



## Reaction to fire classification report

### 1 Introduction

This classification report defines the classification assigned to the product “Polyester” in accordance with the procedure given in EN 13501-1:2007.

This classification report replace SP classification report P704907B, dated June 24, 2008.

### 2 Details of classified product

#### 2.1 General

The product “Polyester” is defined as self-supporting metal sheet for roofing, external cladding and internal lining and fully supported metal sheet and strip for roofing, external cladding and internal lining and.

According to the owner of this classification report, this product complies with the European product specifications EN 14782 and EN 14783.

#### 2.2 Product description

According to information provided by the client, the product has the following composition:

Coated steel sheet with coating called “Polyester”.

Behind the steel sheet a vapour open wind shelter of polypropylene laminated with polyethylene can be attached. The product can be insulated or not.

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### 3 Test reports & test results in support of classification

#### 3.1 Test reports

This classification is based on the test report listed below:

Name of laboratory	Name of sponsor	Test report ref no	Test method
SP	SSAB Tunnpå AB	P704907	EN 13823
SP	SSAB Tunnpå AB	P7 04907-01	EN ISO 1716
SP	SSAB Tunnpå AB	F0 22919 C	EN ISO 1716
SP	SSAB Tunnpå AB	F8 08938: 3	EN ISO 1716

#### 3.2 Test results

The tests have been carried out on products covering the area weight range and thickness range of the product group. The product standards EN 14782 and EN 14783 has been applied in the process of selecting suitable products for testing

Test method	Parameter	Number of tests	Results	
			Continuous parameter mean (m)	Compliance with parameters
EN 13823		3		
	<i>FIGRA</i> <sub>0,2MJ</sub> (W/s)		9	Compliant
	<i>FIGRA</i> <sub>0,4MJ</sub> (W/s)		5	Compliant
	<i>LFS</i> < edge		(-)	Compliant
	<i>THR</i> <sub>600s</sub> (MJ)		0.6	Compliant
	<i>SMOGR</i> <sub>A</sub> (m <sup>2</sup> /s <sup>2</sup> )		7	Compliant
	<i>TSP</i> <sub>600s</sub> (m <sup>2</sup> )		47	Compliant
EN ISO 1716	Flaming droplets/particles	9	(-)	No flaming droplets/particles
	<i>PCS</i> (MJ/kg) (1)		<3	Compliant
	<i>PCS</i> (MJ/m <sup>2</sup> ) (2)		0.8	Compliant
	<i>PCS</i> (MJ/m <sup>2</sup> ) (3)		0.3	Compliant
	<i>PCS</i> (MJ/m <sup>2</sup> ) (3)		2.7	Compliant
	<i>PCS</i> (4)		1.4	Compliant

(-) : not applicable

(1): for non-homogeneous products the parameter for each substantial component is given

(2): for non-homogeneous products the parameter for each external non-substantial component is given

(3): for non-homogeneous products the parameter for each internal non-substantial component is given

(4): the parameter for the product as a whole

## 4 Classification and field of application

### 4.1 Reference and direct field of application

This classification has been carried out in accordance with clause 11 and 15 of EN 13501-1:2007 and according to EN 14782 and EN 14783.

### 4.2 Classification

The product called "Polyester" in relation to its reaction to fire behaviour is classified:

A2

The additional classification in relation to smoke production is:

s1

The additional classification in relation to flaming particles/droplets is:

d0

The format of the reaction to fire classification for construction products excluding floorings and linear pipe thermal insulation product is:

Fire Behaviour		Smoke Production			Flaming Droplets	
<b>A2</b>	-	s	1	,	d	0

**Reaction to fire classification: *A2-s1,d0***

### 4.3 Field of application:

This classification is valid for the following product parameters:

All grades of steel.

Nominal thickness of steel sheet:  $\geq 0.4$  mm.

All types of profile with depth of ribs  $\leq 165$  mm.

Coating:

All colours

Maximum nominal thickness: 30  $\mu$ m

Maximum area weight: 44 g/m<sup>2</sup>

Maximum PCS  $\leq 0.8$  MJ/m<sup>2</sup>

Wind shelter behind steel sheet:

No wind shelter or wind shelter with nominal area weight  $\leq 60$  g/m<sup>2</sup> and PCS-value  $\leq 2.7$  MJ/m<sup>2</sup>.

Insulation:

No insulation or mineral wool insulation with at least Euroclass A2-s1,d0 and thermal resistance  $\leq 5.4$  m<sup>2</sup>K/W.



This classification is valid for the following end use conditions:

Joints:

Vertical and horizontal joints.

