NIEDAX GROUP

NIEDAX®

SUSTAINABLITY DATA SHEET

Product information for the certification system of the DGNB (German Sustainable Building Council)

This sustainability data sheet provides product-specific information relevant for a building certification according to theDGNB system. The data refers to version 2015 and 2012 (upgrade 31.07.2013) of the DGNB.

CABLE TRAY

NX CITO LINE ONE CLICK - FINISHED!

Sustainability Data Sheet

Product information for the certification system of the DGNB (German Sustainable Building Council)

This sustainability data sheet provides product-specific information relevant for a building certification according to the DGNB system. The data refers to version 2015 and 2012 (upgrade 31.07.2013) of the DGNB.

Cable Tray Systems

General information

Company name:	Niedax GmbH & Co. KG
Adress:	Asbacher Straße 141, 53545 Linz/Rhein
Contact person:	Mr. Thomas Basten
Telephone:	+49 (0)2645 138 - 657
Email:	Thomas.Basten@niedax.de
Homepage:	www.niedax-group.com
Date of this sustainability data sheet	10.02.2016

Product information

Product information

The Cable Tray System with patented stamped joint connection for screwless quick fastening offers a high degree of flexibility and efficiency for laying power supply or data cables for professional electrical installation. The rolled-in edges of the rails protect assemblers as well as cables and wires from injuries during electrical installation. 3D longitudinal and transverse embossing arranged in the floor significantly increases longitudinal and transverse rigidity and stability.

Good ventilation of the cables and wires is achieved through the high proportion of holes in the floor.

Offset bottom and side perforation allows stepless attachment and mounting of the system components to be achieved without drilling as well as mounting on the brackets.

Continuous central hole or keyhole perforation in the base for suspension using threaded rods as well as openings in the grid for the most common cable sleeves and cable glands for strain relief.

Sustainability Data Sheet

The production of cable support systems (cable trays, moulded pats, suspended supports, cantilevers, accessories, etc.), starting form sheet metal and strip material, is carried out exclusively in Germany at the St. Katharinen location using state-of-the-art machinery, e.g. punching, roll forming and laser, punching and bending technology. The product is thus 100% Made in Germany.

Application

Utilization as:	Cable Tray System
Instructions for use:	Product catalogue and VDE documentation http://www.niedax.de/fileadmin/user_upload_vertrieb_niedax/downloads/Zertifikate_Zulassungen/Niedax-VDE-Dokumentation.pdf
Cleaning instructions:	No cleaning necessary
Safety data sheet:	Not required
Used in cost groups:	KG 400

The cable support system for horizontal and vertical laying of power supply or data cables in buildings and industrial plants has a high degree of innovation with highest functionality and professional design. The possible applications are almost unlimited due to the extensive range of accessories. The different material and surface finishes allow for indoor and outdoor use.

Technical data and ingredients in the product

The following (construction) technical data in the condition of delivery are relevant for the declared product.

Description	Figure	Unit
Weight of cable support system per declared unit	2.501	kg/running meter
Thickness cable tray	0.75	mm
Height cable tray	60	mm
Width cable tray	200	mm
Load capacity depending on suspension distance (1.0 m - 2.5 m)	170 - 40	kg/m
Equipotential bonding		Yes

Sustainability Data Sheet

The following composition results from the average of the main product components:

Components	Composition	Material
Cable tray RLVC 60.200	1 running meter	galvanised steel*
Overhead hanger HUF 50/300 F	0.75 piece/running meter	galvanised steel *
Bracket KTUM 200 incl. accessories (screws)	0.75 piece/running meter	galvanised steel *

* without further coating

Environmental-labels and labels

Environmental label	Not available
Environmental product declaration (EPD)	Not available
GISCODE	Not available
EMICODE	Not available
DGNB Navigator registration code	Not available
Quality management system	ISO 9001:2015
Work protection managment system	OHSAS 18001:2007
REACH	1907/2006/EG
RoHS	2011/65/EU
VDE	DIN EN 61537
UL/CNC	Available
General Building Inspection Certificate	DIN 4102 part 12
EMV	Available

Environmental quality (ENV)

In this topic area the responsible material selection is evaluated. The aim is to minimize the impact of building materials on the environment over their entire life cycle. Furthermore, the responsible use of resources is evaluated.

