

RUAUDindustries®

Sprayed insulating materials

editorial

With facilities on the cutting edge of technology, Ruaud Industries® has been for more than 40 years a leading specialist in the production of spray-on (flocked) insulating materials.

Active in research and development, we have created our own laboratory for the constant improvement of our products.
They are developed, optimized, and tested in our spraying room, then manufactured in our state-of-the-art robotized factory.

We have subjected our products to testing by CSTB- and CEBTP-approved laboratories under the new European standards (CE label), with as result the validation of new test results for acoustic correction, thermal insulation, and passive fire protection on many substrates.

We act in a spirit of preserving the environment, and all of our products have been low-biopersistence since 2000. This approach comes naturally to us as an active member of several professional bodies, among them as the SNI, etc.

Our sales team and engineers, attentive to your needs, take pride in their ability to devise an appropriate solution to any spray-on insulation problem in a very short time.

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RUAUDindustries®

Sprayed insulating materials

The wet spraying of mineral wool was first employed in France in 1975. The regulation of its application has been steadily improved through a DTU (building standard) of which the first version was published in 1989 (DTU 27-1). A QUALIBAT qualification (7142-7143) has contributed since 1994 to recognition of companies specializing in sprayed application.

The producers of our basic raw material achieved fundamental progress in improving the safety of rock wools at the end of the 1990s. We have chosen to use only mineral binders, which produce no emanations during the service life of the product (Directive 97/69 CE).

Our sprayed insulating materials can be used to achieve compliance with the regulations in force concerning energy savings (RT 2012) and passive fire protection (Fire safety regulations and fire safety construction rules). They also have remarkable acoustic correction properties.

Our products can be applied on many different substrates: concrete floors and structures, light beam and slab floors, composite slabs with structural trays, wooden floors, steel structures, etc. The placement technique makes it possible to treat hard-to-reach places, structures that are not flat, and surfaces of which the relief is deep or complex. The surfacing matches the contour of the substrate, creating an unbroken insulating jacket without thermal bridges.

The properties of our insulating materials are useful in many settings: multiple dwellings, parking garages, arcades, soffits of balconies, auditoriums, recording studios, discotheques, multipurpose halls, sports halls, swimming pools, exhibition rooms, media libraries, hospitals, schools, dining halls, stations, hotels, shopping malls, stores, shops, office buildings, high-rise buildings, warehouses, industrial buildings.

a few figures

1976 The founding of Ruaud Industries

18,000 Tonnes/year Production capacity

2000 Automation of the production process

18% market share

CE Tests of fire resistance performed in compliance with European standards





1 000 000 m²
insulated per year

On the strength of its experience as a manufacturer, **Ruaud Industries®** will provide all the technical support you want.

Feel free to contact us!

Protec Thermique'S®

Protec Thermique'S® is a spray-on insulating coating.
It takes the form of a light fluffy substance.

Applications

- Thermal insulation: **Useful thermal conductivity = 0.039W/m.K**
- Acoustic correction
- Fire resistance on concrete structure

CHARACTERISTICS

- Voluminal mass: 150Kg/m^3 ±15%
- Colour: Greyish white
- Finished appearance: Stabilized flat surface, veined appearance
- Fireproof: Euroclass A1
- PH: 11.5
- Rot-proof, resistant to rodents and vermin
- Stable over time
- Does not crack

COMPOSITION

Protec Thermique'S® is made up of rock wool, mineral hydraulic binders, and a dust suppression agent.
Protec Thermique'S® is asbestos-free.
Protec Thermique'S® is made only from wool compliant with directive 97/69 CE (low biopersistence; product not classified as carcinogenic).

PLACEMENT

Protec Thermique'S® is applied using a specific spraying machine for fibrous mixtures. Application is in accordance with the good practices defined in the DTU 27.1.
Protec Thermique'S® must not be applied at temperatures below +5°C or above 45°C. During the initial setting stage (4 days).
Protec Thermique'S® must not be subjected to vibrations. The drying stage that follows lasts approximately 4 to 6 weeks, depending on the thickness and atmospheric conditions.

ADVANTAGES

- No thermal bridges
- Sound material
- Rapid, practical solution
- Small manpower needs
- Clean site
- On all reliefs

PACKAGING AND STORAGE

- **Protec Thermique'S®** is packaged in 21.50 kg bags, on pallets of 27 bags, or 580,50 kg per pallet. Dimensions: 0.80 x 1.20 x 2.10m.
- All bags are identified by their date and time of production, in order to ensure traceability.
- Storage life: 12 months from the date of production.
- Storage away from the elements.

FDES (Environmental and Sanitary Declaration): Compliant with standard EN 15804+A1 - NF EN 15804/CN

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Sprayed insulating materials

Z.I. de la Croix Saint-Nicolas - 18 rue Gustave Eiffel - 94510 La Queue-en-Brie
Tel. : +33 (0)1 45 76 72 26 - Fax : +33 (0)1 45 76 42 34 - contact@ruaud.com
www.ruaud.com

Protec Thermique'S®

Compliant with directive 97/69 EC. Asbestos free product

Thermal resistance of Protec Thermique'S®
versus thickness sprayed (Insulation only)

Thickness **Protec Thermique'S®** (in mm)	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240
Thermal resistance R	2,05	2,30	2,55	2,80	3,05	3,30	3,55	3,80	4,10	4,35	4,60	4,85	5,10	5,35	5,60	5,85	6,15

Certificate ACERMI N° 12/146/766

Thickness Protec Thermique'S®
(in mm) to be sprayed in order to obtain the required U_{wall} in the case of a reinforced concrete slab giving onto a room that is not heated and not open.