Mounting:

All overlaps of 40 mm - 300 mm between two successive profiles.

Fixing at distance  $\leq 360$  mm.

Metal scantlings creating a void behind the steel sheet.

The sample was delivered by the client. SP Fire Technology was not involved in the sampling procedure.

## **5 Limitations**

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

“The classification assigned to the product in this report is appropriate to a declaration of conformity by the manufacturer within the context of system 3 attestation of conformity and CE marking under the Construction Products Directive.


The manufacturer has made a declaration, which is held on file. This confirms that the product's design requires no specific processes, procedures or stages (e.g. no addition of flame-retardants, limitation of organic content, or addition of fillers) that are aimed at enhancing the fire performance in order to obtain the classification achieved. As a consequence the manufacturer has concluded that system 3 attestation is appropriate.

The test laboratory has, therefore, played no part in sampling the product for the test, although it holds appropriate references to the manufacturer's factory production control that is claimed to be relevant to the samples tested and that will provide for their traceability.”

**SP Technical Research Institute of Sweden**  
**Fire Technology - Fire Dynamics**



Per Thureson  
Technical Manager



Marina C Andersson  
Technical Officer



## Reaction to fire classification report

### 1 Introduction

This classification report defines the classification assigned to the products “Prelaq Nova” and “Prelaq Nova Matt” in accordance with the procedure given in EN 13501-1:2007.

This classification report replace SP classification report P704907A, dated June 24, 2008.

### 2 Details of classified product

#### 2.1 General

The products “Prelaq Nova” and “Prelaq Nova Matt” are defined as self-supporting metal sheet for roofing, external cladding and internal lining and fully supported metal sheet and strip for roofing, external cladding and internal lining and.

According to the owner of this classification report, these products comply with the European product specifications EN 14782 and EN 14783.

#### 2.2 Product description

According to information provided by the client, the product has the following composition:

Coated steel sheet with coating called “Prelaq Nova” or “Prelaq Nova Matt”.

Behind the steel sheet a vapour open wind shelter of polypropylene laminated with polyethylene can be attached. The product can be insulated or not.

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### 3 Test reports & test results in support of classification

#### 3.1 Test reports

This classification is based on the test report listed below:

Name of laboratory	Name of sponsor	Test report ref no	Test method
SP	SSAB Tunnpå AB	P704907	EN 13823
SP	SSAB Tunnpå AB	P7 04907-01	EN ISO 1716
SP	SSAB Tunnpå AB	F0 22919 C	EN ISO 1716
SP	SSAB Tunnpå AB	F8 08938: 1	EN ISO 1716
SP	SSAB Tunnpå AB	F8 08938: 4	EN ISO 1716

#### 3.2 Test results

The tests have been carried out on products covering the area weight range and thickness range of the product group. The product standards EN 14782 and EN 14783 has been applied in the process of selecting suitable products for testing.

Test method	Parameter	Number of tests	Results	
			Continuous parameter mean (m)	Compliance with parameters
EN 13823		3		
	<i>FIGRA</i> <sub>0,2MJ</sub> (W/s)		86	Compliant
	<i>FIGRA</i> <sub>0,4MJ</sub> (W/s)		30	Compliant
	<i>LFS</i> < edge		(-)	Compliant
	<i>THR</i> <sub>600s</sub> (MJ)		1.0	Compliant
	<i>SMOGR</i> <sub>A</sub> (m <sup>2</sup> /s <sup>2</sup> )		13	Compliant
	<i>TSP</i> <sub>600s</sub> (m <sup>2</sup> )		56	Compliant
EN ISO 1716	Flaming droplets/particles	12	(-)	No flaming droplets/particles
	<i>PCS</i> (MJ/kg) (1)		<3	Compliant
	<i>PCS</i> (MJ/m <sup>2</sup> ) (2)		1.7	Compliant
	<i>PCS</i> (MJ/m <sup>2</sup> ) (3)		0.3	Compliant
	<i>PCS</i> (MJ/m <sup>2</sup> ) (3)		2.7	Compliant
	<i>PCS</i> (4)		1.4	Compliant

(-) : not applicable

(1): for non-homogeneous products the parameter for each substantial component is given

(2): for non-homogeneous products the parameter for each external non-substantial component is given

(3): for non-homogeneous products the parameter for each internal non-substantial component is given

(4): the parameter for the product as a whole



## 4 Classification and field of application

### 4.1 Reference and direct field of application

This classification has been carried out in accordance with clause 11 and 15 of EN 13501-1:2007 and according to EN 14782 and EN 14783.