Criteria overview for this topic area

Criterion group	Criterion	Criteria description	Relevance for declared product	
			Version 2012	Version 2015
Impact on the global and local environment (ENV10)	ENV1.1	Life Cycle Assessment - Emission-related environmental impact	Yes	Yes
	ENV1.2	Local environmental impact	Yes	Yes
	ENV1.3	Ecological material extraction	No (N/R)	No (N/R)
Use of resources and waste generation (ENV20)	ENV2.1	Life Cycle Assessment – Use of resources *Version 2012: LCA primary energy*	Yes	Yes
	ENV2.2	Drinking water demand and wastewater production	No (N/R)	No (N/R)
	ENV2.3	Use of land	No (N/R)	No (N/R)

Legend: N/R = not required, N/A = not applicable

ENV1.1 Life Cycle Assessment - Emission-related environmental impact

Description of the criterion:
Within the scope of the building certification according to the DGNB system, a building ecobalance must be calculated, which includes all building components of the building. Life Cycle Assessment (LCA) is a method defined by the standards DIN EN ISO 14040 and DIN EN ISO 14044 to analyse and assess environmental aspects and effects of product systems. The entire life cycle of a product from the extraction of the raw materials to the end of its life is taken into account. The emissions of a building are calculated according to their impact potential (global warming potential, ozone layer depletion potential, ozone formation potential, acidification potential, overfertilisation potential.)

Proportional criterion for the overall evaluation: 7.9%

Product information for the declared product for this criterion:

Unit of reference	1 running meter Cable Support System
Source of data	Manufacturer declaration (no externally verified EPD)
Quality of the data	Internal quality control by thinkstep AG
Service life according to BBSR-Table 2011	≥ 50 years
Life cycle end	100% recycling

Sustainability Data Sheet

Creator of the LCA	thinkstep AG, Hauptstraße 111-113, 70771 Leinfelden-Echterdingen, Germany
Used software and satabase	GaBi software und database; LBP, Universität Stuttgart und thinkstep AG, 2015 (http://documentation.gabi-software.com/)
Comment on the use of the data	The life cycle assessment calculation was carried out in compliance with the methodical requirements of DIN EN 15805. Thus the results are suitable for the use in the LCA calculation according to the DGNB system. In this case, however, according to DGNB rules, acalculation surcharge of 10% must be added by the user, since the data is not externally checked.

The declaration of the information corresponds to the modular division into life cycle sections and modules in accordance with EN 15804.

Life cycle sections	**Production stage**	**Credits and loads outside the system boundary**
Declared modules according to DIN EN 15978	A1-A3	D
GWP [kg CO_2-Äq.]	6.45E+00	-4.28E+00
ODP [kg CFC11-Äq.]	1.36E-10	4.75E-11
POCP [kg Ethen-Äq.]	3.15E-03	-2.47E-03
AP [kg SO_2-Äq.]	2.39E-02	-1.66E-02
EP [kg PO_4^{3-}-Äq.]	2.16E-03	-1.40E-03
Legend	GWP = Global warming potential; ODP = Ozone depletion potential; POCP = Photochemical oxidation creation potential; AP = Acidification potential for soil and water; EP = Eutrophication potential; ADPE = Abiotic depletion potential for elements; ADPF = Abiotic depletion potential for fossil fuels	

ENV2.1 Life Cycle Assessment – Use of resources (version 2015) / Primary energy (version 2012)

Description of the criterion:
In addition to ENV1.1, this criterion evaluates the total resource consumption/primary energy requirements of the building. The aim is to reduce this consumption and at the same time increase the share of renewable primary energy used as much as possible.

Proportional criterion for the overall evaluation: 1.1%

Product information for the declared product for this criterion:

The declaration of the information corresponds to the modular division into life cycle sections and modules in accordance with EN 15804.

Life cycle sections	Production stage	Credits and loads outside the system boundary
Declared modules according to DIN EN 15978	A1-A3	D
PE total [MJ]	8.10E+01	-3.65E+01
PERT [MJ]	4.44E+00	1.28E+00
PENRT [MJ]	7.66E+01	-3.78E+01
ADPE [kg Sb-Äq.] *	5.85E-04	-4.33E-08
FW [m³] *	2.85E-02	-2.74E-03
Legend	PE total = Total primary energy use; PERT = Total renewable primary energy use; PENRT = Total non-renewable primary energy use, ADPE = Abiotic depletion potential for elements; FW = Net use of fresh water	

* ADPE and FW are only relevant for version 2015.

ENV1.2 Local environmental impact

Description of the criterion:
The aim of this criterion is to minimise risks to human health and the environment. All construction materials and building materials used which may present a risk within their life cycle (from production and processing on the building site, use in the building to their disposal (dismantling, recycling, landfilling)) are evaluated. Therefore, criterion ENV1.2 sets specific requirements for a variety of building materials and products and assesses them in 4 successive quality levels.
Only the requirements that are relevant for the classification of the product in question are shown below.

For the declared product there are no requirements for this criterion.

Proportional criterion for the overall evaluation: 3.4%

Environmental quality (ECO)

In this field the sustainable use of financial resources is evaluated. Therefore, the focus is on reduction of building-related life cycle costs and the value stability of the building.

Criteria overview for this topic area.

