



Deutsche  
Akkreditierungsstelle  
D-PL-11130-01-02

paconsult

## TEST REPORT Revision 1

**Project No.:** 19-11918

**Test Specimen:** Shipping Unit - Plastic Case MAX430

**Client:** Plastica Panaro Srl  
Via Gramsci 438  
41054, Marano Sul Panaro (MO) / Italy

**Responsible Persons:** Margit Pochendorfer (Plastica Panaro Srl)  
Gunnar Blunk (PAConsult GmbH)

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### **Purpose:**

By means of a laboratory simulation one shipping unit "Plastic Case MAX430" is tested to environmental strains. The tests are performed, according to the specification of the client – ATA 300 Cat. 1 [1].

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### **Summary:**

The tests were performed successfully. During the tests no visible changes could be observed.

The shipping unit was not opened. The detailed visual inspection of the specimen and the evaluation of the results are performed by the client.

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**Written:** Gunnar Blunk  
(Project Leader)

  
Signature

September 10, 2019

**Reviewed /**

**Approved:** Torben Hintze  
(Head of Laboratory)

List of Revision:

<b>Revision</b>	<b>Date</b>	<b>Reason</b>
0	2019-08-26	Original Document
1	2019-09-10	Changed the weight description of the specimen in table 1 on page 3.

**With this revision all previous versions are no longer valid.**

**2. Table of Contents**

1. Cover Sheet ..... 1

2. Table of Contents ..... 2

3. Specimen ..... 3

4. Test and Equipment..... 4

    4.1 Test Facility ..... 5

    4.2 Laboratory Conditions ..... 5

    4.3 Equipment used for Test..... 5

5. Test Procedures ..... 6

    5.1 Drop Test ..... 7

    5.2 Impact Test ..... 9

6. Tests and Results ..... 10

    6.1 Drop Test ..... 10

    6.2 Impact Test ..... 10

7. Summary ..... 11

8. References ..... 11

### 3. Specimen

For the tests one shipping unit was provided by the client (see Figure 1). Table 1 specifies the shipping unit. In the following designation the specimen is abbreviated by EUT (Equipment Under Test).

**Table 1:** Specimen

EUT No	Specimen	Content	Dimensions in mm			Weight in kg
			Length	Width	Height	
1	Shipping Unit Plastic Case MAX430	With dummy weight	470	370	180	Plastic Case: 2.76 Dummy Weight: 10.19  Total Weight: 12.95
<b>Note:</b> The specified dimensions are identification values and not measurement results.						



**Figure 1:** EUT

The incoming goods control showed no visible damages at the specimen.

#### 4. Test and Equipment

The test standards and parameters are given by the client. Table 2 describes the tests, according to the specification.

**Table 2:** Test Parameters

Seq	Test	Test Parameter	Test Level	Reference
1	Drop Test	Drop Height: Face Drops 762 mm Edge Drops 915 mm Corner Drops 915 mm	<u>Face Drops:</u> Faces 3, 1, 2, 4, 5 and 6  <u>Edge Drops:</u> 2-3, 3-4, 3-5 and 3-6  2-5, 2-6, 4-5, 4-6, 1-2, 1-4, 1-5 and 1-6  <u>Corner Drops:</u> 1-2-5, 1-4-5, 1-4-6, 1-2-6, 2-3-5, 2-3-6, 3-4-5 and 3-4-6	ATA 300 B-2-1 Cat. 1 [1]
2	Impact Test	Drop Height Projectile 50 cm Projectile: Ø 32 mm Weight: 6 kg	1 Drop on Face 1	ATA 300 B-2-4 Cat. 1 [1]

#### 4.1 Test Facility

The tests were performed in the laboratory of:

PAConsult GmbH  
 Site Hamburg  
 Birkenau 3  
 22087 Hamburg  
[www.paconsult.de](http://www.paconsult.de)  
 ISTA Member ID: ST-9678



#### 4.2 Laboratory Conditions

All tests are performed under the conditions listed in Table 3, if not stated otherwise in the test report.

