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 lb25 kg = 55 lb50 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)

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.





U.S. Department of Transportation

Safety Administration

Pipeline and Hazardous Materials

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U.S. Department of Transportation **Pipeline and Hazardous Materials** Safety Administration



G 11 D

NOTE: This document is for general guidance only and must not be used to determine compliance with 49 CFR, Parts100-185.





	kaging Codes	Combination Packaging	Interpreting
§§178.504 - 178.521		United Code in Kilograms Manu Nations Performance	ar of Ifacture United Nations Symbol in place of the symbol
A1 Steel drum, non-removable head	4A Steel box	Symbol Level Solids	Packaging Code: Des
A2 Steel drum, removable head	4B Aluminum box	4GV/X 20/S/0	A letter "W" designate "variation" packaging.
B1 Aluminum drum, non-removable head	4C1 Wood box, ordinary	(n)	Performance Level:
B2 Aluminum drum, removable head	4C2 Wood box, sift-proof walls	(B ^{4GV/X 20/S/05}) USA/0000	aging. X - I
D Plywood drum	4D Plywood box	↑ ↑	Y -
G Fiber drum	4F Reconstituted wood box	Country of Manufacturer Authorization Identification	Z - 1
H1 Plastic drum, non-removable head	4G Fiberboard box		Specific Gravity: Specific gravity do
H2 Plastic drum, removable head	4H1 Plastic box, expanded		Gross Mass: Packag
N1 Metal drum, non-removable head	4H2 Plastic box, solid	Single Combination or Composite	
N2 Metal drum, removable head	5H1 Woven plastic bag, unlined or non-coated	Single, Combination, or Composite	S: Designates that the
2C1 Wooden barrel, bung type	5H2 Woven plastic bag, sift-proof		ar of Hydrostatic Test Pre facture not required for inner
2C2 Wooden barrel, slack type, removable head	5H3 Woven plastic bag, water-resistant	United Nations Performance	Year of Manufacture
A1 Steel jerrican, non-removable head	5H4 Plastic film bag	Symbol Level Solids	(1H and 3H) must be located elsewhere on
A2 Steel jerrican, removable head	5L1 Textile bag, unlined or non-coated	m 1Å2/Ž40/Š/0	5
B1 Aluminum jerrican, non-removable head	5L2 Textile bag, sift-proof		Country of Authorize factured and marked.
B2 Aluminum jerrican, removable head	5L3 Textile bag, water-resistant		Manufacturer Identi
H1 Plastic jerrican, non-removable head	5M1 Paper bag, multi-wall		facturer or certifying a
3H2 Plastic jerrican, removable head	5M2 Paper bag, multi-wall water-resistant	team off Country of Manufacturer Authorization Identification	Minimum Thickness
§§178.522 and 178.523	3		R: Reconditioned particular to the second tioned particular to the second
		Single or Composite Packaging -	R: Reconditioned part L: Reconditioned part required for inner part
\$\$178.522 and 178.523 SHA1 Plastic receptacle within a protective steel of SHA2 Pla	drum	Single or Composite Packaging - Liquids United Code Specific Ye Manu	R: Reconditioned pace L: Reconditioned pace required for inner pace Mote: Additional mark
HA1 Plastic receptacle within a protective steel of	drum crate or box	Single or Composite Packaging -	R: Reconditioned pace L: Reconditioned pace required for inner pace ufacture Additional Requirem
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larkings §§178.502 and 178.503

or embossing metal receptacles, the letters UN may be applied

es the type of packaging and material of construction. bociate administrator approval. A letter "V" designates special

ies the performance standard for successful testing of the pack-

ackagings meeting **Packing Group I, II and III tests.** ackagings meeting **Packing Group II and III tests.** ackagings meeting **Packing Group III tests.**

pravity for which the packaging design type has been tested. If texceed 1.2, the designation may be omitted.

be tested for maximum gross mass in kilograms.

aging is intended to contain solids or inner packagings.

: Internal Hydrostatic Test Pressure in Kilopascals. This test is ging of combination packaging.

two digits of year of manufacture. Plastic drums and jerricans ed with the month of manufacture. The month marking may be ackage.

Country designation code indicates where the package is manu-

n: Name and address or authorized symbol of packaging manu-

netal or plastic drums, jerricans or the outer packaging of comor reuse or reconditioning.

having successfully passed a leakproofness test. This test is not of combination packaging.

quirements for Reconditioned packaging are found in §178.503.

for Intermediate Bulk Containers (IBC)

For IBCs, the month and year of manufacture.

 $\operatorname{\mathbf{nd}}$: For IBCs, the stacked test load in kilograms. A number "0" : is not designed for stacking.

for IBCs are found in §178.702 - 178.710

Fests for Non-Bulk Packaging

packaging design types.

78.604) All packaging design types intended for liquids.

05) All metal, plastic, and composite design types intended

) All packaging design types other than bags.

07) All bung-type wooden barrels.

All packaging design types.

See §178.609 for test requirements for packagings for

173.27) Packagings intended for air transport.