



Référence: E13*27R04/01*4013*01

Annexes: - Rapport technique
- Fiche de renseignements du constructeur

Luxembourg, le 15 janvier 2019

COMMUNICATION



concernant 2/: - ~~HOMOLOGATION ACCORDEE~~
concerning 2/: APPROVAL GRANTED
- ~~HOMOLOGATION ETENDUE~~
APPROVAL EXTENDED
- ~~HOMOLOGATION REFUSEE~~
APPROVAL REFUSED
- ~~HOMOLOGATION RETIREE~~
APPROVAL WITHDRAWN
- ~~ARRET DEFINITIF DE LA PRODUCTION~~
PRODUCTION DEFINITELY DISCONTINUED

d'un type de triangle de présignalisation en application du Règlement N° 27
of a type of advance-warning triangle pursuant to Regulation N° 27


Numéro d'homologation:

Approval number:

E13*27R04/01*4013*01

Marque d'homologation:

Approval mark:

 27R044013

**1. Marque de fabrique ou de commerce
du triangle de présignalisation:**

Trade name or mark of the advance-warning triangle:

Reflex-Polska
Reflex-Italy
WÜRTH
GENART

Type:

Type:

MICRO

2. Nom du fabricant:

Manufacturer's name:

Reflex-Polska sp.zo.o.

3. Adresse:

Address:

Reflex-Polska sp.zo.o.
ul. Kokotek 27
41-700 Ruda Śląska
Poland

4. Le cas échéant, nom de son représentant:

If applicable, name of the manufacturer's representative:

not applicable

5. **Adresse:**
Address: not applicable
6. **Description sommaire du triangle de présignalisation:**
Brief description of the advance-warning triangle: Equilateral triangle with 3 equally dimensioned catadioptré reflectors and one ECE-foil.
7. **Présenté à l'homologation le:**
Submitted for approval on: 14.12.2018
8. **Autorité déléguée:**
Assigned authority: *Société Nationale de Certification et d'Homologation L-5201 Sandweiler*
- Service technique chargé des essais d'homologation:**
Technical service conducting approval tests: Luxcontrol SA
B.P. 349
L-4004 Esch-sur-Alzette
9. **Date du procès-verbal délivré par ce service:**
Date of test report issued by that service: 17.12.2018
10. **Numéro du procès-verbal délivré par ce service:**
Number of test report issued by that service: LCA 54 0468 001 18
11. **L'homologation est 1:**
Approval 1: ~~accordée~~ / étendue / ~~refusée~~ / ~~retirée~~
~~granted~~ / extended / ~~refused~~ / ~~withdrawn~~
12. **Remarques:**
Remarks: not applicable

13. **Lieu:** Luxembourg
Place:

14. **Date:** 15 janvier 2019
Date:

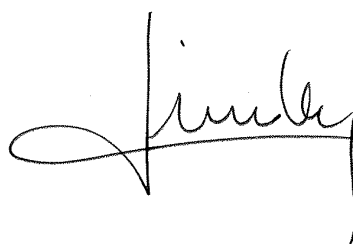
15. **Signature:**
Signature:

**Pour le Ministre de la Mobilité
et des Travaux publics**



**Alain DISFVISCOUR
Conseiller**

Pour la SNCH



**Laurent LINDEN
Attaché de Direction**



16. **Sont annexées à la présente communication les pièces suivantes qui portent le numéro d'homologation indiqué ci-dessus:**

**... dessins cotés;
... photographies**

The following documents, bearing the approval number shown above are annexed to this communication:

... dimensioned drawings;
... photographs

voir "INDEX DU DOSSIER D'HOMOLOGATION" ci-joint / see "INDEX TO TYPE-APPROVAL REPORT"

Modifications faisant l'objet de la présente extension:

Reasons of extension:

see contents of the extension, Annex A, Page 1.