λ Concrete = 2,3 W/m.K
R_{si} (0,17) + R_{se} (0,17) = 0,34 m² .K/W
λ Protec Thermique'S = 0,039 W/m.K

Thickness of slab in mm / Thermal resistance Concrete slab		110	140	170	200	230
	U	0,047	0,060	0,073	0,086	0,100
U in W/m2.K	0,18	202	201	201	200	200
	0,20	180	179	179	178	178
	0,22	162	162	161	161	160
	0,24	148	147	147	146	145
	0,26	135	134	134	133	133
	0,28	124	124	123	123	122
	0,30	115	114	114	113	113
	0,32	107	106	106	105	105
	0,34	100	99	99	98	98
	0,36	93	93	92	92	91
	0,38	88	87	87	86	85
	0,40	82	82	81	81	80
	0,42	78	77	77	76	76
	0,44	74	73	73	72	71
	0,46	70	69	69	68	68
	0,48	66	66	65	65	64

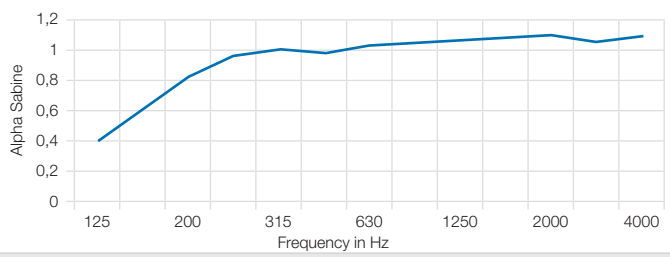
Certificate ACERMI N° 12/146/766

Fire resistance properties of Protec Thermique'S®

Protec Thermique'S®	Concrete slab, 140 mm Coating on steel, 20 mm	Concrete girder
83mm	REI 360 minutes (fire-stop rating 6 hours)	REI 270 minutes (fire-stop rating 4 hours 30)

CSTB classification report no. RS-10-008 / CSTB test report no. RS10-008 / CSTB test report no. RS10-007

Acoustic absorption coefficient αs Protec Thermique'S® Thickness 80mm



α w = 1,00
Class = A

Acoustic absorption coefficient αs
Protec Thermique'S®
Thickness 80mm

CSTB test report no. AC-0926021062/2-REV 01

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Tél. : 01 45 76 72 26 - Fax : 01 45 76 42 34 - contact@ruaud.com
www.ruaud.com

RUAUDindustries® Les isolants projetés

Protec Flamme®

Protec Flamme® is a spray-on insulating coating.
It takes the form of a light fluffy substance.

Applications

EC Certificate of conformity 0679-CPR-0747
ETE - 21/1097

Complementary protection of structures from fire, in response to fire regulations for buildings open to the public, high-rise buildings, equipment rooms, and residential buildings.

- Passive fire protection on:
  - Concrete and masonry elements (p. 9)
  - Steel, metallic structure (p. 10-13)
  - Steel/concrete floor (p. 14)
  - Wood (p. 14)
- Acoustic correction (p. 15)
- Contribution to thermal insulation: $\lambda = 0.05$ W/m.K
- **Protec Flamme®** delivers remarkable acoustic absorption performance (reduction of reverberation time).
(Characteristic specific to the material, independent of the substrate)

CHARACTERISTICS

- Voluminal mass: 250Kg/m^3 ±15 %
- Colour: Greyish white
- Finished appearance: Stabilized flat surface, veined appearance
- Fireproof: Euroclass A1
- PH: 12
- Rot-proof, resistant to rodents and vermin
- Dimensional stability over time

COMPOSITION

Protec Flamme® is made up of rock wool, mineral hydraulic binders, and a dust suppression agent.
Protec Flamme® is asbestos-free.
Protec Flamme® is made only from wool compliant with directive 97/69 CE (low biopersistence; product not classified as carcinogenic).

PLACEMENT

Protec Flamme® is applied using a specific spraying machine for fibrous mixtures.
Application is in accordance with the good practices defined in the DTU 27.1.
Protec Flamme® must not be applied at temperatures below +5°C or above 45°C.
During the initial setting stage (4 days).
Protec Flamme® must not be subjected to vibrations.
The drying stage that follows lasts approximately 3 to 4 weeks.
Any placement solution must be consistent with the domain of validity of the fire resistance classification report.

PACKAGING AND STORAGE

- **Protec Flamme®** is packaged in 25-kg bags, on pallets of 24 bags, or 600Kg (Dimensions: 0.80 x 1.20 x 2.30m)
- All bags are identified by their date and time of production, in order to ensure traceability.
- Storage life: 12 months from the date of production.
- Storage away from the elements.

CE
Tests of fire resistance performed in compliance with European standards

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Protec Flamme®
on Concrete and masonry elements

Compliant with directive 97/69 EC. Asbestos free product

Thickness of **Protec Flamme®** to be applied for fire protection on a concrete slab and on a concrete girder.

EC Certificate of conformity 0679-CPR-0747
ETE - 21/1097
Reference documents: NF-EN-1992.2.1 (Eurocode 2)
CSTB test report no. RS-09-002 / RS-09-003 / RS-09-004 / RS-09-005
CSTB classification report no. RS-09-156

Concrete Slab and Girder:

Initial coating of rebars = 15mm		Fire resistance class				
		REI				
		60 min (CF 1h)	90 min (CF 1h30)	120 min (CF 2h)	180 min (CF 3h)	240 min (CF 4h)
Minimum required slab thickness		80	100	120	150	175
Concrete slab	**Thickness PROTEC FLAMME® in mm**	**17**	**17**	**17**	**24**	**28**
Minimum girder width		120	150	200	240	280
Concrete Girder	**Thickness PROTEC FLAMME® in mm**	**15**	**15**	**19**	**45**	**55**

Prestressed Concrete Slab and Girder:

Initial coating of rebars = 15mm		Fire resistance class				
		REI				
		60 min (CF 1h)	90 min (CF 1h30)	120 min (CF 2h)	180 min (CF 3h)	240 min (CF 4h)
Minimum required slab thickness		80	100	120	150	175
Prestressed Concrete Slab	**Thickness PROTEC FLAMME® in mm**	**17**	**17**	**17**	**33**	**37**
Minimum girder width		120	150	200	240	280
Prestressed concrete girder	**Thickness PROTEC FLAMME® in mm**	**15**	**23**	**32**	**57**	**66**

Conditions of validity: (limits of applicability)

- Valid for all concrete slabs (walls) exposed to fire on only one side in a horizontal (vertical) position.
- Voluminal mass of the concrete between 1,963 and 2,629kg/m^3.

