



LICENCE

for a design of packaging for the carriage of dangerous goods

Licence No.:

8107

Date: 2017-11-17

Design: 4GV Fibreboard Boxes

Applicant: Mondi Wellpappe Ansbach GmbH
Corrugated Packaging

Robert-Bosch-Straße 3
D 91522 Ansbach

LICENCE FOR A DESIGN OF A PACKAGING FOR THE CARRIAGE OF DANGEROUS GOODS

1 Legal Basis

Dangerous Goods Carriage Law - Federal Law Gazette I No. 145/1998 in the version of Federal Law Gazette I No. 91/2013

Roads with public traffic:

European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), Federal Law Gazette No. 522/1973, in the version of Federal Law Gazette III No. 34/2017

Railroad:

Convention concerning International Carriage by Rail (COTIF), Federal Law Gazette No. 225/1985, Appendix C - Regulations concerning the International Carriage of Dangerous Goods by Rail (RID), Federal Law Gazette III No. 137/1967, in the version of Federal Law Gazette III No. 112/2017

Waterways:

European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN), Federal Law Gazette III No. 67/2008, in the version of Federal Law Gazette III No. 79/2017

Transport by sea:

Federal Law Gazette No. 387/1996 with IMDG Code, Amendment 38-16

Civil Aviation:

Federal Law Gazette No. 97/1949 with ICAO-TI, Edition 2017-2018

in connection with:

Accreditation of the Austrian Institute for Packaging (ÖIV) as Testing Laboratory (the Testing Laboratory was accredited according to ISO/IEC 17025 as Testing Laboratory with the ID-number 0013 for the first time at 1st December 1995 with Zl. 92714/501-IX/2/95 by Akkreditierung Austria / Federal Ministry of Science, Research and Economy for the scopes named in the notification and published under www.bmwfw.gv.at/akkreditierung)

Notification of the Republic of Austria, Federal Ministry of Transport, Section IV, concerning the allocation of a short marking to identify packagings which have been tested by the ÖIV in accordance with Federal Law Gazette No. 143/1981 (Notification of 1981-09-21, Zl. 75.170/1-IV/6-81)

2 Applicant

Mondi Wellpappe Ansbach GmbH
Corrugated Packaging

Robert-Bosch-Straße 3
D 91522 Ansbach

3 Packaging Manufacturer

Identical to applicant

4 Description of the Packaging Design

Design "90/60 - 7773"

Folding boxes made of double wall corrugated fibreboard (sort "Concor 69800", composition according to the applicant 400 KLB/160 W/280 TLB/160 W/400 KLB, flutes CA) with outer bottom and top flaps meeting (FEFCO 0201); in the boxes a bag made of plastics (foil-thickness min. 100 µm), filled with absorbent material "Vermiculite" and leakproof sealed;

Manufactured with a glued and stitched joint;

Box closure: double-L-closure with a fibre reinforced self-adhesive plastics tape (width: 75 mm);
the box is additionally strapped twice with bands made of plastics (min. width: 11.5 mm) parallel to its broad side edges;

Nominal inside dimensions: 570 x 370 x 430 mm (L x B x H);

Outside dimensions: 585 x 385 x 470 mm (L x B x H);

The thickness of cushioning material between inner packagings and between inner packagings and the outside of the packaging shall not be reduced below the corresponding thicknesses in the tested packaging according to our Test Report Nr. 8107/10/17;

Maximum total combined gross mass of inner packagings: 41.58 kg;

Maximum gross mass of the filled and sealed package: 53 kg;

Original filling material: articles or inner packagings of any type for solids or liquids;
For the tests glass bottles as inner packagings filled with water and lead shot were used.

5 Requirements for the Packaging Design

The packaging design must be in conformity with the design type which was tested according to the below-mentioned Test Report for a design type **4GV** ("Fibreboard Boxes") in accordance with chapter 6.1, requirements for the construction and testing of packagings of enclosure A to the European Agreement regarding the International Carriage of Dangerous Goods by Road (ADR).

Similar regulations are in force for the transport by train (RID), by ship (IMDG-Code) and by plane (ICAO-TI), whereby the test requirements regarding the packagings for carrying dangerous goods by the various transport operators have been largely harmonised, because of the acceptance of the UN-Recommendations ("Orange book", Recommendations prepared by the United Nations Committee of Experts on the Transport of Dangerous Goods, 19th revised edition, 2015).