Criterion group	Criterion	Criteria description	Relevance for declared product	
			Version 2012	Version 2015
Life cycle costs (ECO10)	ECO1.1	Building-related costs in the life cycle	Yes	Yes
Development of value (ECO20)	ECO2.1	Flexibility and reusability	Yes	Yes
	ECO2.2	Marketability	No (N/R)	No (N/R)

Legend: N/R= not required, N/A = not applicable

ECO1.1 Building-related costs in the life cycle

Description of the criterion:
Within the scope of this criterion, a life cycle cost calculation is carried out, which includes the construction costs of the building as well as the follow-up costs or selected usage costs.

Proportional criterion for the overall evaluation: 9.6%

Product information for the declared product for this criterion:

Life cycle cost calculation	The cable support system falls under the cost group 440 or 450. Thus its production, renewal and maintenance costs must be included in the life cycle cost calculation.

ECO2.1 Flexibility and reusabilty

Description of the criterion:
The aim is to design the building as flexibly as possible and to plan for the greatest possible reusabilty. The easier it is to adapt a building to changing requirements, the more favourable the impact on user acceptance, service life and life cycle costs.

Proportional criterion for the overall evaluation: 9.6%

Product information for the declared product for this criterion:

7. Technical building equipment: Electrical engineering	The distribution and connections of the elctrical engineering are planned in such a flexible way that they can be adapted in the event of a changed room situation or redesign without structural measures.

(Relevance for verrsion 2015 depends on usage profile)

Sociocultural and functional quality (SOC)

The focus of this topic area is user comfort, as well as the safety and health of users and visitors of the building.

Criteria overview for this topic area.

Criterion group	Criterion	Criteria description	Relevance for declared product	
			Version 2012	Version 2015
Health, comfort and user satisfaction (SOC10)	SOC1.1	Impact on thermal comfort	No (N/R)	No (N/R)
	SOC1.2	Indoor air quality	No (N/R)	No (N/R)
	SOC1.3	Impact on acoustic comfort	No (N/R)	No (N/R)
	SOC1.4	Impact on visual comfort	No (N/R)	No (N/R)
	SOC1.5	Influence of the user	No (N/R)	No (N/R)
	SOC1.6	Quality of stay indoor/outdoor *Version 2012: Exterior quality*	No (N/R)	No (N/R)
	SOC1.7	Safety *Version 2012: Safety and risk of incidents*	Yes	Yes
Functionality (SOC20)	SOC2.1	Accessibility	No (N/R)	No (N/R)
	SOC2.2	Utilization offers to the public *Version 2012: Public accessibility*	No (N/R)	No (N/R)
	SOC2.3	Accessibility for bycicles	No (N/R)	No (N/A)
Design quality (SOC30)	SOC3.1	Method for urband planning and design conception	No (N/R)	No (N/A)
	SOC3.2	Art on site	No (N/R)	No (N/A)
	SOC3.3	Layout quality	No (N/R)	No (N/A)

Legend: N/R= not required, N/A = not applicable

SOC1.7 Safety and risk of incidents

Description of the criterion:
The aim of the criterion is to increase the feeling of safety in order to contribute to a person's comfort. Furthermore, dangerous situations should be avoided and the effects of unavoidable damage reduced.

Proportional criterion for the overall evaluation: 1.1% (version 2012: 0.9%)

Product information for the declared product for this criterion:

Influence on the development of fire risks	The product (material: galvanized steel without further coating) does not contain any substances which lead to corrosive and decomposing flue gases in case of fire.

Technical quality (TEC)

High technical building quality promotes the sustainability of a building in several areas simultaneously. Therefore, criteria such as energy efficiency or recyclability are considered separately in this thematic are.

Criteria overview for this topic area.

Criterion group	Criterion	Criteria description	Relevance for declared product	
			Version 2012	Version 2015
Quality of the technical design (TEC10)	TEC1.1	Fire safety	Yes	No (N/A)
	TEC1.2	Sound insulation	No (N/R)	No (N/R)
	TEC1.3	Protection against condensation water in the building envelope *Version 2012: Thermal and moisture protection - Technical quality of the building envelope*	No (N/R)	No (N/R)
	TEC1.4	Adaptability of technical systems	No (N/R)	No (N/R)
	TEC1.5	Cleaning and maintenance friendliness of the structure	No (N/R)	No (N/R)
	TEC1.6	Renaturation and recycling friendliness *Version 2012: Renaturation and dismantling friendliness*	Yes	Yes
	TEC1.7	Immission protection	No (N/R)	No (N/R)

Legend: N/R= not required, N/A = not applicable

TEC1.1 Fire safety

Description of the criterion:
Fire events not only endanger the lives of humans and animals, but also cause damage to the building fabric and release pollutant emissions. The minimum requirement for fire protection are specified in the state building regulations, the fire protection concept of a building or in special building guidelines, e.g. high-rise building guidelines. With structural and technical measures, fire protection that goes beyond the minimum requirements can be planned under sustainable aspects.