Beam-and-block floors (hollow or solid) and other substrates: Get in touch with us.

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RUAUDindustries® Sprayed insulating materials

Protec Flamme®
on Steel structure

Critical temperature 570°C:
for continuous girders

Conditions of validity:

- Spraying of PROTEC FLAMME® on 4 sides
- Section factor between (50 and 450 m^{-1})
- **Galvanized steel**
- **Steel painted with Alkyd- or Epoxy-based corrosion-proofing paint**

Reference documents: NF-EN-1993-1-2 (Eurocode 3) - NF-EN-1992-1-2/NA (Eurocode 3).

EC Certificate of conformity 0679-CPR-0747
ETE - 21/1097

Classification report RS-09-133/Test report RS-09-133.

Thickness of PROTEC FLAMME® to be sprayed on metallic structures according to their section factors and the fire resistance class to be achieved:

Critical temp. 570°C - Treatment of 4 sides

	Profiles of the metallic structures					Thickness of PROTEC FLAMME® in mm				
Section factor (m^{-1})	IPE	IPN	HEA	HEB	UAP	R 30 (SF 30)	R 60 (SF 1h)	R 90 (SF 1h30)	R 120 (SF 2h)	R 180 (SF 3h)
400-450	80	80				20	45	65	85	-
375-400	100					20	40	60	80	-
360-375						20	40	60	80	-
330-360	140/120	100				15	40	60	80	-
320-330						15	35	55	75	-
300-320	160	120			80	15	35	55	75	-
280-300	180				100	15	35	55	75	-
260-280	200	140	120/100		130	15	35	50	70	-
250-260	220	160	140			15	30	50	70	-
240-250						15	30	50	65	-
225-240	270/240	180	180/160		175/150	15	30	45	65	-
210-225	300	200	200	100	200	15	30	45	65	-
200-210				120	220	15	25	45	60	-
185-200	360/330	220	220	140	250	15	25	40	60	-
175-185		240	240		270	15	25	40	55	-
165-175	400	260	260	160		15	25	40	55	85
160-165	450		280		300	15	25	35	50	80
150-160		280	300	180		15	20	35	50	80
145-150	500	300		200		15	20	35	50	75
140-145	550	320	320			15	20	35	45	75
130-140		340	340	240/220		15	20	30	45	75
125-130	600		360	260		15	20	30	45	70
120-125		360	400	280		15	20	30	40	70
115-120		380		300		15	15	30	40	65
110-115		400	450			15	15	25	40	65
105-110		425	500	340/320		15	15	25	40	60
95-105		475/450	600/550	400/360		15	15	25	35	60
90-95		500		450		15	15	25	35	55
85-90				600/500		15	15	25	30	55
75-85		600/550				15	15	20	30	50
70-75						15	15	20	30	45
60-70						15	15	20	25	45
50-60						15	15	15	25	35

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Protec Flamme®
on Steel structure

Compliant with directive 97/69 EC. Asbestos free product

Critical temperature 570°C:
for continuous girders

Conditions of validity:

- Spraying of PROTEC FLAMME® on 3 sides
- Section factor between (50 and 450 m^{-1})
- **Galvanized steel**
- **Steel painted with Alkyd- or Epoxy-based corrosion-proofing paint**

Reference documents: NF-EN-1993-1-2 (Eurocode 3) - NF-EN-1992-1-2/NA (Eurocode 3).

EC Certificate of conformity 0679-CPR-0747
ETE - 21/1097

Classification report RS-09-133/Test report RS-09-133.

Thickness of PROTEC FLAMME® to be sprayed on metallic structures according to their section factors and the fire resistance class to be achieved:

Critical temp. 570°C - Treatment of 3 sides

	Profiles of the metallic structures					Thickness of PROTEC FLAMME® in mm				
Section factor (m^{-1})	IPE	IPN	HEA	HEB	UAP	R 30 (SF 30)	R 60 (SF 1h)	R 90 (SF 1h30)	R 120 (SF 2h)	R 180 (SF 3h)
400-450						20	45	65	85	-
375-400						20	40	60	80	-
360-375	80					20	40	60	80	-
330-360	100	80				15	40	60	80	-
320-330						15	35	55	75	-
300-320	120	100				15	35	55	75	-
280-300	140					15	35	55	75	-
260-280	160	120			80	15	35	50	70	-
250-260	180				100	15	30	50	70	-
240-250						15	30	50	65	-
225-240	200	140	120/100		130	15	30	45	65	-
210-225	220	160	140		150	15	30	45	65	-
200-210	240		180/160		175	15	25	45	60	-
185-200	300/270	180			200	15	25	40	60	-
175-185		200	200	100	220	15	25	40	55	-
165-175	330	220	220	120	250	15	25	40	55	85
160-165	360	240			270	15	25	35	50	80
150-160	400		240	140	300	15	20	35	50	80
145-150		260	260			15	20	35	50	75
140-145	450					15	20	35	45	75
130-140	500	300/280	280	180/160		15	20	30	45	75
125-130			300			15	20	30	45	70
120-125	550	320		200		15	20	30	40	70
115-120	600	340	320	220		15	15	30	40	65
110-115			340			15	15	25	40	65
105-110		360	360	240		15	15	25	40	60
95-105		400/380	450/400	300/260		15	15	25	35	60
90-95		425	550/500	320		15	15	25	35	55
85-90		450	600	360/340		15	15	25	30	55
75-85		550/475		550/400		15	15	20	30	50
70-75				600		15	15	20	30	45
60-70		600				15	15	20	25	45
50-60						15	15	15	25	35

