

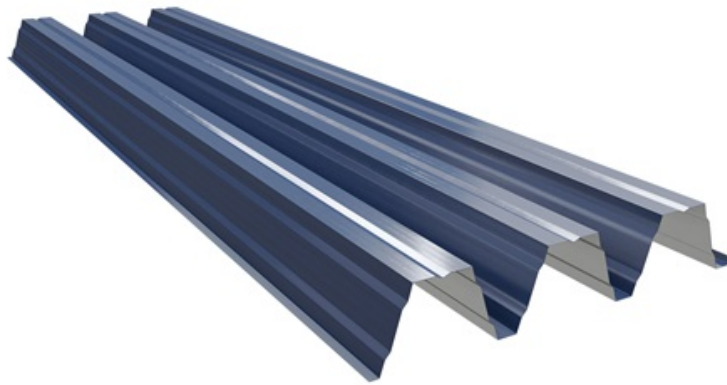
# Load-Bearing Sheet T153-40L-840

Height and optimal geometry of the T153 makes it the strongest load-bearing sheet in our portfolio.

**This product is optionally available with following sustainable features:**

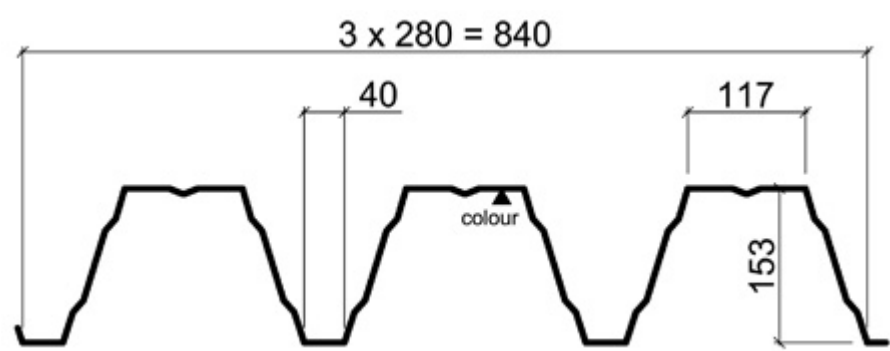
- Steel profile made of recycled steel (SSAB Zero) for significantly lower CO<sub>2</sub> emissions and high circularity (Ruukki LowCarbon)
- Availability and delivery time for different thickness/coating combinations varies.

For the optimal structural dimensioning, use Ruukki's roof dimensioning software, [Poimu](#).



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# Properties



Model name	Load-Bearing Sheet T153-40L-840
Product code	T153-40L-840
Height	153 mm
Width of valley	40 mm
Width of crown	117 mm
Effective width	840 mm
Minimum length	800 mm
Maximum Length	18300 mm
Quality control	Factory production control according to EN 1090-1 and EN 1090-4
Tolerances	Dimensions and shape according to EN 1090-4, material thickness according to EN 10143
CE Marking	EN1090-1
Execution class	EXC1, EXC2, EXC3

