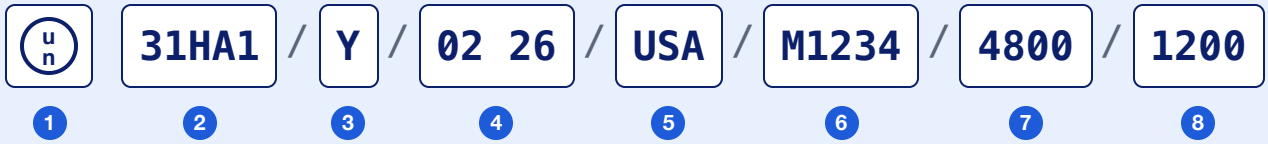
IBC Tote UN Codes and Markings

How to read the UN mark on an intermediate bulk container, decode codes like **31HA1**, and check the dates that decide whether a tote can still be filled.



Example mark. Read it as: a composite IBC for liquids with a rigid plastic bottle in a steel cage, tested for Packing Group II and III, made February 2026, certified in the USA by registrant M1234, stacking test load 4,800 kg, maximum gross mass 1,200 kg.

READING THE MARK, FIELD BY FIELD

	FIELD	EXAMPLE	WHAT IT MEANS
1	**UN packaging symbol**	`u/n`	Certifies that the IBC design passed UN performance tests.
2	**IBC type**	`31`	**11** = solids, loaded and discharged by gravity · **21** = solids, loaded or discharged under pressure over 10 kPa · **31** = liquids. Flexible IBCs (bulk bags) start with **13**.
3	**Materials**	`HA`	For a composite IBC, the first letter is the inner receptacle (**H** = rigid plastic) and the second is the outer cage or casing (**A** = steel). See the material table.
4	**Category**	`1`	On a composite IBC: **1** = rigid plastic inner receptacle, **2** = flexible plastic inner. On a rigid plastic IBC: **1** = built to carry a stacking load, **2** = freestanding.
5	**Packing group rating**	`Y`	**X** = PG I, II and III · **Y** = PG II and III · **Z** = PG III only.
6	**Month and year**	`02 26`	Month and last two digits of the year of manufacture. For a composite IBC, the inner receptacle carries its own date too.
7	**Country / certifier**	`USA · M1234`	The authorizing country and the manufacturer's name or registered symbol.
8	**Stacking test load**	`4800`	The load in kg used in the stacking test. **0** means the IBC is not designed to be stacked.
9	**Maximum gross mass**	`1200`	The highest permitted gross mass in kg: IBC plus contents.

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IBC MATERIAL LETTERS

LETTER	MATERIAL
A	Steel
B	Aluminum
N	Metal other than steel or aluminum
H	Rigid plastic
HZ	Composite: plastic inner receptacle; Z is replaced by the outer material letter
G	Fiberboard
C / D / F	Natural wood / plywood / reconstituted wood
L / M	Textile / multiwall paper (flexible IBCs)

COMMON CODES

TOTE	**31HA1**	liquids, rigid plastic bottle, steel cage
PLASTIC	**31H2**	liquids, freestanding rigid plastic IBC
BULK BAG	**13H3**	flexible, woven plastic with liner

RULES TO CHECK BEFORE FILLING

- **Plastic has a service life.** Rigid plastic and composite IBCs may carry hazmat for 5 years from the inner receptacle's date of manufacture (49 CFR 173.35, UN Model Regulations 4.1.1).
- **2.5-year test.** IBCs for liquids, or for solids loaded or discharged under pressure, need a leakproofness test and external inspection every 2.5 years (49 CFR 180.352).
- **5-year inspection.** An internal inspection is due every 5 years. Do not fill an IBC once a test or inspection is overdue.
- **Read the data plate.** Beyond the UN mark, the plate shows capacity at 20 °C, tare mass, test pressure (liquids), and the dates of the last leakproofness test and inspection.
- **Respect stacking.** A **0** stacking load or a crossed-out stacking symbol means do not stack.
- **Rebottled totes** carry the new inner receptacle's date. That date, not the cage's, starts the 5-year clock.

BEFORE YOU FILL: A FOUR-STEP CHECK

1

Match the type to the product

Liquids need a **31** type. Gravity-discharged solids can use **11**; pressure-discharged solids need **21** or **31**.

2

Match the rating letter

Check the PG from the Hazardous Materials Table against **X**/**Y**/**Z** on the mark.

3

Check the dates

Inner receptacle under 5 years old, and the last leakproofness test and inspection still current.

4

Check mass and stacking

Filled gross mass at or under the mark, and stack only within the marked load.

Sourcing IBC totes or rebottles?

Find new, rebottled and reconditioned IBC suppliers in the Packaura directory, or send one RFQ to vetted manufacturers and distributors.

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