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RUAUDindustries® Sprayed insulating materials

Protec Flamme®
on Steel structure

Critical temperature 500°C:
for elements loaded in compression or compression and bending

Conditions of validity:

- Spraying of PROTEC FLAMME® on 4 sides
- Section factor between (50 and 450 m^{-1})
- **Galvanized steel**
- **Steel painted with Alkyd- or Epoxy-based corrosion-proofing paint**

Reference documents: NF-EN-1993-1-2 (Eurocode 3) - NF-EN-1992-1-2/NA (Eurocode 3).

EC Certificate of conformity 0679-CPR-0747
ETE - 21/1097

Classification report RS-09-133/Test report RS-09-133.

Thickness of PROTEC FLAMME® to be sprayed on metallic structures according to their section factors and the fire resistance class to be achieved:

Critical temp. 500°C - Treatment of 4 sides

	Profiles of the metallic structures					Thickness of PROTEC FLAMME® in mm				
Section factor (m^{-1})	IPE	IPN	HEA	HEB	UAP	R 30 (SF 30)	R 60 (SF 1h)	R 90 (SF 1h30)	R 120 (SF 2h)	R 180 (SF 3h)
400-450	80	80				25	50	75	-	-
375-400	100					20	45	70	-	-
360-375						20	45	65	85	-
330-360	140/120	100				20	45	65	85	-
320-330						20	40	65	85	-
300-320	160	120			80	20	40	60	80	-
280-300	180				100	20	40	60	80	-
260-280	200	140	120/100		130	15	40	60	80	-
250-260	220	160	140			15	35	55	75	-
240-250						15	35	55	75	-
225-240	270/240	180	180/160		175/150	15	35	55	70	-
210-225	300	200	200	100	200	15	35	50	70	-
200-210				120	220	15	30	50	70	-
185-200	360/330	220	220	140	250	15	30	50	65	-
175-185		240	240		270	15	30	45	60	-
165-175	400	260	260	160		15	25	45	60	-
160-165	450		280		300	15	25	40	60	-
150-160		280	300	180		15	25	40	55	-
145-150	500	300		200		15	25	40	55	85
140-145	550	320	320			15	25	40	55	85
130-140		340	340	240/220		15	25	35	50	80
125-130	600		360	260		15	20	35	50	80
120-125		360	400	280		15	20	35	50	75
115-120		380		300		15	20	35	45	75
110-115		400	450			15	20	30	45	75
105-110		425	500	340/320		15	20	30	45	70
95-105		475/450	600/550	400/360		15	20	30	40	65
90-95		500		450		15	15	25	40	65
85-90				600/500		15	15	25	35	65
75-85		600/550				15	15	25	35	60
70-75						15	15	25	30	55
60-70						15	15	20	30	50
50-60						15	15	20	25	45

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Protec Flamme®
on Steel structure

Compliant with directive 97/69 EC. Asbestos free product

Critical temperature 500°C:
for elements loaded in compression or compression and bending

Conditions of validity:

- Spraying of PROTEC FLAMME® on 3 sides
- Section factor between (50 and 450 m^{-1})
- **Galvanized steel**
- **Steel painted with Alkyd- or Epoxy-based corrosion-proofing paint**

Reference documents: NF-EN-1993-1-2 (Eurocode 3) - NF-EN-1992-1-2/NA (Eurocode 3).

EC Certificate of conformity 0679-CPR-0747
ETE - 21/1097
Classification report RS-09-133/Test report RS-09-133.

Thickness of PROTEC FLAMME® to be sprayed on metallic structures according to their section factors and the fire resistance class to be achieved:

Critical temp. 500°C - Treatment of 3 sides

	Profiles of the metallic structures					Thickness of PROTEC FLAMME® in mm				
Section factor (m^{-1})	IPE	IPN	HEA	HEB	UAP	R 30 (SF 30)	R 60 (SF 1h)	R 90 (SF 1h30)	R 120 (SF 2h)	R 180 (SF 3h)
400-450						25	50	75	-	-
375-400						20	45	70	-	-
360-375	80					20	45	65	85	-
330-360	100	80				20	45	65	85	-
320-330						20	40	65	85	-
300-320	120	100				20	40	60	80	-
280-300	140					20	40	60	80	-
260-280	160	120			80	15	40	60	80	-
250-260	180				100	15	35	55	75	-
240-250						15	35	55	75	-
225-240	200	140	120/100		130	15	35	55	70	-
210-225	220	160	140		150	15	35	50	70	-
200-210	240		180/160		175	15	30	50	70	-
185-200	300/270	180			200	15	30	50	65	-
175-185		200	200	100	220	15	30	45	60	-
165-175	330	220	220	120	250	15	25	45	60	-
160-165	360	240			270	15	25	40	60	-
150-160	400		240	140	300	15	25	40	55	-
145-150		260	260			15	25	40	55	85
140-145	450					15	25	40	55	85
130-140	500	300/280	280	180/160		15	25	35	50	80
125-130			300			15	20	35	50	80
120-125	550	320		200		15	20	35	50	75
115-120	600	340	320	220		15	20	35	45	75
110-115			340			15	20	30	45	75
105-110		360	360	240		15	20	30	45	70
95-105		400/380	450/400	300/260		15	20	30	40	65
90-95		425	550/500	320		15	15	25	40	65
85-90		450	600	360/340		15	15	25	35	65
75-85		550/475		550/400		15	15	25	35	60
70-75				600		15	15	25	30	55
60-70		600				15	15	20	30	50
50-60						15	15	20	25	45

