

Guide to Performance Packaging Codes

PACKING GROUP (PG)

Packing group means a grouping according to the degree of danger presented by hazardous materials. Class 2, Class 7, Division 6.2 (other than regulated medical wastes), and ORM-D materials do not have packing groups.

- Packing Group I - Great Danger**
- Packing Group II - Medium Danger**
- Packing Group III - Minor Danger**

References for all Hazardous Materials Performance Packaging Standards and Tests can be found in the Code of Federal Regulations, Title 49, Part 178.

Conversion Factors §171.10

For compatibility with international transportation standards, most units of measure used in Subchapter C of the 49 CFR are expressed using International System of Units (SI).

Where SI units appear (L, kg, kPa) they are the regulatory standard. U.S. standard or customary units, (gal, lbs, psi) appearing in parentheses following SI units are for information only and not intended to be the regulatory standard.

- 10 kPa = 1.45 psi
- 75 kPa = 10.9 psi
- 95 kPa = 13.8 psi
- 100 kPa = 14.5 psi
- 150 kPa = 21.8 psi
- 250 kPa = 36.3 psi
- 1 kg = 2.2 lb
- 25 kg = 55 lb
- 50 kg = 110 lb
- 100 kg = 220 lb
- 150 kg = 330 lb
- 200 kg = 440 lb
- 250 kg = 551 lb
- 0.47 L = 1 pint (US)
- 0.95 L = 1 quart (US)
- 1 L = .264 gal (US)
- 3.8 L = 1 gal (US)
- 4 L = 1.06 gal (US)
- 5 L = 1.32 gal (US)
- 10 L = 2.6 gal (US)

Interpreting Markings §§178.502 and 178.503

United Nations Symbol: For embossing metal receptacles, the letters UN may be applied in place of the symbol.

Packaging Code: Designates the type of packaging and material of construction. A letter "W" designates associate administrator approval. A letter "V" designates special "variation" packaging.

Performance Level: Identifies the performance standard for successful testing of the packaging.

- X** = For packagings meeting **Packing Group I, II and III tests.**
- Y** = For packagings meeting **Packing Group II and III tests.**
- Z** = For packagings meeting **Packing Group III tests.**

Specific Gravity: Specific gravity for which the packaging design type has been tested. If the specific gravity does not exceed 1.2, the designation may be omitted.

Gross Mass: Packaging type tested for maximum gross mass in kilograms.

S: Designates that the packaging is intended to contain solids or inner packagings.

Hydrostatic Test Pressure: Internal Hydrostatic Test Pressure in Kilopascals. This test is not required for inner packaging of combination packaging.

Year of Manufacture: Last two digits of year of manufacture. Plastic drums and jerricans (1H and 3H) must be marked with the month of manufacture. The month marking may be located elsewhere on the package.

Country of Authorization: Country designation code indicates where the package is manufactured and marked.

Manufacturer Identification: Name and address or authorized symbol of packaging manufacturer or certifying agency.

Minimum Thickness: For metal or plastic drums, jerricans or the outer packaging of composite packaging intended for reuse or reconditioning.

R: Reconditioned packaging.

L: Reconditioned packaging having successfully passed a leakproofness test. This test is not required for inner packaging of combination packaging.

Note: Additional marking requirements for Reconditioned packaging are found in §178.503.

Additional Requirements for Intermediate Bulk Containers (IBC)

Month and Year: For IBCs, the month and year of manufacture.

Stacking Test Load: For IBCs, the stacked test load in kilograms. A number "0" shows that the IBC is not designed for stacking.

Note: Standards and codes for IBCs are found in §178.702 - 178.710

Required Tests for Non-Bulk Packaging

Drop Test: (§178.603) All packaging design types.

Leakproofness Test: (§178.604) All packaging design types intended for liquids.

Hydrostatic Test: (§178.605) All metal, plastic, and composite design types intended to contain liquids.

Stacking Test: (§178.606) All packaging design types other than bags.

Cooperage Test: (§178.607) All bung-type wooden barrels.

Vibration Test: (§178.608) All packaging design types.

Infectious Substances: See §178.609 for test requirements for packagings for infectious substances.

Pressure Differential: (§173.27) Packagings intended for air transport.

Guide to Performance Packaging Codes

NEW PRODUCTS ON THIS PAGE

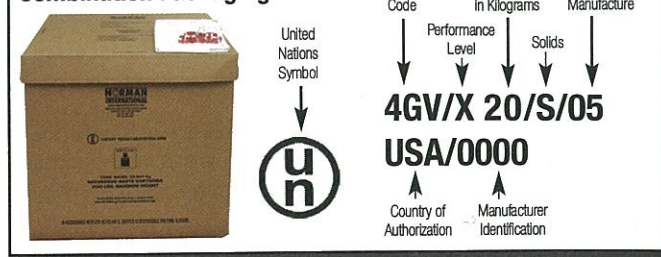
Non-Bulk Packaging Codes §§ 178.504 - 178.521