Therefore the mentioned Test Report is an integral part of this Licence:

Test Report No.:	Date:	Testing House:
8107/10/17	2017-11-17	Österreichisches Institut für Verpackungswesen

6 Manufacturing of the Packagings

Packagings of this licensed design may be mass-produced. By affixing the mark it is certified that mass-produced packagings meet all the requirements of the licensed packaging designs and that all conditions and supports listed in this Licence are fulfilled.

7 Marking

Packagings, when mass-produced in accordance with the tested design, must be durable, legible and readily visible marked as follows:



*) the last two digits of the year of production of the fibreboard boxes

All letters, numerals and symbols shall be at least 12 mm high and the marking or a duplicate thereof shall appear on the top or on a side of the packaging;

8 Conditions for the Use of the Packagings

- 8.1 Packagings, mass-produced in accordance with this licensed packaging design and marked according to point 7 may be used for dangerous goods if such packagings are permitted by the regulations of the various transport operators. If used for transportation by ship, suitable qualities of papers for liners and flutes should be used and the glue of the corrugated board should be wet strength.
- 8.2 According to the capability of the packagings, dangerous goods to be transported can be classified in packaging group I, II or III.
- 8.3 The total combined gross mass of the inner packagings must not exceed 41.58 kg.
- 8.4 The gross mass of the packages must not exceed 53 kg.
- 8.5 The thickness of cushioning material between inner packagings and between inner packagings and the outside of the packaging shall not be reduced below the corresponding thickness in the originally tested packaging. When fewer or smaller inner packagings are used (as compared to the inner packagings used in the drop test) sufficient additional cushioning material shall be used to take up void spaces.

- 8.6 Inner packagings containing liquids shall be completely surrounded with a sufficient quantity of absorbent material to absorb the entire liquid contents of the inner packagings.
- 8.7 In addition to the UN-Mark specified in point 7 the packagings have to bear other prescribed markings, symbols and dangerous goods labels.
- 8.8 Those parts of packagings which are in direct contact with dangerous substances should not be affected by chemical or by other action of those substances. If necessary, they should be provided with a suitable inner coating or treatment. Such parts of packagings should not incorporate constituents liable to react dangerously with the contents so as to form hazardous products, or to weaken them significantly.
- 8.9 The applicant/manufacturer named in point 2/3 must be able to prove that all conditions concerning the usage of these packagings are well known to everybody who uses/fills these packagings for/with dangerous goods.
- 8.10 Direction is made to the necessary approval and supervision of the quality assurance programme according to the “BAM – Gefahrgutregeln (BAM-GGR), BAM-GGR 001, Verfahren der Qualitätssicherung bei der Herstellung und Überwachung von Verpackungen, Großverpackungen und Großpackmitteln (IBC) für den Transport gefährlicher Güter“.

9 Others

The packaging design is in accordance with the test requirements for packagings for the carriage of dangerous goods as stated in the international agreements for traffic by road (ADR), rail (RID), sea (IMDG-Code) and air (ICAO-TI/IATA-DGR). This also covers the test requirements laid down in the Recommendations of the United Nations (UN).

This Licence is given but may be revoked at any time.

10 Licence

The packaging design as prescribed in point 4 is licensed under the condition that the requirements of point 5 - 8 are fulfilled.

ÖSTERREICHISCHES INSTITUT FÜR VERPACKUNGSWESEN



Dipl.-Ing. (FH) M. Auer, MSc
Head of Institute



Ing. Ulrike Seher
Executive Officer

This Licence No. 8107 consists of 7 pages.



TEST REPORT

No. 8107/10/17

Mondi Wellpappe Ansbach GmbH
Corrugated Packaging

Robert-Bosch-Straße 3
D 91522 Ansbach

The results of the investigations carried out only concern the submitted sample.

The accreditation of the Testing House and this Test Report do not constitute an authorization of the test samples by the accreditation body.