**Table 3:** Environmental Conditions

Temperature	15 °C - 35 °C
Relative Humidity	< 85 %
Air Pressure	860 hPa - 1060 hPa

#### 4.3 Equipment used for Test

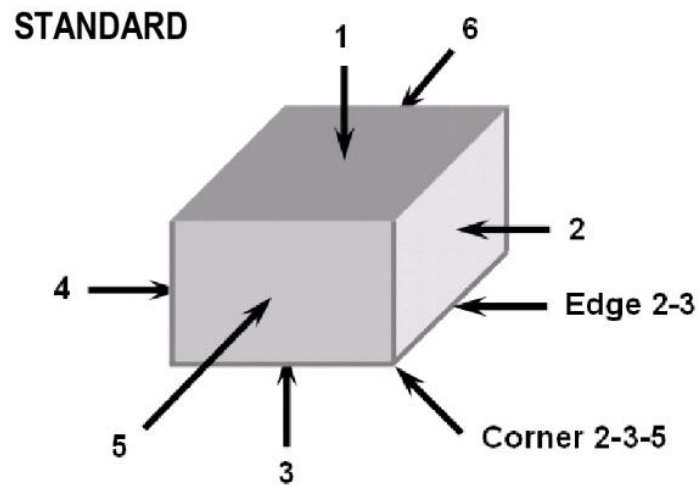
The test equipment used in the laboratory of PAConsult GmbH in Hamburg is listed in Table 4.

**Table 4:** Test Equipment

Device	Manufacturer	Type	Serial number / Version	Date of last calibration
Drop Table	Lansmont	PDT-56ED	M-15943	2018/09
Impact Projectile	PAConsult	n/a	n/a	n/a
Scale (Lab. 4)	Mettler Toledo	SB32000-P	2114375058	2018/07
<b>The calibration of the laboratory test equipment is performed annually (<math>\pm</math> 2 months).</b>				

## 5. Test Procedures

The identification of the test faces, edges, and corners of the shipping unit is shown in Figure 2.



**Figure 2:** Definitions of Faces, Edges, and Corners

### 5.1 Drop Test

The drops are performed onto a steel plate. Table 5 shows the allocation of the drop number, drop height, and shipping unit’s test faces.

**Table 5:** Drop Test Parameters

Drop Area	Orientation	Drop Height	Drops
Faces	Face 3	762 mm	27
	Face 1		27
	Face 2		27
	Face 4		27
	Face 5		26
	Face 6		26
Bottom Edges	Edge 2-3	915 mm	7
	Edge 3-4		7
	Edge 3-5		7
	Edge 3-6		6
Vertical Edges	Edge 2-5	915 mm	7
	Edge 2-6		6
	Edge 4-5		7
	Edge 4-6		6
Top Edges	Edge 1-2	915 mm	7
	Edge 1-4		7
	Edge 1-5		7
	Edge 1-6		6
Bottom Corners	Corner 2-3-5	915 mm	5
	Corner 2-3-6		5
	Corner 3-4-6		5
	Corner 3-4-5		5
Top Corners	Corner 1-2-5	915 mm	5
	Corner 1-4-5		5
	Corner 1-4-6		5
	Corner 1-2-6		5

Figure 3 exemplarily shows the test setups.