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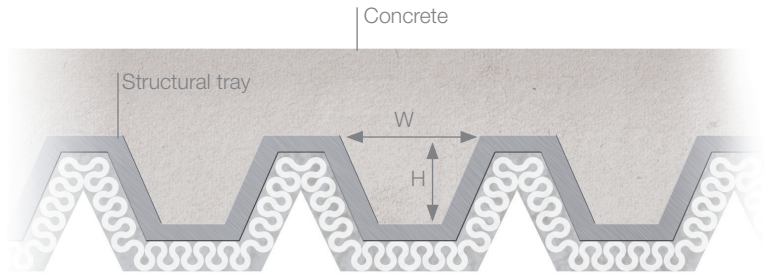
RUAUDindustries® Sprayed insulating materials

Protec Flamme®
on **composite and wooden Floors**

Compliant with directive 97/69 EC · Asbestos free product

Fire resistance performance on composite Floor

(cast in situ concrete slab with structural tray)
Test of fire resistance compliant with standard XP-ENV-13-381-5



Protec Flamme®

Conditions of validity:

- Trapezoidal waveform
- Thickness of sheet metal ≥0.75mm
- Effective height ≥83mm
- H ≤87mm
- W ≤151.5mm
- Voluminal mass of concrete between 1,935kg/m³ and 2,619kg/m³

REI	60 minutes (CF 1h)	90 minutes (CF 1h30)	120 minutes (CF 2h)	180 minutes (CF 3h)
Protec Flamme®	18mm	18mm	30mm	60mm

Classification report CSTB NO. RS-09-156 - Test report CSTB NO. RS-09-049/RS-09-050

Fire resistance on wooden Floor

Test of fire resistance compliant with standard NF-EN-13 65-2



Protec Flamme®

Conditions of validity:

- Height of plenum ≥15cm
- Expanded metal bonding reinforcement, thickness ≥0.35mm

REI	60 minutes (CF 1 h)	90 minutes (CF 1h30)
Protec Flamme®	41mm	85mm

Test report CSTB NO. RS-09-082 / RS-09-083

EC Certificate of conformity 0679-CPR-0747
ETE - 21/1097

Steel roof tray: Get in touch with us

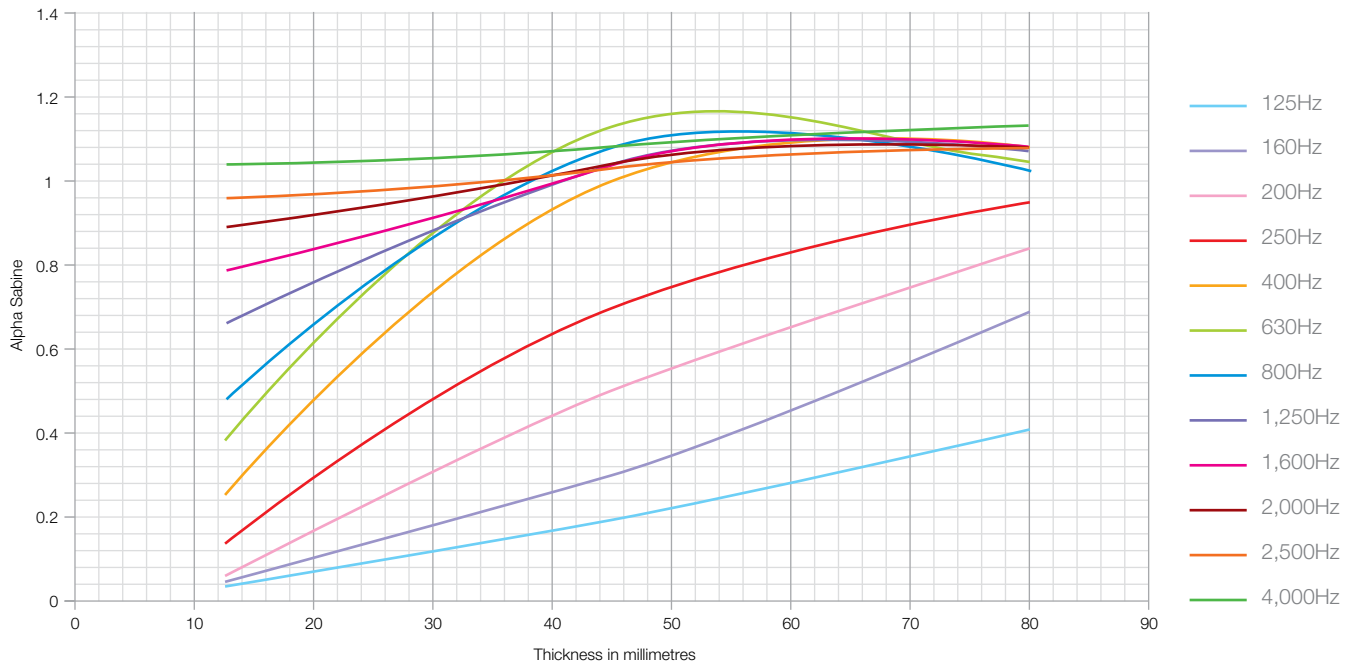
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Protec Flamme®
Acoustic correction

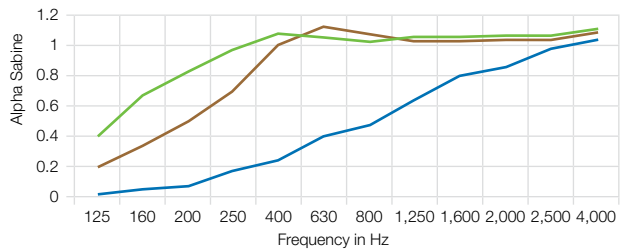
Compliant with directive 97/69 EC. Asbestos free product

