

Product Verification

Sustainability

Self declared according to LEED Building Design and Construction V3 (2009)

Product Systems

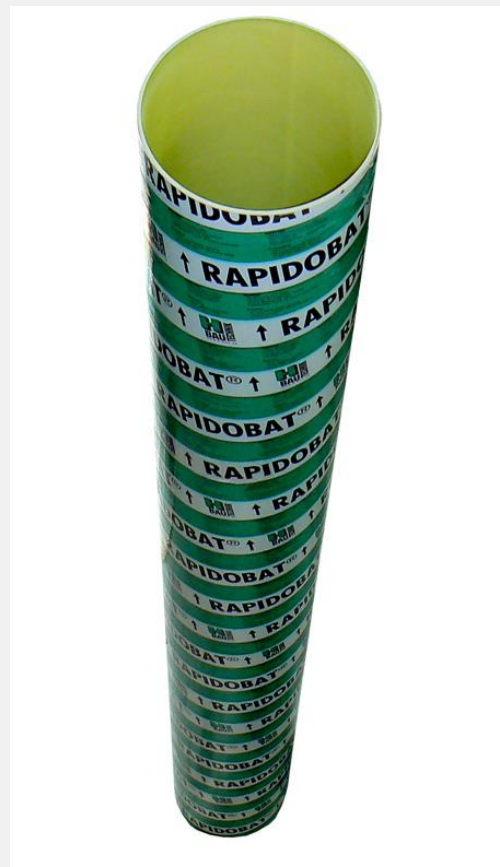
RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes

H-BAU Technik GmbH

With RAPIDOBAT® formwork tubes, H-BAU provides a system of column formwork for easy and economic manufacturing of round and rectangular columns. The formwork tubes consist of multi-layered, very stable webs of paper and cardboard. In addition, the formwork tubes could be specially refined depending on the demands placed on the exposed concrete and requirements of the architect. Various versions are available.

The RAPIDOBAT® Cretcon HD formwork tube has a internal coating. The hydrogel formwork skin is self-activating as soon as it comes into contact with the fresh concrete. With the activatable RAPIDOBAT® Cretcon HD coating, it is possible to achieve a very high-quality concrete surface finish on exposed concrete columns. The integrated ripcord allows the reinforced-concrete columns to be stripped easily and without problems. The formwork tube can then be used to support the new concrete.

The products are manufactured in the factory and do not remain as formwork component in the building.



Product Assessment

Materials & Resources

Criteria	Product Verification
MR Credit 4: Recycled Content	128 %
MR Credit 5: Regional Materials	Yes
MR Credit 6: Rapidly Renewable Materials	0 %
MR Credit 7: Certified Wood	N/A

Indoor Environmental Quality

Criteria	Product Verification
IEQ Credit 4.1: Low Emitting Materials: Adhesives and Sealants	N/A
IEQ Credit 4.2: Low Emitting Materials: Paints and Coatings	N/A
IEQ Credit 4.3: Low Emitting Materials: Flooring Systems	N/A
IEQ Credit 4.4: Low Emitting Materials: Composite Wood and Agrifiber Products	N/A

Legend: yes = Product contributes toward satisfying the credit, N/A = Product not relevant in the credit, no = Credit requirements are not proven

Summary

The product contributes to the certification:

- Creditable recycled content according to LEED for the entire product: 128 %
- Information for MR Credit 5: Regional Materials is available (points can be achieved if the product has been extracted, harvested or recovered, as well as manufactured, within 500 miles/800 km of the project site): Yes
- Content of rapidly renewable materials for the entire product: 0 %

Product Properties

Manufacturer:

Environmental Management System according ISO 14001: N/A

Ingredients:

Recycled content post-consumer:	83 wt%
Recycled content pre-consumer:	90 wt%

■ Product Components

Name	Amount	Material type / Function	DfD	Total Weight	Specific Weight	Portion (%)
Paper	0.813		No	0.813	1 kg / kg	81.30 %
Glue	0.125		No	0.125	1 kg / kg	12.50 %
Inner layer	0.031		No	0.031	1 kg / kg	3.10 %
Covering	0.031		No	0.031	1 kg / kg	3.10 %

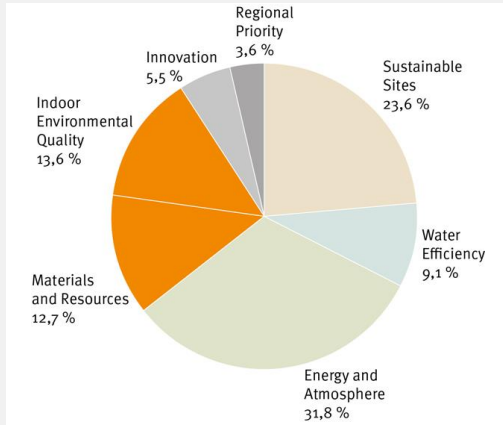
■ System description

The American LEED (Leadership in Energy and Environmental Design) certification system was published by the USGBC (U.S. Green Building Council) in the late 1990s. The LEED system can be used internationally for all buildings, regardless of whether it is a new building, refurbishment or existing building. In LEED v3 a total of seven environmental categories with different credits are considered, in which up to 110 points can be collected. The LEED levels of certification which can be achieved are Certified, Silver, Gold and Platinum. Up to now, more than 92,000 LEED projects have been registered in 167 countries, of which 39,000 have already achieved a certificate (as of October 2017).