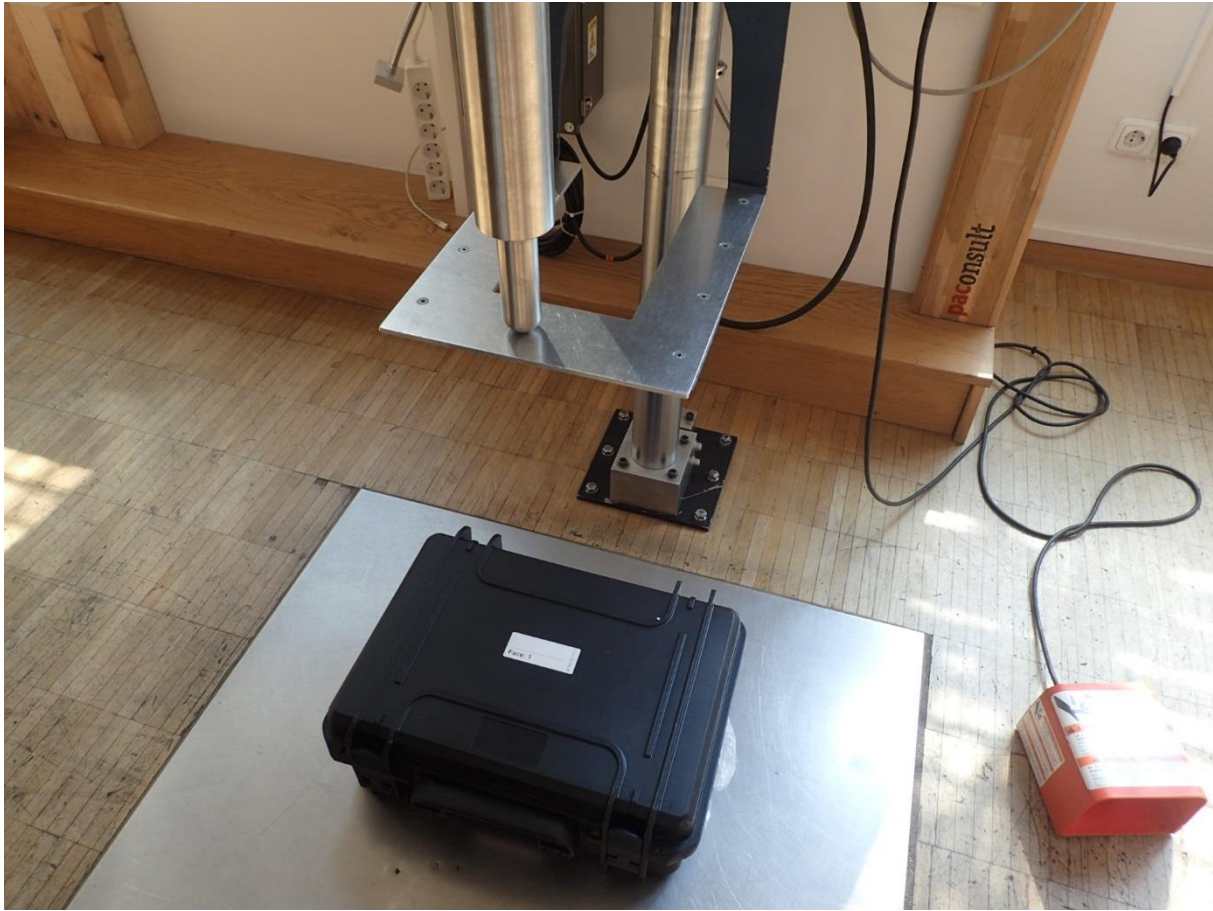


**Figure 3: Drop Test – Setups**



## 5.2 Impact Test

The impact projectile was placed onto the drop table, 50 cm above the top surface of the specimen. The drop was performed once onto the top face. Figure 4 shows the test setup.



**Figure 4:** Impact Test - Setup

## 6. Tests and Results

### 6.1 Drop Test

The test was performed using the specified parameters in Table 2. During and after the test no visible changes were observed.

### 6.2 Impact Test

The test was performed using the specified parameters in Table 2. After the test no visible changes were observed.

## 7. Summary

The tests were finished successfully. During the tests no visible changes were observed. Table 6 summarizes all test results.

**Table 6:** Summary Results

Results Environmental Simulation - Plastic Case MAX430 -		
Seq	Test	Result
1	Drop Test	no visible changes were observed
2	Impact Test	no visible changes were observed

The detailed visual inspections of the contents and the evaluation of the results are performed by the client.

## 8. References

[1] ATA Specification 300 Revision 2008.1; 2008

### Note

This test report may only be reproduced in its entirety and without alterations. Publication in parts is subject to the approval by the test laboratory. The test results refer exclusively to the designated test specimens. Test reports without signature are not valid.