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If the client refers to this Test Report, he has to add "Österreichisches Institut für Verpackungswesen (ÖIV)" and the following article:



THE TESTING LABORATORY WAS ACCREDITED ACCORDING TO ISO/IEC 17025 AS TESTING LABORATORY WITH THE ID-NUMBER 0013 FOR THE FIRST TIME AT 1ST DECEMBER 1995 WITH ZL. 92714/501-IX/2/95 BY AKKREDITIERUNG AUSTRIA / FEDERAL MINISTRY OF SCIENCE, RESEARCH AND ECONOMY FOR THE SCOPES NAMED IN THE NOTIFICATION AND PUBLISHED UNDER WWW.BMFWF.GV.AT/AKKREDITIERUNG.

1 Submitted Sample

1.1 Applicant

Mondi Wellpappe Ansbach GmbH
Corrugated Packaging

Robert-Bosch-Straße 3
D 91522 Ansbach

1.2 Packaging Manufacturer

Identical to applicant

1.3 Description of the Packaging Design

1.3.1 **Design “90/60 - 7773”**

Folding boxes made of double wall corrugated fibreboard (sort “Concor 69800”, composition according to the applicant 400 KLB/160 W/280 TLB/160 W/400 KLB, flutes CA) with outer bottom and top flaps meeting (FEFCO 0201); in the boxes a bag made of plastics (foil-thickness min. 100 µm), filled with absorbent material “Vermiculite” and leakproof sealed; Manufactured with a glued and stitched joint;

Box closure: double-L-closure with a fibre reinforced self-adhesive plastics tape (width: 75 mm); the box is additionally strapped twice with bands made of plastics (min. width: 11.5 mm) parallel to its broad side edges;

Nominal inside dimensions: 570 x 370 x 430 mm (L x B x H);

Outside dimensions: 585 x 385 x 470 mm (L x B x H);

Maximum gross mass of the filled and sealed package: 94.4 kg;

Inner Packagings: 3 layers each 36 100-ml-glass bottles (outside diameter: 56 mm; height <incl. closure>: 103 mm; gross mass: 770 g) with plastic screw closures were used for the drop tests; see attached packaging layout;

Original filling material: articles or inner packagings of any type for solids or liquids;
For the tests glass bottles as inner packagings filled with water and lead shot were used.

The use of other packaging methods or components may render this Test Report invalid.

2 Requested Investigations

In accordance with the requirements for the construction and testing of packagings of chapter 6.1, laid down in enclosure A of the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), each packaging, except the inner packagings of combination packagings, must conform with a packaging design that has been tested and licensed in accordance with the regulations of chapter 6.1 of the above named enclosure.

Similar regulations are in force for the transport by train (RID), by ship (IMDG-Code) and by plane (ICAO-TI), whereby the test requirements regarding the packagings for carrying dangerous goods by the various transport operators have been largely harmonised, because of the acceptance of the UN-Recommendations ("Orange book", Recommendations prepared by the United Nations Committee of Experts on the Transport of Dangerous Goods, 19th revised edition, 2015).

The submitted samples should be tested for the packaging specification **4GV** („Fibreboard Boxes“) for Packaging Groups I, II and III, and in case of positive results an UN-Mark (Packaging Licence No.) should be established.

Additionally the outer cover (top surface) of the corrugated fibreboard of the packagings should be tested in the respect whether it complies concerning its water absorptiveness with the requirements of subsection 6.1.4.12 of enclosure A of the European Agreement concerning the International Carriage of Dangerous Goods by Road.

3 Investigations Carried out - Results of Investigations

Receipt of test samples: 2017-10-31

The air-conditioning of the test samples was made under the standard climate condition 23 °C/ 50 % relative humidity till the achievement of constant weight. The tests were carried out under the same climatic conditions.

The submitted samples (UN 4G/X60/Y75/Z85/S/17/A/PA-02/3761-AN) were folding boxes, which were tested and licensed in connection with our certificate No. 3761/6/91.

Considering the fact, that samples of this kind were tested in the respect of the determination of water absorptiveness - Cobb-Test - a newly test was disclaimed.

3.1 Packaging Tests

The tests were carried out in accordance with the instructions of the ADR (as described in section 6.1.5, test requirements for packagings).