1/ Biffer les mentions inutiles/ Strike out what does not apply



Référence: E13*27R04/01*4013*01

Annexes: - Rapport technique
- Fiche de renseignements du constructeur

Luxembourg, le 15 janvier 2019

Index du dossier d'homologation Index to type-approval report

| | | |
|----|--|---|
| | Numéro d'homologation: Approval number: | E13*27R04/01*4013*01 |
| | Révision: Revision: | 00 |
| | Marque de fabrique ou de commerce: Trade name or mark: | <i>Reflex-Polska</i> <u><i>Reflex-Italy</i></u> <u><i>WÜRTH</i></u> <u><i>GENART</i></u> |
| | Type: Type: | <i>MICRO</i> |
| 1. | Procès-verbal d'essai: Test report: | N° LCA 54 0468 001 18 |
| | - Technical report: | Pages 1 to 8 |
| | - Index to information package: | Annex A - Page 1 |
| 2. | Dossier du constructeur: Report of the manufacturer: | N° --- |
| | - Technical description: | Annex B - Page 1 |
| | - Drawing of the device: | Annex B - Page 2 |
| 3. | Autres documents annexés: Other documents annexed: | not applicable |
| 4. | Date de délivrance de l'homologation initiale: Date of issue of initial type approval: | 06.12.2017 |
| 5. | Date de la dernière délivrance de pages révisées: Date of last issue of revised pages: | not applicable |
| 6. | Date de la dernière délivrance d'une homologation révisée: Date of last extension: | 15.01.2019 |

TECHNICAL REPORT

No.: LCA 54 0468 001 18

Inspection concerning the

Advance-Warning Triangles

performed according to the

ECE Regulation No. 27

Type: **MICRO**
Manufacturer: **Reflex-Polska Sp.z o.o**
ul. Kokotek 27
PL – 41-700 Ruda Śląska

Extension 1 to ECE Type Approval no.: E13*27R00*27R04*4013*00

Index:

| | | |
|----------------------------------|------|---|
| 1. General | Page | 2 |
| 2. Inspections and their results | Page | 3 |
| 3. Evaluation of test results | Page | 7 |
| 4. Statement of compliance | Page | 8 |
| Annex (beginning with an index) | | |

A reproduction of this report and its annexes, except in full, is prohibited without the written permission of Luxcontrol s.a.

...



1. **General**

1.1. **Test Provisions**

The inspection was carried out according to the requirements of the ECE-Regulation No. 27 including the supplement 1 to the 04 series of amendments which entered into force on 10 October 2017.

1.2. **Information concerning the approval of advance-warning triangles**

The statements below apply to the previous ECE type-approval as referred to on page 1.

1.2.1. () Numbering according to the communication following Annex 1 of Regulation No. 27

(1.) Trade name or mark of the advance-warning triangle:

Reflex-Polska
Reflex- Italy
WÜRTH
GENART

Type: MICRO

(2.) Manufacturer's name:

Reflex-Polska Sp.z o.o

(3.) Address:

ul. Kokotek 27
PL – 41-700 Ruda Śląska

(4.) If applicable, name of manufacturer's representative:

not applicable

(5.) Address:

not applicable



(6.) Brief description of the advance-warning triangle:

Equilateral triangle with 3 equally dimensioned catadioptr reflectors and one ECE-foil.

(7.) Submitted for approval on:

December 14, 2018

(12.) Remarks:

not applicable

2. Inspections and their results

2.1. Version of the tested vehicle

Following version has been used for testing (if not stated in part 1.2.2. of this report):

Not applicable

2.2. Inspection items

| | Location of test: | Date of receipt of test item: | Date of test: | Inspector: |
|-------------|---|-------------------------------|--|------------|
| Main report | see item (3.) Bosmal Sarni Stok 93 PL – 43 300 Bielsko Biala | Sept. 5, 2017 | Sept. 5-14, 2017 Sept.25-Oct.13, 2017 | D. Durazzi |
| Ext.1 | Luxcontrol S.A. L-4004 Esch/Alzette | Not applicable | December 14, 2018 | D. Durazzi |

2.2.1. Markings:

The trade mark is marked clearly legible and indelible on the front of the advance-warning triangle.