Acoustic absorption of Protec Flamme® versus thickness, broken down by frequency band



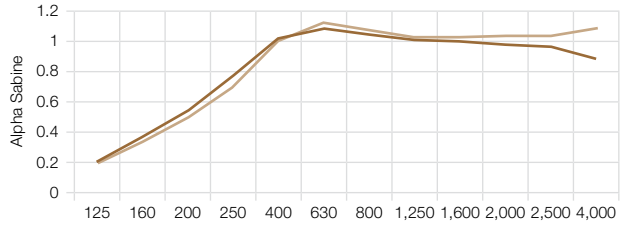
Test report CSTB NO. AC 09-260 18045/1- REV 01/Test report CSTB NO. AC 09- 260 21062/1-REV 01
Test report CSTB NO. AC 09-260 18045/2-REV 01

Acoustic absorption coefficient αs for different thicknesses



Test report CSTB NO. AC 09-260 18045/1-REV 01/Test report CSTB NO. AC 09- 260 21062/1-REV 01
Test report CSTB NO. AC 09-260 18045/2-REV 01

Acoustic absorption coefficient αs for 45mm thickness with and without finish



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RUAUDindustries® Sprayed insulating materials

Protec Acoustique®

Protec Acoustique® is a spray-on insulating coating. It takes the form of a light fluffy substance.

Applications

Protec Acoustique® delivers remarkable acoustic absorption performance. Reduction of the reverberation time for concert halls, conference rooms, cinemas, sports halls, discotheques, etc. Characteristic specific to the material, independent of the substrate.

CHARACTERISTICS

- Voluminal mass: 250Kg/m³ ±15%
- Colour: Greyish white
- Finished appearance: Stabilized flat surface, veined appearance
- Fireproof: Euroclass A1
- PH: 12
- Rot-proof, resistant to rodents and vermin
- Dimensional stability over time

COMPOSITION

Protec Acoustique® is made up of rock wool, mineral hydraulic binders, and a dust suppression agent.
Protec Acoustique® is asbestos-free.
Protec Acoustique® is made only from wool compliant with directive 97/69 CE (low biopersistence; product not classified as carcinogenic).

PLACEMENT

Protec Acoustique® is applied using a specific spraying machine for fibrous mixtures. Application is in accordance with the good practices defined in the DTU 27.1.
Protec Acoustique® must not be applied at temperatures below +5°C or above 45°C. During the initial setting stage (4 days).
Protec Acoustique® must not be subjected to vibrations. The drying stage that follows lasts approximately 3 to 4 weeks.

PACKAGING AND STORAGE

- **Protec Acoustique®** is packaged in 25-kg bags, on pallets of 24 bags, or 600Kg (Dimensions: 0.80 x 1.20 x 2.30m)
- All bags are identified by their date and time of production, in order to ensure traceability.
- Storage life: 12 months from the date of production.
- Storage away from the elements.

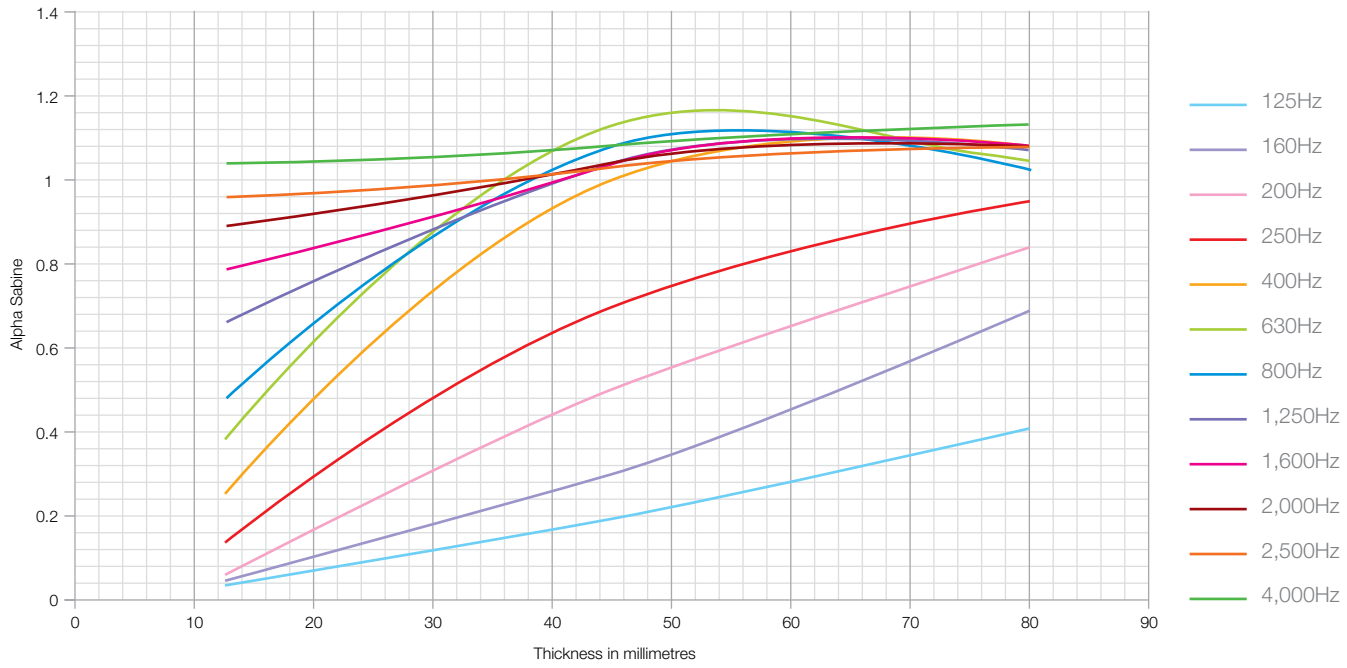
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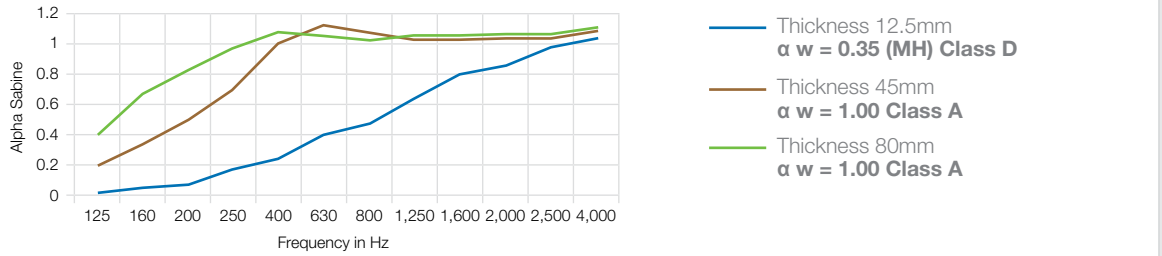
Protec Acoustique®