3.1.1 Drop Tests

The tests were done at Mondi Wellpappe Ansbach GmbH, Abteilung QS, Robert-Bosch-Str. 3, D 91522 Ansbach, recognized test house by BAM, Bundesanstalt für Materialforschung und -prüfung, in the presence of the Investigator.

The drop of the packages was done by means of an electro-pneumatic hook, where a belt was used for hanging up/positioning the samples. The impact target was a steel plate.

The drop height was (according to the required packaging groups) **1.8 m**.

None of the tested samples was leaking or showed any appreciable damage after the tests. The inner packagings were leakproof.

Date of tests: 2017-10-05

3.1.2 Stacking Tests

The tests were carried out with an electronically material testing machine supplied by Comp. Zwick, type BX1-FR050TH.A1K-002.

The empty test samples were subjected to a force applied to the top surface of the test samples equivalent to the total weight of identical filled packages, which might be stacked on it, up to a height of 3 metres (including test sample). The tests were done in load direction side 1 - side 3 (identification of sides according ÖNORM EN ISO 22206:1992 "Packaging; complete, filled transport packages; identification of parts when testing").

Duration of the test: 24 hours.

According to the above mentioned conditions a constant pressure load of **4990 Newton** was applied to the samples.

None of the samples tested showed any considerable damage. During and after the tests no deformation or other signs of early breakdown that could affect the strength of the cases or could cause an instability of the stack were detected.

