable teats for feeding bottle made out of natural rubber or silicone rubber.
IS 8747	Environmental Stress-Crack Resistance of Blow-Moulded Polyethylene Containers — Methods of Test	This standard prescribes the methods of test for environmental stress-crack resistance under specified conditions of stress and in the presence of environments, such as soaps, wetting agents, oils or detergents.
IS 7408 (Part 1)	Blow moulded polyolefin containers - Specification: Part 1 : up to 5 litres capacity	This standard specifies tolerances on mass, dimensions, performance requirements and methods of sampling and tests for blow moulded containers, made from polyolefins, with capacities up to and including 5 litres.
IS 7408 (Part 2)	Blow moulded polyolefin containers - Specification: Part 2 : over 5 litres, up to and including 60 litres capacity	This standard (Part 2) specifies tolerances on dimensions, performance requirements and methods of sampling and tests for free standing blow moulded containers, made from polyolefins, with capacities over 5 litres up to and including 60 litres and having an internal neck diameter not exceeding 75 mm.
IS 7408 (Part 3)	Blow moulded polyolefin containers - Specification: Part 3 : closed head containers over 60 litres, up to and including 250 litres capacity	This standard (Part 3) specifies tolerances on dimensions, performance requirements and methods of sampling and tests for free standing blow moulded containers, made from Polyolefins, with capacities over 60 litres, up to and including 250 litres and having an internal neck diameter not exceeding 75 mm.