Space for the approval marks and additional symbols is provided on the triangle.

2.2.2. General requirements:

The advance-warning triangle is open in its centre and has a red border which outer part is made of retro-reflecting material and which inner part is made of fluorescent material.

The advance-warning triangle is manufactured in such a way to retain its required properties and its satisfactory functioning when used in a customary manner (on the road or in a vehicle).

The optical units of the advance-warning triangle cannot be disassembled easily. The various parts of the advance-warning triangle give good stability on the road and cannot be disassembled easily. The triangle can be folded in



order to be placed in its protective cover. The movable parts cannot be detached.

When in its position of use on the road, the front face of the advance-warning triangle does not form an angle of more than 5° with its base plane. The front of the advance-warning triangle can be easily cleaned. The advance-warning triangle (including its support) does not present any sharp edges or corners.

The advance-warning triangle is accompanied by its protective cover and a copy of the instructions referred to in paragraph 3.3. of the Regulation.

2.2.3. Particular specifications:

2.2.3.1. Shape and dimensions:

The requirements regarding shape and dimensions of the triangle as well as its support are met.

2.2.3.2. Colorimetric specification:

2.2.3.2.1. Retro-reflecting devices:

The colorimetric properties of the tested retro-reflectors are situated within the limits prescribed in paragraph 7.2.1.2. of the Regulation.

2.2.3.2.2. Fluorescent materials:

The colorimetric properties of the reflected light as well as the part emitted by fluorescence are situated within the limits prescribed in paragraph 7.2.2.2. of the Regulation.



2.2.3.3. Photometric specification:

2.2.3.3.1. Retro-reflecting devices:

The ratio of the greatest to the smallest measured CIL-Value, measured at random slices of 50 mm length, is less than 3 (only at 20').

Results of the photometric test of the advance-warning triangle (in mcd/Lx):

| Sample 1 (max) | | Illumination angles (β) | | | | | | | |
|-----------------------------------|-------|---------------------------------|-------------------------|-------------------------|-------------------------|---------------------|---------------------|-------------------------|-------------------------|
| Vertical | V | 0° | 0° | 0° | 0° | 0° | 0° | +20° | -20° |
| Horizontal | H | +5° | -5° | +30° | -30° | +40° | -40° | 0° | 0° |
| Angles of divergence (α) | 20' | 8 000 (8 000) | 8 151 (8 000) | 2 947 (1 750) | 3 104 (1 750) | 642 (600) | 683 (600) | 5 147 (4.000) | 5 104 (4.000) |
| | 1°30' | 1 541 (600) | 1 553 (600) | 323 (100) | 315 (100) | 64 (50) | 68 (50) | 612 (200) | 697 (200) |

| Sample 3 (min) | | Illumination angles (β) | | | | | | | |
|-----------------------------------|-------|---------------------------------|-------------------------|-------------------------|-------------------------|---------------------|---------------------|-------------------------|-------------------------|
| Vertical | V | 0° | 0° | 0° | 0° | 0° | 0° | +20° | -20° |
| Horizontal | H | +5° | -5° | +30° | -30° | +40° | -40° | 0° | 0° |
| Angles of divergence (α) | 20' | 8 184 (8 000) | 8 362 (8 000) | 2 837 (1 750) | 3 230 (1 750) | 610 (600) | 659 (600) | 5 181 (4.000) | 5 245 (4.000) |
| | 1°30' | 1 513 (600) | 1 523 (600) | 330 (100) | 329 (100) | 65 (50) | 60 (50) | 589 (200) | 702 (200) |

Remark: Values between brackets () are the minimum required values in mcd/Lx)

...