- 1A1 Steel drum, non-removable head
- 1A2 Steel drum, removable head
- 1B1 Aluminum drum, non-removable head
- 1B2 Aluminum drum, removable head
- 1D Plywood drum
- 1G Fiber drum
- 1H1 Plastic drum, non-removable head
- 1H2 Plastic drum, removable head
- 1N1 Metal drum, non-removable head
- 1N2 Metal drum, removable head
- 2C1 Wooden barrel, bung type
- 2C2 Wooden barrel, slack type, removable head
- 3A1 Steel jerrican, non-removable head
- 3A2 Steel jerrican, removable head
- 3B1 aluminum jerrican, non-removable head
- 3B2 aluminum jerrican, removable head
- 3H1 Plastic jerrican, non-removable head
- 3H2 Plastic jerrican, removable head
- 4A Steel box
- 4B Aluminum box
- 4C1 Wood box, ordinary
- 4C2 Wood box, sift-proof walls
- 4D Plywood box
- 4F Reconstituted wood box
- 4G Fiberboard box
- 4H1 Plastic box, expanded
- 4H2 Plastic box, solid
- 5H1 Woven plastic bag, unlined or non-coated
- 5H2 Woven plastic bag, sift-proof
- 5H3 Woven plastic bag, water-resistant
- 5H4 Plastic film bag
- 5L1 Textile bag, unlined or non-coated
- 5L2 Textile bag, sift-proof
- 5L3 Textile bag, water-resistant
- 5M1 Paper bag, multi-wall
- 5M2 Paper bag, multi-wall, water-resistant

Non-Bulk Packaging Codes §§ 178.522 and 178.523

- 6HA1 Plastic receptacle within a protective steel drum
- 6HA2 Plastic receptacle within a protective steel crate or box
- 6HB1 Plastic receptacle within a protective aluminum drum
- 6HB2 Plastic receptacle within a protective aluminum crate or box
- 6HC Plastic receptacle within a protective wooden box
- 6HD1 Plastic receptacle within a protective plywood drum
- 6HD2 Plastic receptacle within a protective plywood box
- 6HG1 Plastic receptacle within a protective fiber drum
- 6HG2 Plastic receptacle within a protective fiberboard box
- 6HH1 Plastic receptacle within a protective plastic drum
- 6HH2 Plastic receptacle within a protective plastic box
- 6PA1 Glass, porcelain or stoneware receptacles within a protective steel drum
- 6PA2 Glass, porcelain or stoneware receptacles within a protective steel crate or box
- 6PB1 Glass, porcelain or stoneware receptacles within a protective aluminum drum
- 6PB2 Glass, porcelain or stoneware receptacles within a protective aluminum crate or box
- 6PC Glass, porcelain or stoneware receptacles within a protective wooden box
- 6PD1 Glass, porcelain or stoneware receptacles within a protective plywood drum
- 6PD2 Glass, porcelain or stoneware receptacles within a protective wickerwork hamper
- 6PG1 Glass, porcelain or stoneware receptacles within a protective fiber drum
- 6PG2 Glass, porcelain or stoneware receptacles within a protective fiberboard box
- 6PH1 Glass, porcelain or stoneware receptacles within a protective expanded plastic packaging
- 6PH2 Glass, porcelain or stoneware receptacles within a protective solid plastic packaging

Combination Packaging



United Nations Symbol

Packaging Code: 4GV/X
Performance Level: 20
Gross Mass in Kilograms: S
Solids: /
Year of Manufacture: 05

Country of Authorization: USA
Manufacturer Identification: /0000

Single, Combination or Composite Packaging - Solids

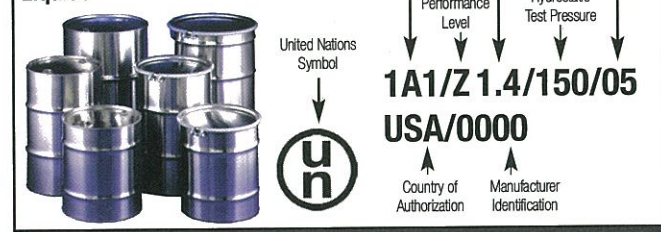


United Nations Symbol

Packaging Code: 1A2/Z
Performance Level: 40
Gross Mass in Kilograms: S
Solids: /
Year of Manufacture: 05

Country of Authorization: USA
Manufacturer Identification: /0000

Single, or Composite Packaging - Liquids



United Nations Symbol

Packaging Code: 1A1/Z
Performance Level: 1.4
Specific Gravity: /
Hydrostatic Test Pressure: 150
Year of Manufacture: 05

Country of Authorization: USA
Manufacturer Identification: /0000

Intermediate Bulk Containers - IBC



United Nations Symbol

Packaging Code: 31HA1/Y
Performance Level: 04
Month of Manufacture: /
Year of Manufacture: 03

Country of Authorization: USA
Manufacturer Identification: /0000
Stack Test Load: /2400
Gross Mass in Kilograms: /800