Compliant with directive 97/69 EC. Asbestos free product

Acoustic absorption of Protec Acoustique® versus thickness

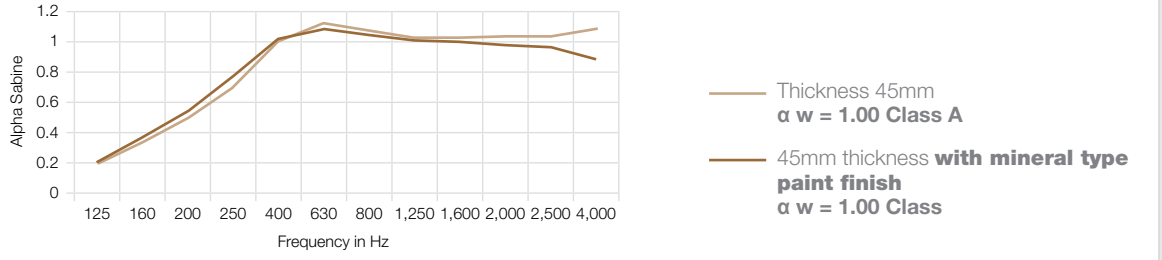


Test report CSTB NO. AC 09-260 18045/3-REV01/Test report CSTB NO. AC 09-260 18045/4-REV01
Test report CSTB NO. AC 09-260 21062/3-REV01



Test report CSTB NO. AC 09-260 18045/3-REV01/Test report CSTB NO. AC 09-260 18045/4-REV01
Test report CSTB NO. AC 09-260 21062/3-REV01

Acoustic absorption coefficient αs for 45mm thickness with and without finish



Test report CSTB NO. AC 09-260 21062/3-REV01

Protec Surface®

COMPOSITION

Protec Surface® is a coating that provides mechanical protection for «PROTEC» sprayed products. This very thick white paste, which can be used as is or slightly thinned, can be applied on any mineral-fibre-based surfacing, new or old, that is perfectly sound.

CHARACTERISTICS

- Appearance: White, pebble finish
- Thickness applied: 2 to 5mm
- Consumption from 1.5 to 4kg/m²
  depending on the means of application and the condition of the substrate
- Can be thinned up to 10% with water
- Density: 1.6
- Drying: 24h to 72h depending on ambient conditions
- Odourless
- Non-toxic

PLACEMENT

- Is applied on a dry fibrous surfacing.
- Machines:
  - Screw feed machine: average productivity 500m²/day, up to 800m²/day with the most powerful machines.
  (Get in touch with us for information about the models of machines)
  - Gravity fed spray gun for pasty products (4 or 6mm nozzle).
- After application and drying, **Protec Surface®** can be painted.
- Cleaning with water.

REACTION TO FIRE

- **Product rated M0.**

PACKAGING AND STORAGE

- **Protec Surface®** is packaged in 25kg plastic buckets.
- **STORE AWAY FROM FROST**
- Storage life 1 year in unopened original packaging.

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Protec Surface®



Protec Surface® coating



Fibrous surfacing



Ready-to-use materials for spray-on insulation.

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Colles

BRL Glue

PURPOSE

BRL glue is a strong ready-to-use tack primer.
It is compatible with all of our products PROTEC®.
It is recommended for difficult substrates (absorbent or posing bonding problems) and for passive fire protection applications on all substrates.

CHARACTERISTICS

TYPE
BRL is a dispersion of carboxylated styrene-butadiene copolymers in water.

MAIN CHARACTERISTICS
- Gel-like appearance with blue reflection
- Density (20°C): 1.00 ±0.005
- Viscosity (20°C): approximately 23,000mPa.s
- PH: 8

DIRECTIONS FOR USE

PREPARATION
- Mix well before using.

APPLICATION
- On a substrate that is dry, clean, sound, and free of dust, grease, and oil.
- Use away from the elements and at an ambient temperature above 5°C.
- BRL glue can be applied by compressed air sprayer or by roller.
- Consumption: 200 to 300g per m^2.
- Spray PROTEC® products while the BRL tack primer is still wet.
- Application on highly absorbent substrate: apply a first coat of BRL glue to close the pores of the substrate. Apply a second coat of BRL glue the next day, then apply the PROTEC® product on the BRL while it is still wet.