Proportional criterion for the overall evaluation: not included in version 2015 (version 2012: 4.1%)

Product information for the declared product for this criterion (for version 2012):

Fire protection class	Metal: A1 (non combustible)

(Criterion no longer required in version 2015)

TEC1.4 Adaptability of technical systems

Description of the criterion:
A high adaptability of the technical system (i.e. a good adaptability to changing conditions) can decisively influence the user acceptance of a building and its service life level as well as the costs incurred in operations. The adaptability and expandability of existing networks as well as the integration of existing functions into a higher level system is rated positively.

Proportional criterion for the overall evaluation: 4.1% (version 2012: 2.0%)

Product information for the declared product for this criterion:

Reserves of vertical shafts / routes	Shafts / routes for water-bearing trades (heating, plumbing and cooling), electrical and IT supply Spatial reserves for later conversion: Reserves of > 20% (> 10%) are available on average

TEC1.6 Renaturation and dismantling friendliness

Description of the criterion:
If the materials in the building components can be separated by type and with little effort in the event of conversion or dismantling and can be recycled, the criterion renatuartion and dismantling friendliness of the building ist assessed positively. A good result can be achieved with the selection of pollutant-free recyclabe building materials.

Proportional criterion for the overall evaluation: 4.1%

Product information for the declared product for this criterion (for version 2012):

Effort for dismantling	Very low
Effort for separation	Light
Recyclability / Disposal	Due to its high value as a raw material, steel scrap is not disposed of, but fed into an established recycling cycle. The zinc is separated and processed again into semifinished zinc products.

In version 2015, this criterion is no longer relevant, since cost group 400 was excluded.

Process quality (PRO)

In this topic area, the quality of the processes from project preparation to the utilization phase is evaluated in terms of sustainability.

Criteria overview for this topic area.

Criterion group	Criterion	Criteria description	Relevance for declared product	
			Version 2012	Version 2015
Quality of planning (PRO10)	PRO1.1	Project preparation and planning *Version 2012: Quality of the project preparation*	No (N/R)	No (N/R)
	PRO1.2	Integral planning	No (N/R)	No (N/A)
	PRO1.3	Conceptual design and optimization in planning *Version 2012: Proof of the optimization and complexity of the approach in planning*	No (N/R)	No (N/R)
	PRO1.4	Securing sustainability aspects in tendering and procurement	No (N/R)	No (N/R)
	PRO1.5	Prerequisites for optimal use and management *Version 2012: Creation of conditions for optimal use and management*	Yes	Yes
	PRO1.6	Method for urband planning and design conception	No (N/A)	No (N/R)
Quality of construction (PRO20)	PRO2.1	Construction site / Construction process	No (N/R)	No (N/R)
	PRO2.2	Quality assurance of construction	Yes	Yes
	PRO2.3	Orderly commissioning	No (N/R)	No (N/R)

N/R= not required, N/A = not applicable

PRO1.5 Prerequisites for optimal use and management *(Version 2012: Creation of conditions for optimal use and management)*

Description of the criterion:
In this criterion, recommendations for actions and documents, such as comprehensive building documentation, are evaluated to support optimal building operation.

Proportional criterion for the overall evaluation: 1.0% (version 2012: 1.4)

Product information for the declared product for this criterion:

Cleaning instructions	Cleaning of the cable support system is not necessary.

PRO2.2 Quality assurance of construction

Description of the criterion:
The criterion is used to describe and evaluate the construction work. In addition, subsequent conversion and renaturation measures are to be facilitated and their sustainability optimised. For this purpose, the materials and auxiliary materials used or installed must be documented and safety data sheets must be compiled.
Proportional criterion for the overall evaluation: 1.4%

Product information for the declared product for this criterion:

Installation manual
http://www.niedax.de/fileadmin/user_upload/Montageanleitungen/MA_CITO_LINE_RLVC.pdf

VDE drawing approval:
http://www.niedax.de/fileadmin/user_upload_vertrieb_niedax/downloads/Zertifikate_Zulassungen/Niedax-VDE-Zeichengenehmigungsausweis-RLVC-System.pdf

VDE documentation:
http://www.niedax.de/fileadmin/user_upload_vertrieb_niedax/downloads/Zertifikate_Zulassungen/Niedax-VDE-Dokumentation.pdf

Disclaimer:

The content and results presented in this report are based on data and information provided by the customer. Therefore, thinkstep AG assumes no responsibility or guarantee, neither expressly nor implicitly, with regard to the correctness or completeness of the contents of this document or the declared results.

The above-mentioned percentages of the criterions in the overall evaluation correspond to percentages that can be reached for the entire building (usage profile new office and administration building). Depending on the criterion, the cable support system only contributes to a certain extent. With other usage profiles, the influence can vary.