

**Test Report****Ref. No: 5F705VFR1215106**

<b>Customer:</b> PB Appro Diffusion 3, Rue Niepce 21 700 Nuits Saint Georges France Customer contact: Mr. Pascal Barrer Phone.: +33 / (0) 380621540	<b>Test date:</b> July 28 <sup>th</sup> 2017 <b>Samples received:</b> June 29 <sup>th</sup> 2017 <b>Last test number:</b> same <b>Last test date:</b> December 22 <sup>nd</sup> 2015
<b>UPS Account.:</b> -	
<b>Ordered by:</b> Maxime Cazelles, UPS	

<b>Product description:</b>	1 bottle wine packaging
<b>Test bottles:</b>	<ul style="list-style-type: none"><li>UPS Reference bottle 0.75 l, Typ Schlegel / Ø 76 mm, height: 330 mm, weight: 1.20 kg</li></ul>
<b>Shipment weight:</b>	appr. 1.40 kg
<b>Condition before test:</b>	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 1 bottle wine packaging solution from PB Appro Diffusion (Europackwine), for bottles with 0.75 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 5F705VFR1215106 is provided until the end of August 2018.**



## Test procedure

### Air-conditioning of the test samples DIN EN 2233

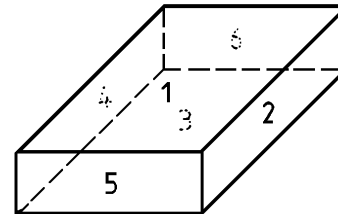
The packaging to be tested will be pre-air-conditioned in an air-condition chamber for at least 24 hours prior to the test. Air-condition preparation before the test is specified as an air-condition status of "E+20 °C / 60% r.H.

### 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.

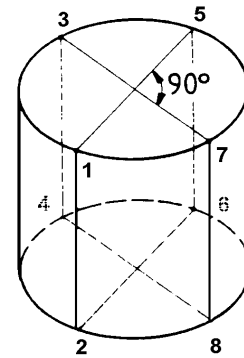


#### **Cylindrical shape**

Four corners at the top: 1, 3, 5, 7,  
and four at the bottom: 2, 4, 6, 8.

The line between this corners:

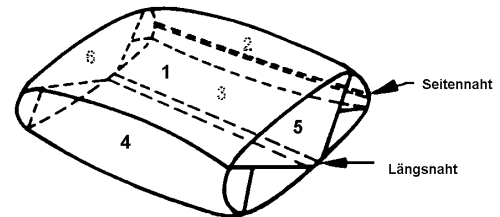
1-2, 3-4, 5-6, 7-8



#### **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:** 1 wine bottle

**Bottle type / dimensions / weight:**

Type	Weight per bottle	Dimensions Ø x h
UPS Reference Bottle: Schlegel	1.20 kg	Ø 76 mm, height: 330 mm

**Package weight (gross):** appr. 1.40 kg

**Fragility:** Robust G-value: over 110 G

### Shipping container:

**Description:**

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

### **Outer Proportions:**

LxBxH: appr. 134 x 121 x 385 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 <sup>2</sup> )
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:**

- 2 pieces engineered EPS – Foam, 2 EPS trays as as top and bottom protection for one bottle.
  - Proportions:  
One EPS tray as top and bottom protection for one bottles, code 2807164  
Proportions complete, 2 pieces:  
LxBxH: appr. 123 x 123 x 365 mm  
Proportions 1/2 pieces:  
LxBxH: appr. 123 x 61.5 x 365 mm
    - Manufacturer: Appro Diffusion, Foam type / density: EPS 23kg/m<sup>3</sup>



**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: 1003 hPa Humidity: 54 % 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 bottle was detected.



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**Result:**

Outer packaging:  
- sufficient

Closure:  
- sufficient

Cushioning:  
- sufficient

Immobilization:  
- sufficient

 <b>Reference bottle</b> Typ: Schlegel Capacity 750 ml (0,75l) Ø 74 mm Height 330 mm Weight 1.2 kg		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 28<sup>th</sup> 2017

Martin Seburschenich



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Photos

pic.1 (outer packaging)	pic.2 (EPS mold)	pic.3 (top and bottom EPS mold)
pic.4 (UPS reference bottle)	pic.5	pic.6 (outer packaging before test)
pic.7 (outer packaging after test)	pic.8 (inner packaging after test)	pic.9 (merchandise condition after test)



## **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.
9. **CONFIDENTIALITY NOTICE:** The information contained in and accompanying this document may be privileged or confidential and is intended solely for the use of the intended recipient(s).  
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