HEALTH AND SAFETY

- Cleaning: with water
- Dry product: Soak in water, then eliminate
- During application: wearing gloves and glasses is recommended
- In case of contact with eyes, rinse with plenty of water; if irritation follows, seek medical advice
- If accidentally swallowed: drink potable water

PACKAGING, TRANSPORT, AND STORAGE

- BRL is delivered in 25-litre plastic buckets.
- NON-TOXIC, COMPLIANT WITH LABOUR LEGISLATION.
- Labelling per EEC directive no. 67-548 (for dangerous substances) is not required.
- BRL glue is not designated as a dangerous substance by the ADR circular (European Agreement for transportation of Dangerous goods by Road).
- Store BRL between 10°C and 25°C.
- **KEEP AWAY FROM FROST**
- Close opened buckets carefully to prevent evaporation, which would alter the characteristics of the BRL glue.

The effectiveness of RUAUD INDUSTRIES products depends on their proper placement. We are responsible only for the quality of the products. The information contained in this manual is based on laboratory tests, our investigations, and our experience. We are not responsible for its interpretation, which is not under our control. Characteristics liable to change without notice.

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Colles

BRB Glue

PURPOSE

BRB Glue is a strong ready-to-use tack primer.
It is compatible with all of our products PROTEC®.
It is recommended only for concrete substrates.

CHARACTERISTICS

TYPE
BRB glue is a dispersion of polyvinyl alcohol in water.

MAIN CHARACTERISTICS
- Appearance: syrupy liquid, clear to very slightly cloudy
- Density (20°C): 1.00 ±0.005
- Viscosity (20°C): approximately 600mPa.s
- PH: 6

DIRECTIONS FOR USE

APPLICATION
- On a substrate that is dry, clean, sound, and free of dust, grease, and oil.
- Use away from the elements and at an ambient temperature above 5°C.
- BRB glue can be applied by compressed air sprayer or by roller.
- Consumption: 200 to 300g per m^2.
- Spray PROTEC® products while the BRB tack primer is still wet.

HEALTH AND SAFETY

- Cleaning: with water
- Dry product: Soak in water, then eliminate
- During application: wearing gloves and glasses is recommended
- In case of contact with eyes, rinse with plenty of water; if irritation follows, seek medical advice
- If accidentally swallowed: drink potable water

PACKAGING, TRANSPORT, AND STORAGE

- BRB is delivered in 25-litre plastic buckets.
- NON-TOXIC, COMPLIANT WITH LABOUR LEGISLATION.
- Labelling per EEC directive no. 67-548 (for dangerous substances) is not required.
- BRB glue is not designated as a dangerous substance by the ADR circular (European Agreement for transportation of Dangerous goods by Road).
- Store BRB between 10°C and 25°C.
- **KEEP AWAY FROM FROST**
- Close opened buckets carefully to prevent evaporation, which would alter the characteristics of the BRB glue.

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Z.I. de la Croix Saint-Nicolas - 18 rue Gustave Eiffel - 94510 La Queue-en-Brie
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List of
our classification reports and test reports compliant with European standards (Certificates)



Protec Thermique'S®

• **Fire resistance on concrete**	**CSTB**	**classification report no.**	**RS10-008**	
• Fire resistance on underside of concrete slab	CSTB	test report no.	RS10-007	p.7
• Fire resistance on concrete girder	CSTB	test report no.	RS10-008	p.7
• Acoustic report, 80mm thickness	CSTB	test report no.	AC09-26021062/2	p.7
• Environmental and Sanitary Declaration (FDES):				p.7



Protec Flamme®

EC Certificate of conformity 0679-CPR-0747
ETE - 21/1097

• **Fire resistance**	**CSTB**	**classification report no.**	**RS09-156**	
• Fire resistance on underside of concrete slab, 84mm thickness	CSTB	test report no.	RS09-002	p.9
• Fire resistance on underside of concrete slab, 17mm thickness	CSTB	test report no.	RS09-003	p.9
• Fire resistance on concrete girder, 88mm thickness	CSTB	test report no.	RS10-004	p.9
• Fire resistance on concrete girder, 15mm thickness	CSTB	test report no.	RS10-005	p.9
• Fire resistance on composite floor concrete/structural trays, 77mm thickness	CSTB	test report no.	RS09-049	p.14
• Fire resistance on composite floor concrete/structural trays, 18mm thickness	CSTB	test report no.	RS09-050	p.14
• Fire resistance on a wooden floor 85mm thickness	CSTB	test report no.	RS09-082	p.14
• Fire resistance on a wooden floor 41mm thickness	CSTB	test report no.	RS09-083	p.14

• **Fire resistance on steel structure**	**CSTB**	**classification report no.**	**RS09-133**	
• Fire resistance on steel structure	CSTB	test report no.	RS09-133	p.10-11-12-13

• Acoustic test report, 12.5mm thickness	CSTB	test report no.	AC09-26018045/1-Rev01	p.15
• Acoustic test report, 45mm thickness with and without paint	CSTB	test report no.	AC09-26021062/1 Rev01	p.15
• Acoustic test report, 80mm thickness	CSTB	test report no.	AC09-26018045/2-Rev01	p.15



Protec Acoustique®

• Acoustic test report, 12.5mm thickness	CSTB	test report no.	AC09-26018045/3-Rev01	p.17
• Acoustic test report, 45mm thickness with and without paint	CSTB	test report no.	AC09-26021062/3-Rev01	p.17
• Acoustic test report, 80mm thickness	CSTB	test report no.	AC09-26018045/4-Rev01	p.17

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www.ruaud.com

www.ruaud.com

Ruaud industries®
Z.I. de la Croix Saint-Nicolas
18 rue Gustave Eiffel
94510 La Queue en Brie
France

Tel. : **+33 (0)1 45 76 72 26**
Fax : +33 (0)1 45 76 42 34
contact@ruaud.com

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