



BELGISCH VERPAKKINGSINSTITUUT

Besloten Vennootschap met Beperkte Aansprakelijkheid

B.V.I.


DATE : Zellik , 18.11.02

REPORT Nr. : AM/am/G-02.199

OBJECT : Test on plastic receptacle (3H1) intended to be used for the transport of dangerous goods of the Packaging groups II and III.
Receiving date test samples : October 2002
Testing period : October- November 2002

The use of the receptacles is submitted to the authorization of the competent authority (ADR-RID,IMDG,ICAO)


Ing. M. Wittebolle
General Manager


A. Mertens
Analyst Consultant
Packaging Laboratory

De totale of gedeeltelijke reproductie van dit document is verboden zonder machtiging van het B.V.I.

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I. Presented receptacles :

15 plastic receptacles, conform the description (3H1) as mentioned in the different regulations.

Technical data :

1. Receptacle :

Type: plastic receptacle (3H1) as mentioned in the different regulations.
see plan MENO

Manufacturer :

Outer dimensions	: -height	: 326 mm
	-width	: 164 mm
	-length	: 318 mm
Nominal weight	: 670 g	
Determined weight	: 679 g	
Nominal capacity	: 10 Lit.	
Total capacity	: 11 Lit.	
Material	: Basel 5021 DX	



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2. Closure :

- type : Screwcap
- Producer : Resibel
- material : Rigidex HD 5050 EA
- Type : closure with or without child resistance system + emptying spout
- Gasket : flat gasket

3. Identification samples :

Standard liquid: MIXTURE OF HYDROCARBONS

Sample nr	1	2	3	4	5	6	7	8	9	10	11	12	Average
Weight in g	683	682	682	678	681	680	669	666	669	680	689	686	679

II. Preconditioning :

The plastic receptacles have been tested with the following standard liquids :

- mixture of hydrocarbons (Shellsol H)

The receptacles were preconditioned during 21 days at a temperature of 40°C.
The first and the last 24° hrs the receptacles were placed in the inverted position

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Test program :

Standard liquid : MIXTURE OF HYDROCARBONS

Performed tests for plastic receptacles (3H1) prescribed by :
-ADR-RID – Part 6

1. Drop test :

Number of tested receptacles : 6
Conditioning : -18°C
Filling : 98% of the total capacity (water + antifreeze)
Target : steel plate
Drop types : a) drop on the closure : 3 receptacles
: b) drop on the weakest point : 3 receptacles
Drop height : 1.20 m

2. Leakproofness test :

Number of receptacles : 3
Conditioning : ambient temperature
Test pressure : 20 kPa
Duration of the test : 5 minutes

3. Hydraulic pressure test :

Number of tested receptacles : 3
Conditioning : ambient temperature
Test pressure : 200 kPa
Duration of the test : 30 minutes

4. Stacking test :

Number of receptacles : 3
Conditioning : 28 days at 40°C
Filling : 98 % of total capacity
Filling product : mixture of hydrocarbons
Applied force :

$$\{(3000/326)-1\} \times (11 \times 0.98 \times 1.0 + 0,67) = 94 \text{ kg}$$

This force is equivalent to the weight of receptacles, identical to those presented, stacked 3 m high and filled with a liquid with a density of 1.0

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Standard liquid : MIXTURES OF HYDROCARBONS

1. Drop test :

- a) Drop on the closure : no signs of leakage
b) Drop on the weakest point : no signs of leakage

2. Leakproofness test :

No leakage is noticed.

3. Hydraulic pressure test :

No leakage is noticed.

4. Stacking test :

No receptacle shows any deterioration to cause unsteadiness in stocks, or to reduce its strength or tightness.

V. Conclusion :

Standard liquid : MIXTURE OF HYDROCARBONS

The presented receptacles meet successfully the performance tests prescribed for the transport of dangerous goods of packing group II and III, and may be used in connection with the following conditions :

- maximal stacking height : 3 m
 - maximal density of the contents : 1.0
 - maximal vapor pressure of the content at 50°C : 170 kPa
- the content may not affect the material of the receptacles

The receptacles may only be used, for the transport of dangerous goods, by road, rail, sea or air with the agreement of the concerned competent authority.

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Zellik, 18.11.02

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The use of the UN mark hereafter, is still submitted to the authorization of the competent authority.

The hereafter mentioned packaging:

- plastic receptacles (3H1)

which is the subject of report:

- G-02.199 of 18.11.02

Obtain hereafter-mentioned UN mark:



3H1/Y1.0/200/*
B/HJP.**

* :Year of manufacture

** :Registration number to be delivered by the authority.

as far as the use of the above-mentioned packaging in the IMDG,ICAO and ADR-RID prescriptions is provided for.

The stacking test was effectuated for a stacking height of 3 m.

Firm : Henk Jagtenberg Plastics B.V.
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