



Test Report

Ref. No: 5F705VFR1215108

| | |
|---|--|
| Customer: PB Appro Diffusion 3, Rue Niepce 21 700 Nuits Saint Georges France Customer contact: Mr. Pascal Barrer Phone.: +33 / (0) 380621540 | Test date: July 31 st 2017 Samples received: June 29 th 2017 Last test number: same Last test date: 30.12.2015 - 08.02.2016 |
| UPS Account.: - | |
| Ordered by: Maxime Cazelles, UPS | |

| | |
|-------------------------------|---|
| Product description: | 3 Magnum-Bottle wine packaging |
| Test bottles: | <ul style="list-style-type: none">Several types of 1.50 l wine bottles with different shapes and dimensions of the local market in France. Please see detailed description on page 5. |
| Shipment weight: | appr. 8.10 kg |
| Condition before test: | new |

| Sequence # | Test Method | necessity |
|------------|---|-----------|
| 1 | Air conditioning DIN EN 2233 | required |
| 2 | Identification of surfaces, edges and corners in accordance with DIN EN 22206 | required |
| 3 | Vertical Impact Test DIN EN 22248 | required |

Task:

Packaging test to renew a general packaging certification for the 3 bottle wine packaging solution from PB Appro Diffusion (Europackwine), for bottles with 1.50 l capacity.

Acceptance criteria:

Packaging can be classified as sufficient for small parcel distribution system when:

- all terms and conditions of the signed certification agreements are met
- there are no visible damages on the items
- there are no broken or leaking bottles
- products are still functioning
- transport inner and outer packaging is still able to protect the items

Test results:

The test sample has passed the required test norm.

The permission to print a UPS certification recognition with the reference number 5F705VFR1215108 is provided until the end of August 2018.



Test procedure

Air-conditioning of the test samples DIN EN 2233

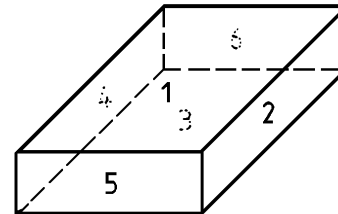
The packaging to be tested will be pre-air-conditioned in an air-condition chamber for at least 24 hours prior to the test. Air-condition preparation before the test is specified as an air-condition status of "E+20 °C / 60% r.H.

Description of the feature DIN - EN 22206

Norm describes the Edge, corner and Face from different Packaging shape:

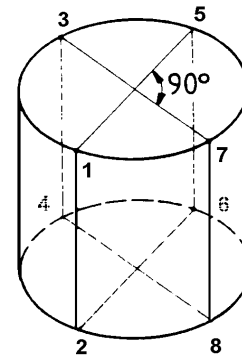
Box Features (Square)

With box placed so that the manufacturer's joint is at the front right, number the faces clockwise with the top being face 1. The front face is 5 and the back is 6. Corners and edges are identified by the faces meeting there.



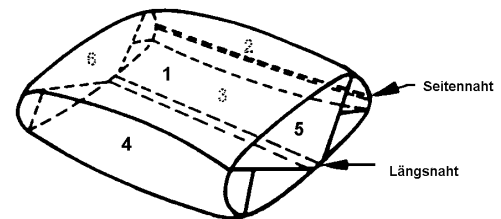
Cylindrical shape

Four corners at the top: 1, 3, 5, 7,
and four at the bottom: 2, 4, 6, 8.
The line between this corners:
1-2, 3-4, 5-6, 7-8



Pouches and bags

With pouch or bag placed so that the fin seal is at the bottom and the lap seal at the front right.
If there are two lap seals one must be left one at the right side with the top being face 1, the right face 2, at the bottom 3, right face 4, front 6.





Vertical Impact Test (Free Fall) DIN – EN 22248

This Norm describes the procedure for conducting a free fall vertical impact test.

The Procedure in short

The packaged product is held over a rigid, smooth surface (impact surface) and allowed to fall freely onto it.