Source: www.usgbc.org

■ System categories

Category Weighting



Category

Category considered in product verification

Sustainable Sites (SS)	No
Water Efficiency (WE)	No
Energy and Atmosphere (EA)	No
Materials and Resources (MR)	Yes
Indoor Environmental Quality (EQ)	Yes
Innovation (IN)	No
Regional Priority (RP)	No

Source: LEED 2009 - New Construction

Detailed Verification

Self declared according to LEED Building Design and Construction V3 (2009)

Materials & Resources

MR Credit 4: Recycled Content

Creditable recycled content according to LEED for the entire product:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	128 %
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Postconsumer recycled content for the entire product:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	83 %
Paper	85 %
Glue	0 %
Inner layer	0 %
Covering	0 %

Do you want to enter the recycled content for the entire product? Otherwise it will be automatically calculated from the components. If you do not have components for your product, we recommend that you enter the recycling percentage for the entire product here:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	Yes
Paper	Yes
Glue	Yes
Inner layer	Yes
Covering	Yes

Postconsumer recycled content of product (creditable):

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	83 %
Paper	85 %
Glue	0 %
Inner layer	0 %
Covering	0 %



Recycled content post-consumer:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	83 wt%
Paper	85 wt%
Glue	0 wt%
Inner layer	0 wt%
Covering	0 wt%

Postconsumer recycled content for steel according to LEED:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	0 %
Paper	0 %
Glue	0 %
Inner layer	0 %
Covering	0 %

The product is made of steel:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	No
Paper	No
Glue	No
Inner layer	No
Covering	No

Recycled content pre-consumer:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	90 wt%
Paper	15 wt%
Glue	0 wt%
Inner layer	0 wt%
Covering	0 wt%

Preconsumer recycled content for the entire product:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	90 %
Paper	15 %
Glue	0 %
Inner layer	0 %
Covering	0 %

MR Credit 5: Regional Materials

Information for MR Credit 5: Regional Materials is available (points can be achieved if the product has been extracted, harvested or recovered, as well as manufactured, within 500 miles/800 km of the project site):

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	Yes
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Place of raw material extraction (e.g D-70563 Stuttgart):

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	Deutschland
Paper	Europa
Glue	keine Angabe / not specified
Inner layer	Deutschland / Italien
Covering	Deutschland / Italien

Place of manufacture (e.g. D-70563 Stuttgart):

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	79771
Paper	keine Angabe / not specified
Glue	keine Angabe / not specified
Inner layer	keine Angabe / not specified
Covering	keine Angabe / not specified

The distance between place of raw material extraction and manufacture is less than 500 miles/800 km:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	Yes
Paper	No
Glue	No
Inner layer	No
Covering	No

MR Credit 6: Rapidly Renewable Materials

Content of rapidly renewable materials for the entire product:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	0 %
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Entire proportion of rapidly renewable raw materials

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	Yes
Paper	Yes
Glue	Yes
Inner layer	Yes
Covering	Yes

Content of rapidly renewable raw materials for the product

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	No Information
Paper	0 %
Glue	0 %
Inner layer	0 %
Covering	0 %

MR Credit 7: Certified Wood
Content of FSC-certified wood-based materials in the entire product:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	N/A
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The product is a wood-based material or is partially made of wood:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	Yes
Paper	No
Glue	No
Inner layer	No
Covering	No

Do you want to enter the content of FSC-certified materials for the entire product? Otherwise it will be automatically calculated from the components. If you do not have any components for your product, we recommend that you enter here the content of FSC certified materials for the entire product:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	Yes
Paper	Yes
Glue	No Information
Inner layer	No Information
Covering	No Information

Certified in accordance with the FSC:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	No Information
Paper	No
Glue	No Information
Inner layer	No Information
Covering	No Information

FSC CoC number:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	No Information
Paper	No Information
Glue	No Information
Inner layer	No Information
Covering	No Information

FSC-certificate valid until:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	No Information
Paper	No Information
Glue	No Information
Inner layer	No Information
Covering	No Information

Content of FSC-certified wood:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	No Information
Paper	0 %
Glue	No Information
Inner layer	No Information
Covering	No Information

Indoor Environmental Quality
IEQ Credit 4.1: Low Emitting Materials: Adhesives and Sealants

The entire product contributes toward satisfying IEQ Credit 4.1: Low Emitting Materials: Adhesives and Sealants:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	N/A
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IEQ Credit 4.2: Low Emitting Materials: Paints and Coatings

The entire product contributes toward satisfying IEQ Credit 4.2: Low Emitting Materials: Paints and Coatings:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	N/A
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IEQ Credit 4.3: Low Emitting Materials: Flooring Systems

The entire product contributes toward satisfying IEQ Credit 4.3: Low Emitting Materials: Flooring Systems:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	N/A
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■ IEQ Credit 4.4: Low Emitting Materials: Composite Wood and Agrifiber Products

The entire product contributes toward satisfying IEQ Credit 4.4: Low Emitting Materials: Composite Wood and Agrifiber Products:

RAPIDOBAT® and RAPIDOBAT® Cretcon HD shuttering tubes	N/A
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■ Contact Details Manufacturer

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■ Disclaimer

This verification is the evaluation and ranking of products in terms of the certification system LEED 2009 (Building Design and Construction). The USGBC (U.S. Green Building Council) generally does not certify products. Therefore the project team or the manufacturer is responsible to declare compliance with respect to the LEED criteria. Notice: This verification is generated by the Assessment Service of BMS. The distribution or publication by third parties is not permitted. The data sheet is not a LEED certification document. The information is based on the manufacturer's specifications. Despite a diligent treatment of all information BMS can not make any warranties about the completeness, reliability and accuracy of this information. The requirements of LEED can be interpreted differently and depend on the project and scope of application. Therefore, BMS cannot accept any liability for the evaluation in terms of the LEED criteria. The user of the data sheet, the user / purchaser of the product and the consultant / planner, who is advising on this product has the duty to check the product for the intended application at their own responsibility. When a new version of this product verification is produced, the previous version loses its validity.