# Materials

Material thickness (mm)	Steel grade	Zinc (g/m <sup>2</sup> )	Surface treatment	Corrosion class, interior	Corrosion class, exterior	Colours **	Weight (kg/m <sup>2</sup> )	GWP, A1-A3 (kgCO <sub>2</sub> e/m <sup>2</sup> )	GWP, D (kgCO <sub>2</sub> e/m <sup>2</sup> )
0.7	S350	Z275	Galvanized	C2	-	-	9.81	25.5	-13.8
0.7	S350	Z100	Polyester 25	C2	-	RR20	9.81	26.9	-13.8
0.7	S350	Z275	Polyester 25	C3*	C3	RR20	9.81	26.9	-13.8
0.8	S350	Z275	Galvanized	C2	-	-	11.22	29.1	-15.8
0.8	S350	Z275	Polyester 25	C3*	C3	RR33	11.21	30.7	-15.8
0.8	S350	Z100	Polyester 25	C2	-	RR20	11.21	30.7	-15.8
0.9	S350	Z275	Galvanized	C2	-	-	12.62	32.8	-17.8
0.9	S350	Z100	Polyester 25	C2	-	RR20	12.62	34.6	-17.8
1.0	S350	Z275	Galvanized	C2	-	-	14.02	36.5	-19.8
1.0	S350	Z100	Polyester 25	C2	-	RR20	14.02	38.4	-19.8
1.0	S350	Z275	Polyester 25	C3*	C3	RR20, RR33	14.02	38.4	-19.8
1.0	S350	Z275	GreenCoat Pural BT	C4*	C4	RR23	14.02	38.4	-19.8
1.2	S350	Z275	Galvanized	C2	-	-	16.82	43.7	-23.7
1.2	S350	Z100	Polyester 25	C2	-	RR20	16.82	46.1	-23.7
1.2	S350	Z275	Polyester 25	C3*	C3	RR33	16.82	46.1	-23.7
1.5	S350	Z275	Galvanized	C2	-	-	21.03	54.7	-29.7
1.5	S350	Z100	Polyester 25	C2	-	RR20	21.03	57.6	-29.7

\*) For perforated sheetings C2

\*\*) The reverse sides of the colour coated sheets are painted as standard with 2-layer grey backside coating

## Protection against corrosion

Environment	Coating
Interior applications in environments with corrosivity category C1, C2 according to EN ISO 12944-2 standard and A1, A2 according to EN 10169 standard	Steel sheets with zinc coating of 100 g/m <sup>2</sup> and with polyester coating SP 15, thickness 15 µm
Interior applications in environments with corrosivity category C1, C2, C3 according to EN ISO 12944-2 standard and A1, A2, A3 according to EN 10169 standard	Steel sheets with zinc coating of 275 g/m <sup>2</sup> and with polyester coating SP 25, thickness 25 µm

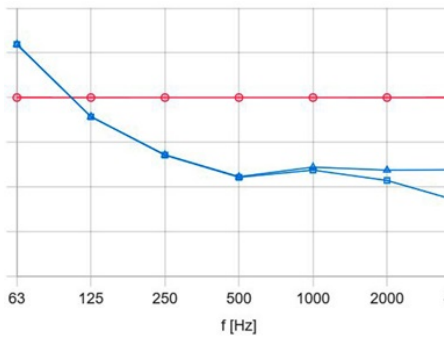
## Design tools



### Poimu software for dimensioning load-bearing sheets

Dimensioning software, Poimu, allows you to optimise product choice according to the Eurocode. Simply by defining some basic input data you can select a load-bearing sheet for their needs from Ruukki's selection. This quick optimisation tool covers 1-, 2-span and continuous structures and gives the exact solution as to what sheet should be used, as well as its length.

[Go to Poimu software](#)



## Ruukki Acoustic Estimator

Try our estimator for your next project. With our estimation tool you can calculate which product configuration provides you with optimal results.

[Go to estimation tool here](#)

## Acoustic perforation

### Acoustic absorption coefficient, absorption class and sound insulation

Find detailed acoustic information from <https://www.ruukki.com/sound-environment> where is collection of products, guide and measured values are available.

### Corrosion resistance

Due to requirement regarding corrosion resistance perforated steel sheets may be applied only indoors and as follows:

Galvanized steel sheets with zinc coating 275 g/m<sup>2</sup> or galvanized steel sheets with zinc coating 100 g/m<sup>2</sup> or 275 g/m<sup>2</sup> together with organic coating SP 25 (polyester 25 µm) - in corroding medium C1 and C2 as per EN ISO 12944-2.

