

## CLASSIFICATION OF REACTION TO FIRE PERFORMANCE IN ACCORDANCE WITH EN EN 13501-1:2018

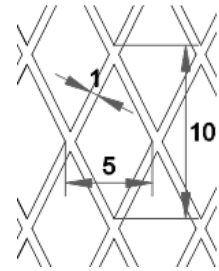
Classification no.	2015-Efectis-R000284[Rev.2]
Sponsor	Recair BV P.O. Box 721 5140 AS WAALWIJK THE NETHERLANDS
Product name	<b>Plastic heat recuperators Recair Sensitive RS160, RS220, RS300 Recair Ultimate RU160, Recair Comfort RC160</b>
Prepared by	Efectis Nederland BV
Notified body no.	1234
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Number of pages	5

## 1. INTRODUCTION

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### 1.1 PRODUCT DESCRIPTION

This classification report defines the classification assigned to **plastic heat recuperators, types Recair Sensitive RS160, RS220, RS300, Recair Ultimate RU160 and Recair Comfort RC160** in accordance with the procedures given in EN 13501-1:2018.



### 1.2 REVISION INFORMATION

Revision 1: The recuperator type Recair Ultimate RU160 is added to the classification.  
Original date of issue: April 2015.

Revision 2: The recuperator type Recair Comfort RC160 is added to the classification.  
Original date of issue: November 2019.

To be able to use the test report, 2015-Efectis-R000284, as a basis for a classification according to EN 13501-1, it is necessary to do a gap analysis to investigate whether the results of the test performed according to the standard EN 13501-1:2007+A1:2009 are still valid for use according to the currently applicable standard EN 13501-1:2018 as required by EN 13501-1:2018.

Efectis has made a comparison between the two 13501-1 standards and examined the test report. Efectis concluded that the results of the test according to the EN 13501-1:2007+A1:2009 standard are still valid according to the standard EN 13501-1:2018. Therefore the test report can be used as a basis for classification according to the standard EN 13501-1:2018.

## 2. DETAILS OF CLASSIFIED PRODUCT

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### 2.1 GENERAL

The product, **plastic heat recuperators, types Recair Sensitive RS160, RS220, RS300, Recair Ultimate RU160 and Recair Comfort RC160**, will be used as a heat exchanger in air ventilation systems.

### 2.2 MANUFACTURER

Recair BV  
P.O. Box 721  
5140 AS WAALWIJK  
THE NETHERLANDS

### 2.3 PRODUCT DESCRIPTION

According to the sponsor the product is composed of a top, bottom and two side panels made of ABS (Acrylonitrile Butadiene Styrene), colour opal green, thickness approx. 2 mm, with a core made of multilayer parallel triangular shaped (RS types) or rocket shaped (RU160) ducts made of high-impact polystyrene, mounted parallel between top and bottom panel.

The core is shielded at all four in- and outlets with an aluminium grid (Aluminium 1050R – H24). The grid size of the mesh is 10 x 5 x 1 mm, the mesh is 0.8 mm thick.

The product is made in three different shapes with different dimensions:

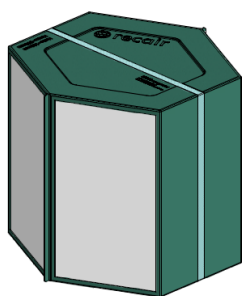
- RS160: width and length of 366 mm, height between 150 mm and 500 mm;

- RS220: width of 138.5 mm, length of 318.5 mm, height between 100 mm and 300 mm;
- RS300: width of 232 mm, length of 481 mm, height between 150 mm and 500 mm;
- RU160: width and length of 366 mm, height between 150 mm and 500 mm.
- RC160: width and length of 366 mm, height between 150 mm and 500 mm.

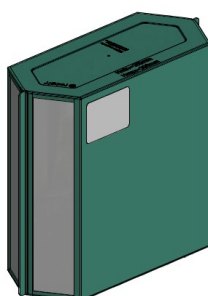
The products have a maximum weight of approx. 5 kg.

See the test report for drawings of each type of recuperator.

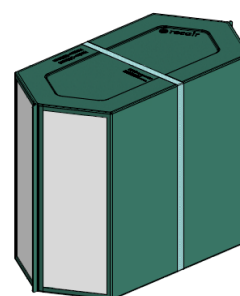
Detailed technical information of the materials used in the recuperators is available at Efectis Nederland.



RS160/RU160/RC160



RS220



RS300

### 3. REPORTS AND RESULTS IN SUPPORT OF THIS CLASSIFICATION

#### 3.1 REPORTS

Name of Laboratories	Name of sponsor	Report ref. no.	Test method
Efectis Nederland BV THE NETHERLANDS	Recair BV THE NETHERLANDS	2015-Efectis-R000283 2019-Efectis-R002261/ SEC/TNL	EN ISO 11925-2:2010 Assessment

### 3.2 TEST RESULTS

Test method and test number	Parameter	No. tests	Results	
			Continuous parameter – mean (m)	Compliance with parameters
<b>EN ISO 11925-2</b>				
<b>Outer panels of the product</b>				
Surface flame impingement	F <sub>s</sub> ≤150 mm	6	15	-
	Ignition of filter paper		-	Compliant
Edge flame impingement	F <sub>s</sub> ≤150 mm	6	33	-
	Ignition of filter paper		-	Compliant
<b>The core lamellae shielded by an aluminium grid</b>				
Side flame impingement	F <sub>s</sub> ≤150 mm	6	8	-
	Ignition of filter paper		-	Compliant

### 3.3 CLASSIFICATION CRITERIA

<b>Fire classification of construction products and building elements</b>	
<b>Classification criteria</b>	
Class Test method(s)	<b>E</b>
<b>EN ISO 11925-2</b> Exposure = 15 s	F <sub>s</sub> ≤ 150 mm within 20 s Ignition of the paper in EN ISO 11925-2 results in a d2 classification.

## 4. CLASSIFICATION AND FIELD OF APPLICATION

### 4.1 REFERENCE OF CLASSIFICATION

This classification has been carried out in accordance with clause 11 of EN 13501-1:2018.

### 4.2 CLASSIFICATION

The product, **plastic heat recuperators, types Recair Sensitive RS160, RS220, RS300, Recair Ultimate RU160 and Recair Comfort RC160**, in relation to its reaction to fire behaviour is classified:

**Reaction to fire classification: E**

## 4.3 FIELD OF APPLICATION

This classification is valid for the following product parameters:

### RS160/RU160/RC160

- Width and length 366 mm
- Height Between 150 mm and 500 mm

### RS220

- Width 138.5 mm
- Length 318.5 mm
- Height Between 100 mm and 300 mm

### RS300

- Width 232 mm
- Length 481 mm
- Height between 150 mm and 500 mm.

Maximum mass Approx. 5 kg

This classification is valid for the following end use applications:

End use conditions use in air ventilation systems

## 4.4 DURATION OF THE VALIDITY OF THIS CLASSIFICATION REPORT

There are no limitations in time on the validity of this report.

## 5. LIMITATIONS

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This classification document does not represent type approval or certification of the product.



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