2.2.3.3.2. Fluorescent materials:

The luminance factor including the luminance by reflection and fluorescence is not less than 30 %.

2.2.4. Particular tests:

| Paragraph in Annex 5 | Test of | Requirements |
|----------------------|--|------------------|
| 5. | clearance to ground | fulfilled |
| 6. | mechanical solidity | fulfilled |
| 7. | heat and low temperature resistance | fulfilled |
| 8. | water resistance | fulfilled |
| 9. | resistance to fuels | fulfilled |
| 10. | stability against wind | fulfilled |
| 11. | resistance of the retro-reflecting device | fulfilled |
| 12. | weather-resistance of the luminance factor and of the colour of the fluorescent material | fulfilled |

Details of wind stability test:

| Sample N° | Direction of wind | Behaviour at 60 km/h | Max. allowed disposition | disposition | Result |
|-------------------------------|-------------------|----------------------|--------------------------|-------------|--------|
| Micro N°1 Weight: 0.396 kg | front | standing | 10° | 10° | pass |
| | rear | standing | 10° | 10° | pass |
| Micro N°2 Weight: 0.396 kg | front | standing | 10° | 10° | pass |
| | rear | standing | 10° | 10° | pass |
| Micro N°3 Weight: 0.396 kg | front | standing | 10° | 10° | pass |
| | rear | standing | 10° | 10° | pass |

2.3. **Remark**

2.3.1. General:

The inspection results are only applicable to items which have been tested.

2.4. **Test facilities**

Calibration of measuring and test equipment used to carry out the inspections is in accordance with the ECE-Regulation stated in 1.1. of this report and with ISO 17025.



3. **Evaluation of test results**

3.1. **Variants and equipment covered**

The tests carried out cover the following vehicle variations and equipment as far as these are relevant for advance-warning triangles:

- As stated in information folder

3.2. **Remarks**

3.2.1. Main report:

not applicable

3.2.2. extension 01:

Commercial description list has been modified.
The existing test results are not affected by the changes.



4. **Statement of compliance**

The inspections items and measurements carried out have shown the compliance of the technical unit described in this report and the attached Annex with the requirements of the ECE-Regulation No. 27 including the supplement 1 to the 04 series of amendments entered into force on 10 October 2017.

Esch-sur-Alzette, Decembre 17, 2018

Luxcontrol s.a.
Service Homologation-automobile

David Durazzi
Ingénieur-Inspecteur

M. Flammang
Ingénieur-Inspecteur

Annex



Index to the information package, including a summary in chronological order, concerning extensions and/or amendments

ECE Type Approval no.: E13*27R00*27R04*4013*00

Main Report

Technical Report No.: LCA 54 0468 002 17 Pages 1 to 8

Composition of the Annex:

A: Index Page 1
B: Information folder Page 1 to 2

Extension 01

Technical Report No.: LCA 54 0468 001 18 pages 1 to 8

Composition of the Annex:

A: Index Page 1
B: Information folder
To be exchanged Page 1

Contents of the extension:

To be added:

- New commercial description (GENART, REFLEX-ITALY)

To be deleted:

- commercial description (Reflex s.a.s.)

Index to the information folder:

- manufacturer's information document (page 1 to 2)
-



TECHNICAL DESCRIPTION

| | |
|---|--|
| 1. Commercial description | Reflex-Polska WÜRTH GENART REFLEX-ITALY |
| 2. Type | MICRO |
| 3. Manufacturer | Reflex-Polska sp. z o.o. ul. Kokotek 27 41-700 Ruda Śląska VAT UE: PL6291996791 |
| 4. Production site | Reflex-Polska sp. z o.o. ul. Kokotek 27 41-700 Ruda Śląska VAT UE: PL6291996791 |
| 5. Description of the warning triangle | see drawings |

Prokurent
Halina Hentisz-Silletti
 Halina Hentisz-Silletti

09.01.2019