### 4.2 Classification

The products called "Prelaq Nova" and "Prelaq Nova Matt" in relation to their reaction to fire behaviour are classified:

A2

The additional classification in relation to smoke production is:

s2

The additional classification in relation to flaming particles/droplets is:

d0

The format of the reaction to fire classification for construction products excluding floorings and linear pipe thermal insulation product is:

Fire Behaviour		Smoke Production			Flaming Droplets	
<b>A2</b>	-	s	2	,	d	0

**Reaction to fire classification: *A2-s2,d0***

### 4.3 Field of application:

This classification is valid for the following product parameters:

All grades of steel.

Nominal thickness of steel sheet:  $\geq 0.4$  mm.

All types of profile with depth of ribs  $\leq 165$  mm.

Coating:

All colours

Maximum nominal thickness: 50  $\mu$ m

Maximum area weight: 76 g/m<sup>2</sup>

Maximum PCS  $\leq 1.7$  MJ/m<sup>2</sup>

Wind shelter behind steel sheet:

No wind shelter or wind shelter with nominal area weight  $\leq 60$  g/m<sup>2</sup> and PCS-value  $\leq 2.7$  MJ/m<sup>2</sup>.

Insulation:

No insulation or mineral wool insulation with at least Euroclass A2-s1,d0 and thermal resistance  $\leq 5.4$  m<sup>2</sup>K/W.

This classification is valid for the following end use conditions:

**Joints:**

Vertical and horizontal joints.

**Mounting:**

All overlaps of 40 mm - 300 mm between two successive profiles.

Fixing at distance  $\leq 360$  mm.

Metal scantlings creating a void behind the steel sheet.

The sample was delivered by the client. SP Fire Technology was not involved in the sampling procedure.

## **5 Limitations**

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

“The classification assigned to the product in this report is appropriate to a declaration of conformity by the manufacturer within the context of system 3 attestation of conformity and CE marking under the Construction Products Directive.

The manufacturer has made a declaration, which is held on file. This confirms that the product's design requires no specific processes, procedures or stages (e.g. no addition of flame-retardants, limitation of organic content, or addition of fillers) that are aimed at enhancing the fire performance in order to obtain the classification achieved. As a consequence the manufacturer has concluded that system 3 attestation is appropriate.

The test laboratory has, therefore, played no part in sampling the product for the test, although it holds appropriate references to the manufacturer's factory production control that is claimed to be relevant to the samples tested and that will provide for their traceability.”

**SP Technical Research Institute of Sweden**  
**Fire Technology - Fire Dynamics**



Per Thureson  
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## Reaction to fire classification report

### 1 Introduction

This classification report defines the classification assigned to the products "Prelaq GreenCoat" and "Prelaq GreenCoat Matt" in accordance with the procedure given in EN 13501-1:2007+A1:2009.

### 2 Details of classified product

#### 2.1 General

The products "Prelaq GreenCoat" and "Prelaq GreenCoat Matt" are defined as a self-supporting metal sheet for roofing, external cladding and internal lining and fully supported metal sheet and strip for roofing, external cladding and internal lining.

According to the owner of this classification report, this product complies with the European product specifications EN 14782 and EN 14783.

#### 2.2 Product description

According to information provided by the client, the product has the following composition:

Organic coated steel, colour black and nominal thickness of 0.6 mm. The steel was coated with a paint system called: "Prelaq GreenCoat" or "Prelaq GreenCoat Matt", with a colour called "52993 - 0015" nominal area weight 58 g/m<sup>2</sup>. "Prelaq GreenCoat" is a polyester based coating. Beneath the coating there was a polyester based primer, nominal area weight 23 g/m<sup>2</sup>. The backside of the steel sheet was covered with a coating based on polyester, nominal area weight 11 g/m<sup>2</sup>. Beneath the coating there was a primer based on polyester, nominal area weight 12 g/m<sup>2</sup>.

Behind the steel sheet a vapour open wind shelter of polypropylene laminated with polyethylene, nominal area weight 60 g/m<sup>2</sup> was attached. The combination was insulated with glass wool insulation called "UNI skiva 36" with nominal thickness 195 mm and nominal thermal resistance 5.4 m<sup>2</sup>K/W.

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### 3 Test reports & test results in support of classification

#### 3.1 Test reports

This classification is based on the test reports listed below:

Name of laboratory	Name of sponsor	Test report ref no	Accredited test method
SP	SSAB Emea AB	PX29354	EN 13823
SP	SSAB Emea AB	PX29354-01	EN ISO 1716

### 3.2 Test results

The test results listed below show the worst case as found in the test programme performed and reported according to the table above. The tests have been carried out on products covering the area weight range and thickness range of the product group and the amount of organic content range. The product standards EN 14782 and EN 14783 has been applied in the process of selecting suitable products for testing .