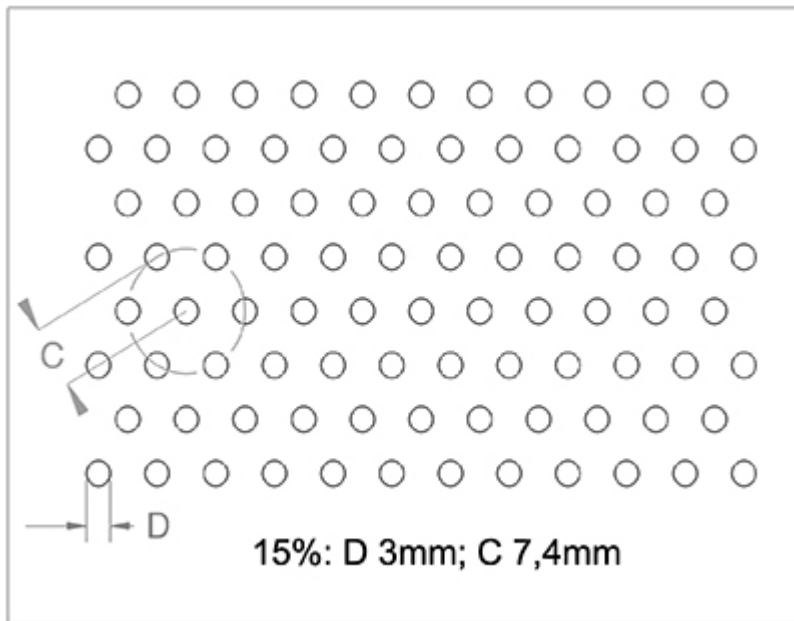
### Load bearing profile application

Load bearing profiles are usually applied in multi layer roofing constructions. Sound absorption can be improved and adjusted by profile perforation selection and insulation layer selection. Perforation leads to improved sound absorption that can greatly improve indoor acoustic conditions; reduction of sound reverberation time and background noise level even without extra acoustic layers and involved costs.

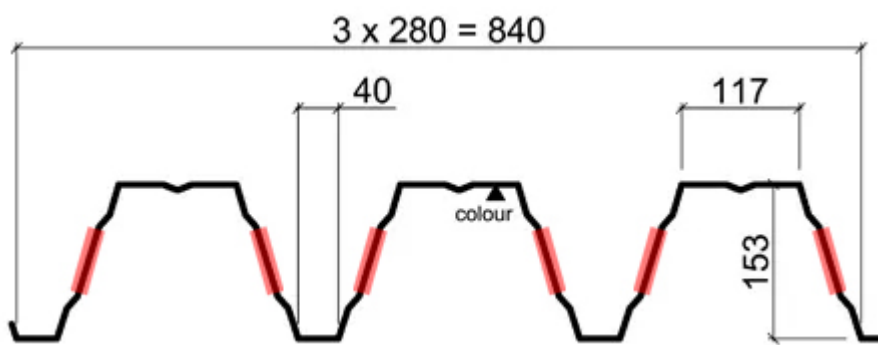
Use of POIMU software enables trapezoidal sheets within a structure to be dimensioned and optimized with perforated profiles too. For more information on POIMU visit [Ruukki Design Tools](#).

### Perforation pattern

Standard degree of perforation is 15% within the area perforated for web perforated profiles.



Perforation location for T153 profile marked with red.



## Anticondensation layer

Profiles with anti-condensation layer are protected against water condensation directly at the bottom surface of the metal sheet. The layer absorbs water which then may be evaporated into the surrounding environment during a change in weather conditions.

Perlite coat, sprayed only on the bottom surface (back coating side) of the profile.

Layer weight	400 .... 1 000 g/m <sup>2</sup>
Water-absorption capacity	~0.5–0.8 l/m <sup>2</sup> –1.1–1.5 l/m <sup>2</sup>
Coating method	Sprayed
Colour	Light gray

Diluting agent	Water
Composition	Perlite grains, cellulose fibres, water and binder

## Technical documents



### Safety anchor EC type examination certificate

PDF, 66.1 KB

Here you can find all technical documents related to Ruukki's load-bearing sheets. Documents are organised by document type. Click to enter document library.

Product descriptions

>

Accessory documents

>

Detail drawings

>

Installation instructions

>

Maintenance instructions

>

## Certificates and approvals

Here you can find all certificates and approvals related to Ruukki's load-bearing sheets. Documents are organised by document type. Click to enter document library.

Declaration of performance

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Environmental product declaration

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