Date of tests: 2017-11-03 to 2017-11-06

ÖSTERREICHISCHES INSTITUT FÜR VERPACKUNGSWESEN



Dipl.-Ing. (FH) M. Auer, MSc
Head of Institute and Investigator



Ing. Ulrike Seher
Executive Officer

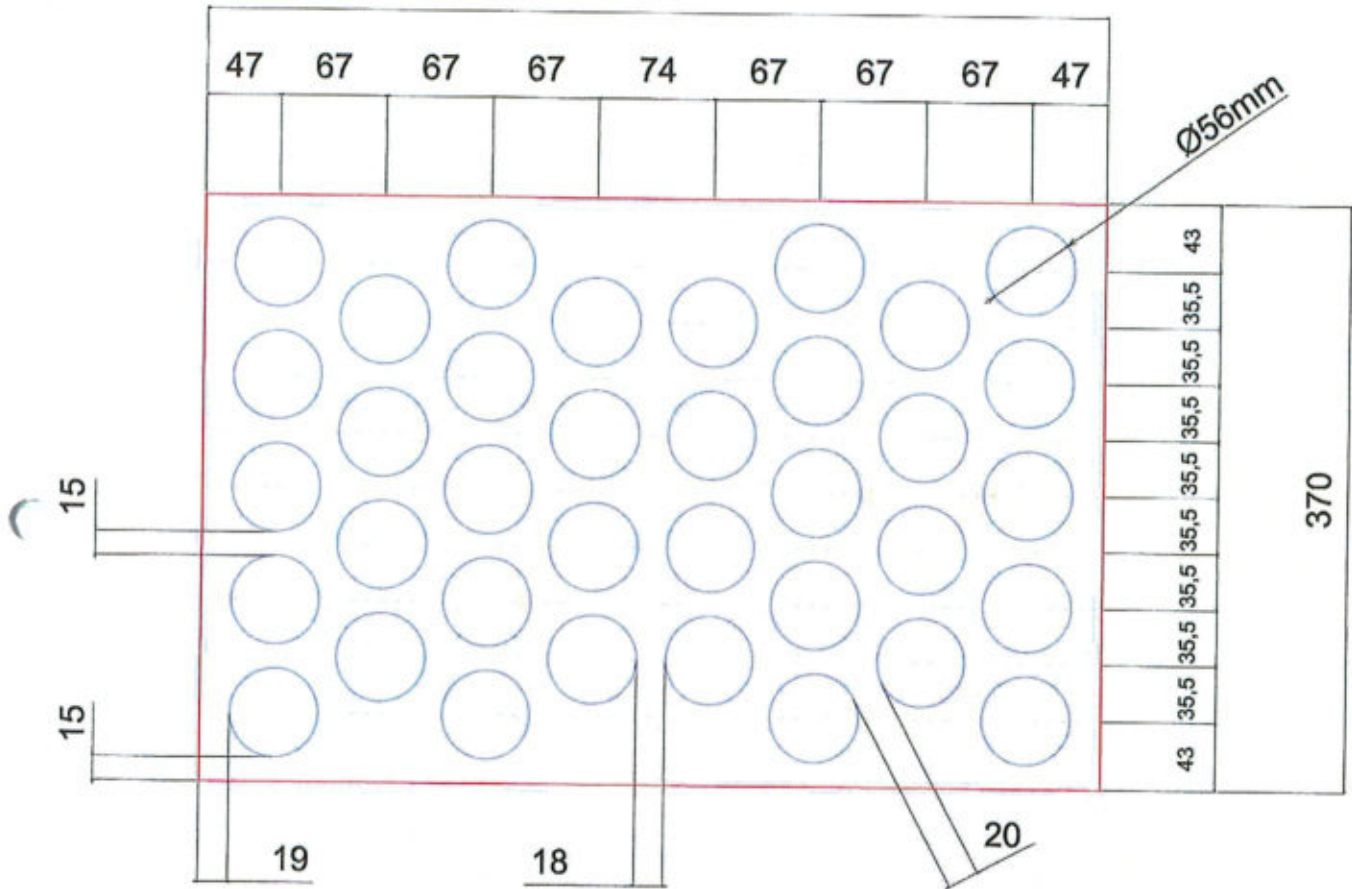
Vienna, 2017-11-17

This Test Report No. 8107/10/17 consists of 5 pages and 1 packaging layout.

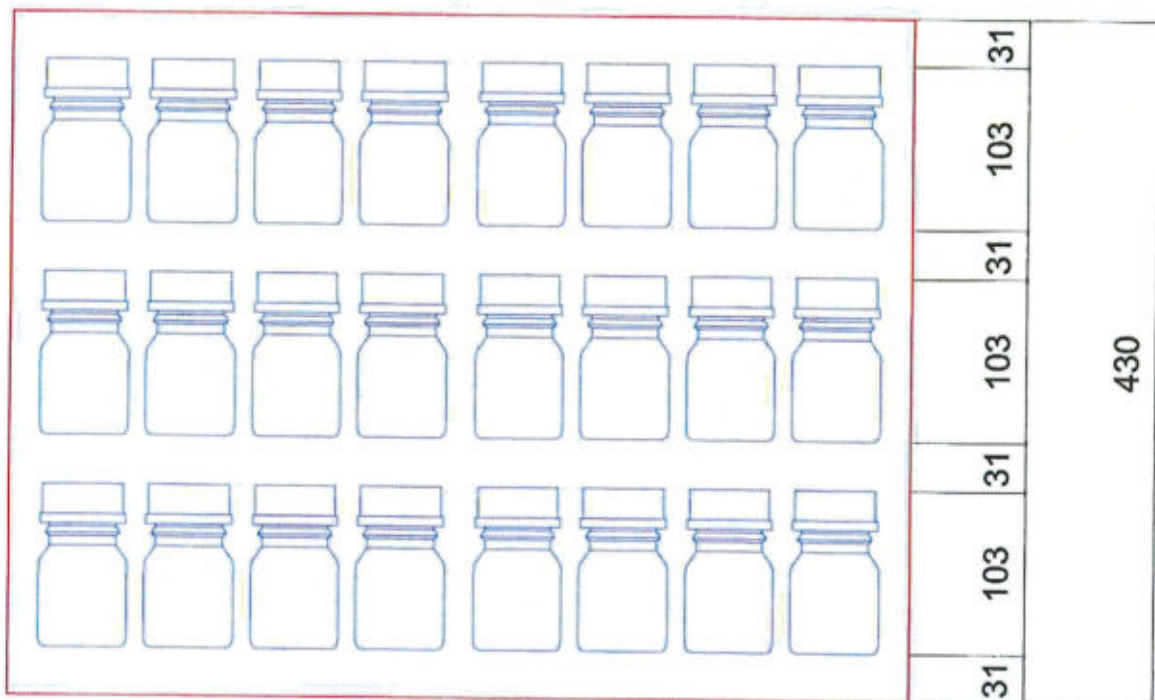
90/60

570x370x430 mm

570



108 x 100 ml (770g) = 83,16kg



Die Abstandsmaße sind aufgerundet