Test method	Parameter	Number of tests	Results	
			Continuous parameter mean (m)	Compliance with parameters
EN 13823		3		
	<i>FIGRA</i> <sub>0,2MJ</sub> (W/s)		0	Compliant
	<i>FIGRA</i> <sub>0,4MJ</sub> (W/s)		0	Compliant
	<i>LFS</i> < edge		(-)	Compliant
	<i>THR</i> <sub>600s</sub> , (MJ)		0.6	Compliant
	<i>SMOGRA</i> , (m <sup>2</sup> /s <sup>2</sup> )		1	Compliant
	<i>TSP</i> <sub>600s</sub> , (m <sup>2</sup> )		43	Compliant
EN ISO 1716	Flaming droplets/particles	15	(-)	No flaming droplets/particles
	<i>PCS</i> (MJ/m <sup>2</sup> ) (2)		1.1	Compliant
	<i>PCS</i> (MJ/m <sup>2</sup> ) (3)		0.4	Compliant
	<i>PCS</i> (MJ/m <sup>2</sup> ) (3)		0.2	Compliant
	<i>PCS</i> (MJ/m <sup>2</sup> ) (3)		0.2	Compliant
	<i>PCS</i> (MJ/m <sup>2</sup> ) (3)		2.7	Compliant
	<i>PCS</i> (MJ/kg) (4)		0.9	Compliant

(-) : not applicable

(2): for non-homogeneous products the parameter for each external non-substantial component is given

(3): for non-homogeneous products the parameter for each internal non-substantial component is given

(4): the parameter for the product as a whole



## 4 Classification and field of application

### 4.1 Reference and direct field of application

This classification has been carried out in accordance with clause 11 and 15 of EN 13501-1:2007+A1:2009 and according to EN 14782 and EN 14783

### 4.2 Classification

The products called “Prelaq GreenCoat and Prelaq GreenCoat Matt” in relation to its reaction to fire behaviour is classified:

A2

The additional classification in relation to smoke production is:

s1

The additional classification in relation to flaming particles/droplets is:

d0

The format of the reaction to fire classification for construction products excluding floorings and linear pipe thermal insulation product is:

Fire Behaviour		Smoke Production			Flaming Droplets	
<b>A2</b>	-	<b>s</b>	<b>1</b>	,	<b>d</b>	<b>0</b>

**Reaction to fire classification:** *A2-s1,d0*

### 4.3 Field of application:

This classification is valid for the following product parameters:

All grades of steel.

Nominal thickness of steel sheet:  $\geq 0.6\text{mm}$ .

Coating:

All colours

Front side PE coating with nominal area weight  $58\text{ g/m}^2$  and nominal PCS  $\leq 1.1\text{ MJ/m}^2$ .

Front side PE primer with nominal area weight  $26\text{ g/m}^2$  and nominal PCS  $\leq 0.4\text{ MJ/m}^2$ .

Back side PE coating with nominal area weight  $11\text{ g/m}^2$  and nominal PCS  $\leq 0.2\text{ MJ/m}^2$ .

Back side PE primer with nominal area weight  $12\text{ g/m}^2$  and nominal PCS  $\leq 0.2\text{ MJ/m}^2$ .

Wind shelter behind steel sheet:

No wind shelter or wind shelter with nominal area weight  $\leq 60\text{ g/m}^2$  and PCS-value  $\leq 2.7\text{ MJ/m}^2$ .

Insulation:

No insulation or mineral wool insulation with at least Euroclass A2-s1,d0 and thermal resistance  $\leq 5.4\text{ m}^2\text{K/W}$ .

Mounting:

All overlaps of 20 mm - 100 mm between two successive profiles.

Fixing at distance  $\leq 300\text{mm}$ .

Metal scantlings creating a void behind the steel sheet.

## 5 Limitations


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

### SP Technical Research Institute of Sweden Fire Technology - Fire Dynamics

Performed by

  
Marina C Andersson

Examined by

  
Per Thureson



## Reaction to fire classification report

### 1 Introduction

This classification report defines the classification assigned to the product “Plastisol P200” in accordance with the procedure given in EN 13501-1:2007.

This classification report replace SP classification report P704907C, dated June 24, 2008.

### 2 Details of classified product

#### 2.1 General

The product “Plastisol P200” is defined as self-supporting metal sheet for roofing, external cladding and internal lining and fully supported metal sheet and strip for roofing, external cladding and internal lining.

According to the owner of this classification report, this product complies with the European product specifications EN 14782 and EN 14783.