The impact surface must be horizontal and level, as well as sufficiently solid and rigid, such that it is neither movable nor deformable under the strains of the test.

The drop height is determined by the weight of the packaged product for manual handling per Norm (EN 24180-2):

| | | | |
|-------|---|-------|-------|
| | - | 10 kg | 80 cm |
| 10 kg | - | 20 kg | 60 cm |
| 20 kg | - | 30 kg | 50 cm |
| 30 kg | - | 40 kg | 40 cm |
| 40 kg | - | 50 kg | 30 cm |
| 50 kg | - | 70 kg | 20 cm |

Because of mechanical sort processes in single parcel distribution, packed products over 10 kg, except products with fluid content, will be tested from the drop height of 60 cm
All packages containing fluid will be tested from the drop height 80 cm.

Steps:

10 times free fall in following order

a) Square shape

| | |
|-------------|---|
| Corner drop | 1 drop at one corner 2-3-5 |
| Edge drop | 3 times at different edges 2-5, 3-5, 2-3 |
| Area drop | 6 times at different areas 5, 6, 2, 4, 1, 3 |

| |
|------------|
| 1 x Corner |
| 3 x Edge |
| 6 x Area |

b) cylindrical items

| | |
|------------|--------------------|
| Area drop | Top, Bottom |
| Point drop | 1, 3, 5, 7 |
| Line drop | 1-2, 3-4, 5-6, 7-8 |

c) sacks and bags

| | |
|------------------|------------|
| Area drop | 1, 3 |
| End drop | 5, 5, 6, 6 |
| Narrow side drop | 2, 2, 4, 4 |



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Description of the tested product

Product description: 3 Magnum wine bottles

Bottle type / dimensions / weight:

| Type | Weight per bottle | Dimensions Ø x h |
|---|-------------------|----------------------------|
| 1 x Magnum 1,5 l Bordeaux, "Bordelino" (IT) | 2.15 kg | Ø 97.4 mm, height: 345 mm |
| 2 x Magnum 1,5 l Burgundy, "Bourgogne" (FR) | 2.60 kg | Ø 107.2 mm, height: 360 mm |

Package weight (gross): appr. 8.10 kg

Fragility: Robust G-value: over 110 G

Shipping container:

Description:

single – wall corrugated card board box similar to FEFCO 0201, without BMC.

Inner Proportions:

LxBxH: appr. 480488 x 165 x 461 mm

Flute profile

B – Flute: 47 ± 3/ft. 155 ± 10/m

Card board composition, corrugation type, paper sort and mass per unit area:

| Composition | Paper sort | Mass unit per (g/m ²) |
|--------------------|------------------|-----------------------------------|
| Outer liner / wall | Test Liner blanc | 140 |
| B – corrugation | Fluting recycled | 140 |
| Inner liner | Kraft Liner | 110 |

Closure method:

PP self-adhesive tape, 50 mm, single stripe over seam

Manufacturer's joint:

Glued

Inner packaging:

Description:

- 3 pieces engineered EPS – Foam, 3 x 2 EPS trays for one bottle as top and bottom protection.
 - Proportions:
Each one EPS tray as top and bottom protection for one bottles, code 2807165
Proportions complete, 2 pieces:
LxBxH: appr. 160 x 160 x 455 mm
Proportions 1/2 pieces:



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LxBxH: appr. 158 x 87 x 455 mm

- Manufacturer: Appro Diffusion, Foam type / density: EPS
23kg/m³



Test setup

Description of the drop test equipment:

Pneumatic Drop Tester with quick tripping
 Manufacturer: L.A.B. Equipment, Inc.
 Model: AD-160A
 Serial Number: 291510
 Max. Package Weight: 73kg (160lbs)
 Max. Package Size:
 Depth 810mm (32")
 Width: No Restrictions
 Height: No Restrictions
 Drop Height Range: 305mm (12") – 1829mm (72")



| Sequence # | Test type | | | Observation | Result |
|------------|--|------------------------|---|----------------|--------|
| 1 | Form definition DIN EN 22206 | | | √ | |
| 2 | Air conditioning DIN EN 2233 Air-pressure: 1005 hPa Humidity: 59 % Temperature: 24° C | | | √ | passed |
| 3 | Drop # | Drop height | Vertical Impact Test DIN – EN 22248 observation | Remark | Result |
| | 1 | 80 cm | no comment, no damages | test continued | |
| | 2 | 80 cm | no comment, no damages | test continued | |
| | 3 | 80 cm | no comment, no damages | test continued | |
| | 4 | 80 cm | no comment, no damages | test continued | |
| | 5 | 80 cm | no comment, no damages | test continued | |
| | 6 | 80 cm | no comment, no damages | test continued | |
| | 7 | 80 cm | no comment, no damages | test continued | |
| | 8 | 80 cm | no comment, no damages | test continued | |
| | 9 | 80 cm | no comment, no damages | test continued | |
| 10 | 80 cm | no comment, no damages | test completed | passed | |

Visual audit:

No broken or leaking bottles were detected.



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Result:

Outer packaging:
 - sufficient

Closure:
 - sufficient

Cushioning:
 - sufficient

Immobilization:
 - sufficient

|  | | bottle type | | | |
|---|----------------|--|--|--|--|
| | | Schlegel | Burgundy | Bordeaux | Sparkling wine |
| | |  |  |  |  |
| Capacity | 500 ml (0.5l) | ✗ | ✗ | ✗ | ✗ |
| | 750 ml (0.75l) | ✗ | ✗ | ✗ | ✗ |
| | 1000 ml (1.0l) | ✗ | ✗ | ✗ | ✗ |
| | 1500 ml (1.5l) | ✓ | ✓ | ✓ | ✓ |

The DIN / EN 22248 test verified that the tested package passed the specified criteria successfully.

Advice:

After any kind of modification, please send us a new test object.

For further information contact us under telephone / address given on page 1.

Neuss, July 31st 2017

Martin Seburschenich



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Photos

| | | |
|-----------------------------|----------------------------|---------------------------------|
| | | |
| pic.1 (outer packaging) | pic.2 (inner packaging) | pic.3 (EPS top and bottom mold) |
| | | |
| pic.4 (Magnum bottles) | pic.5 (Bottles in molds) | pic.6 |
| | | |
| pic.7 (package before test) | pic.8 (package after test) | pic.9 (inside view) |



Attachment

1. The short expertise is only valid for shipments with UPS if they are in accordance with the conditions listed in the short expertise. External packaging, internal packaging and sealing must be in accordance with the description in the short expertise.
2. The packaging test in the short expertise can only be used with the products described in the short expertise. The conditions listed in the short expertise are based on new products if not stated otherwise. The tested packaging is a one-way packaging if not agreed otherwise and can only be used once for shipments.
3. The sender must always make the damaged packaging available to UPS for investigation in case of a damage claim. In addition, the sender is obligated to inform UPS immediately about changes that were made to packaging and product described in the short expertise. An appropriate test packaging or a new sample must be made available immediately to UPS for investigation in case changes are made.
4. A liability for the damages during the transport may possibly be accepted based on the UPS transport conditions if the packaging investigated in the above mentioned short expertise was found adequate after an individual test.
Hidden damages are in principle not subject to a liability obligation based on the short expertise or the UPS transport conditions. Packaging that are not classified as adequate cannot be transmitted to UPS for shipment. UPS does not assume any liability obligation in case of non-compliance.
5. The transport and service limitations listed in the UPS transport conditions apply if no other written agreements have been made with UPS.
6. The packaging test or the short expertise is based on the drop test guidelines in accordance with DIN EN ISO 22206 and DIN EN ISO 22248.
7. The determinations in the short expertise are valid until retraction, however, not longer than two years after establishment.
8. The expertise is only valid for the company listed in the expertise.
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