NISSHIN YOKI

Dangerous goods container performance standards

● 200ℓSteel Drum Can Standards

Drop test

Fire Service Act

1 .Drop height (d: Density of transported substance)

Danger level	Ⅰ	Ⅱ	Ⅲ
Density of 1.2 or less	1.8m	1.2m	0.8m
Density over 1.2	d×1.5m	d×1.0m	d×0.67m

2 .Passing criteria

Liquids...No leaking when internal and external pressures are in equilibrium (Closed head type) No leaking (Open head type)

Solids...No leaking from outer packaging

UN Bulletin

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Container level	Ⅰ	Ⅱ	Ⅲ
Density of 1.2 or less	1.8m	1.2m	0.8m
Density over 1.2	d×1.5m	d×1.0m	d×0.67m

2 .Passing criteria

Liquids...No leaking when internal and external pressures are in equilibrium

Solids...No leaking from outer packaging

Sealing test

Danger level	Ⅰ	Ⅱ	Ⅲ
Applied pressure	30 kPa or more	20 kPa or more	20 kPa or more

Container level	Ⅰ	Ⅱ	Ⅲ
Applied pressure	30 kPa or more	20 kPa or more	20 kPa or more

Hydraulic test

Danger level	Ⅰ	Ⅱ	Ⅲ
Applied pressure	250 kPa	※ 100 kPa	※ 100 kPa

* Apply higher of above and below pressures.

Vapor pressure of content at 55℃ x 1.5-100 kPa

Passing criteria…No leaking after retention for 5 min.

(For plastic containers, retention time shall be 30 min.)

Container level	Ⅰ	Ⅱ	Ⅲ
Applied pressure	250 kPa	※ 100 kPa	※ 100 kPa

* Apply higher of above and below pressures.

Vapor pressure of content at 55℃ x 1.5-100 kPa, vapor pressure of content at 50℃ x 1.75-100 kPa or gauge pressures of container at 55℃ (Subtract 100 kPa from the total pressure of the content vapor and partial pressure of added air or inert gas and multiply by 1.5.)

Passing criteria…No leaking after retention for 5 min.

(For plastic containers, retention time shall be 30 min.)

Stacking test

1. Stack to equivalent height of 3 m and leave for 24 hr.
   (Leave plastic containers at 40℃ or higher temperature for 28 days.)
2. Passing criteria
   No leaking or deformation.

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   (Leave plastic containers at 40℃ or higher temperature for 28 days.)
2. Passing criteria
   No leaking or deformation.

Remarks

1 .Test applicability

Drop test...Apply to all containers.

Sealing test...Apply to liquid containers.

Hydraulic test...Apply to liquid containers.

Stacking test...Apply to all containers.

* Perform drop tests at-18℃ and below for transportable containers with plastic outer packaging, plastic inner receptacles or packaging.

2 .Passing criteria does not apply to the following containers.

①That for Type 4 hazardous material of 61℃ or higher flash point

②Transportable containers for type 2 and 4 hazardous material (excluding Danger Level Ⅰ material) that fit a 500㎖ or less inner packaging in a 30 kg or less outer packaging.

1 .Test applicability

Drop test...Apply to all containers.

Sealing test...Apply to liquid containers.

Hydraulic test...Apply to liquid containers.

Stacking test...Apply to all containers.

* Perform drop tests at -18℃ and below for plastic drums or composite packaging (that consist of outer packaging and a plastic inner receptacle).

2 .Plastic drum and composition packaging standards

Plastic drums and composition packaging with plastic outer packaging and plastic inner receptacles must undergo impact tests for the type of plastic.