#### 2.2 Product description

According to information provided by the client, the product has the following composition:

Coated steel sheet with coating called “Plastisol P200”.

Behind the steel sheet a vapour open wind shelter of polypropylene laminated with polyethylene can be attached. The product can be insulated or not.

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### 3 Test reports & test results in support of classification

#### 3.1 Test reports

This classification is based on the test report listed below:

Name of laboratory	Name of sponsor	Test report ref no	Test method
SP	SSAB Tunnplåt AB	P704907	EN 13823 + EN ISO 11925-2

#### 3.2 Test results

The tests have been carried out on products covering the area weight range and thickness range of the product group. The product standards EN 14782 and EN 14783 has been applied in the process of selecting suitable products for testing

Test method	Parameter	Number of tests	Results	
			Continuous parameter mean (m)	Compliance with parameters
EN ISO 11925-2		18		
Edge/Surface flame attack*				
15 s exposure	$F_s \leq 150 \text{ mm}$		(-)	Compliant
30 s exposure	$F_s \leq 150 \text{ mm}$		(-)	Compliant
Flaming droplets/particles	Ignition of filter paper		(-)	No ignition of filter paper
EN 13823		3		
	$FIGRA_{0,2MJ} \text{ (W/s)}$		208	Compliant
	$FIGRA_{0,4MJ} \text{ (W/s)}$		157	Compliant
	$LFS < \text{edge}$		(-)	Compliant
	$THR_{600s} \text{ (MJ)}$		1.8	Compliant
	$SMOGRA \text{ (m}^2/\text{s}^2\text{)}$		164	Compliant
	$TSP_{600s} \text{ (m}^2\text{)}$		143	Compliant
	Flaming droplets/particles		(-)	Yes, flaming droplets/particles

\* : as required to the end use application of the product

(-) : not applicable

## 4 Classification and field of application

### 4.1 Reference and direct field of application

This classification has been carried out in accordance with clause 11 and 15 of EN 13501-1:2007 and according to EN 14782 and EN 14783.

### 4.2 Classification

The product called "Plastisol P200" in relation to its reaction to fire behaviour is classified:

C

The additional classification in relation to smoke production is:

s2

The additional classification in relation to flaming particles/droplets is:

d1

The format of the reaction to fire classification for construction products excluding floorings and linear pipe thermal insulation product is:

Fire Behaviour		Smoke Production			Flaming Droplets	
C	-	s	2	,	d	1

**Reaction to fire classification: *C-s2,d1***

### 4.3 Field of application:

This classification is valid for the following product parameters:

All grades of steel.

Nominal thickness of steel sheet:  $\geq 0.4$  mm.

All types of profile with depth of ribs  $\leq 165$  mm.

Coating:

All colours

Maximum nominal thickness: 200  $\mu$ m

Maximum area weight: 263 g/m<sup>2</sup>

Maximum PCS  $\leq 5.7$  MJ/m<sup>2</sup>

Wind shelter behind steel sheet:

No wind shelter or wind shelter with nominal area weight  $\leq 60$  g/m<sup>2</sup> and PCS-value  $\leq 2.7$  MJ/m<sup>2</sup>.

Insulation:

No insulation or mineral wool insulation with at least Euroclass A2-s1,d0 and thermal resistance  $\leq 5.4$  m<sup>2</sup>K/W.

This classification is valid for the following end use conditions:

Joints:

Vertical and horizontal joints.

Mounting:

All overlaps of 40 mm - 300 mm between two successive profiles.

Fixing at distance  $\leq 360$  mm.

Metal scantlings creating a void behind the steel sheet.

The sample was delivered by the client. SP Fire Technology was not involved in the sampling procedure.

## **5 Limitations**

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

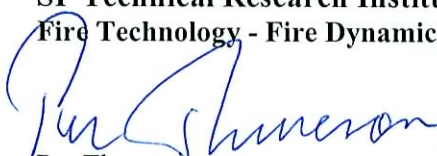
“The classification assigned to the product in this report is appropriate to a declaration of conformity by the manufacturer within the context of system 3 attestation of conformity and CE marking under the Construction Products Directive.

The manufacturer has made a declaration, which is held on file. This confirms that the product's design requires no specific processes, procedures or stages (e.g. no addition of flame-retardants, limitation of organic content, or addition of fillers) that are aimed at enhancing the fire performance in order to obtain the classification achieved. As a consequence the manufacturer has concluded that system 3 attestation is appropriate.

The test laboratory has, therefore, played no part in sampling the product for the test, although it holds appropriate references to the manufacturer's factory production control that is claimed to be relevant to the samples tested and that will provide for their traceability.”

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