EC3 Uncertainty – Default Uncertainty Factors

These category Uncertainty Factors are under active development by BuildingTransparency.org using LCA simulation, industry data, and analysis of existing EPDs. Please note:

- BuildingTransparency updates these factors as it completes detailed studies of each category.
- Categories where the study has not yet been completed and reviewed use the Default factors.
- The LCA studies use a mix of public sources, licensed impact databases, and confidential industry data shared under research agreements. We are not always able to share all data publicly.
- We welcome domain experts who believe non-Default factors to be inaccurate, and have relevant data and expertise, to email contactus@buildingtransparency.org

Some default factors may not be based on rigorous analysis (e.g. 20% defaults, and 3% residual uncertainty) and they act as placeholders while the data necessary to conduct analyses are collected.

The full descriptions of all uncertainty groups including examples are outlined in EC3 General Uncertainty Methodology, however, the following lists the individual uncertainty group abbreviations, names, and adaptations shown in this summary report.

- M – manufacturer uncertainty
- F – facility uncertainty (including steel mills and galvanizing mills)
- P – product uncertainty (including fabrication and product variations)
- B – batch uncertainty
- S – supply chain uncertainty
- L – LCIA uncertainty
- R – residual uncertainty

See the table of uncertainty factors on the following pages.

Table 1. Default EC3 uncertainty factors.

Category	M	F	P	B	S	L	R	Source of uncertainty factors	Report	Last Updated
Default	20.0%	20.0%	20.0%	5.0%	20.0%	3.0%	3.0%	Default.		
Aluminum	10.0%	52.9%	20.0%	5.0%	52.9%	3.0%	3.0%	BT analysis of EPDs and LCA models.	In progress	2/23/2023
Asphalt	20.0%	20.0%	20.0%	5.0%	20.0%	3.0%	3.0%	Default.	In progress	2/23/2023
Cement	7.1%	11.3%	10.0%	1.0%	0.0%	3.0%	3.0%	BT analysis with cement industry, based on EPDs and LCA models.	See report	2/23/2023
Concrete >> Ready Mix	20.8%	2.6%	10.0%	0.8%	10.8%	3.0%	3.0%	BT analysis with concrete industry, based on EPDs and LCA models.	See report	2/23/2023
Flat Glass	5.0%	10.1%	1.0%	1.0%	1.1%	3.0%	3.0%	BT analysis of EPDs and LCA models.	In progress	2/23/2023
Processed Glass	20.0%	20.0%	20.0%	5.0%	20.0%	3.0%	3.0%	Default.	In progress	2/23/2023
IGUs	20.0%	20.0%	20.0%	5.0%	20.0%	3.0%	3.0%	Default.	In progress	2/23/2023
Resilient Flooring	14.7%	16.8%	10.0%	3.0%	17.3%	3.0%	3.0%	BT analysis with RFCI, based on EPDs and LCA models.	In progress	2/23/2023
PVC Membrane Roofing	5.0%	6.0%	10.0%	5.0%	11.0%	3.0%	3.0%	BT analysis with CFFA, based on EPDs and LCA models.	In progress	2/23/2023
KEE Membrane Roofing	5.0%	6.0%	10.0%	5.0%	11.0%	3.0%	3.0%	BT analysis with CFFA, based on EPDs and LCA models.	In progress	2/23/2023
Data Cabling	3.0%	4.0%	26.9%	3.4%	17.5%	3.0%	3.0%	BT analysis with SuperiorEssex, based on EPDs and LCA models.	In progress	2/23/2023
Steel	5.0%	36.9%	3.4%	5.0%	5.6%	3.0%	3.0%	openIMPACT analysis of steel plate based on having the largest variability across existing analyses.	In progress	6/14/2023
Steel >> Hollow Sections	5.0%	36.9%	3.4%	5.0%	5.6%	3.0%	3.0%	openIMPACT analysis of plate (In the interim while HSS is being fixed. Plate has the closest proxy production chain to HSS.)	In progress	6/14/2023
Steel >> Hot Rolled Sections	5.0%	16.0%	4.5%	5.0%	5.1%	3.0%	3.0%	openIMPACT analysis of heavy sections (note: plant=mill, product=fabrication)	In progress	6/14/2023
Steel >> Plate	5.0%	36.9%	3.4%	5.0%	5.6%	3.0%	3.0%	openIMPACT analysis of plate (note: plant=mill, product=fabrication)	In progress	6/14/2023
Steel >> Rebar	5.0%	16.3%	4.9%	5.0%	4.3%	3.0%	3.0%	openIMPACT analysis of rebar (note: plant=mill, product=fabrication)	In progress	6/14/2023
Steel >> Cold Formed	5.0%	30.0%	2.1%	5.0%	5.0%	3.0%	3.0%	openIMPACT analysis of galvanized sheet (product = fabrication and product variations)	In progress	6/14/2023
Steel >> Merchant Bar	5.0%	16.0%	4.5%	5.0%	5.1%	3.0%	3.0%	openIMPACT analysis of heavy sections as the closest proxy production chain.	In progress	6/14/2023
Steel >> Wire and Mesh	5.0%	16.3%	4.9%	5.0%	4.3%	3.0%	3.0%	openIMPACT analysis of rebar as the closest proxy production chain.	In progress	6/14/2023
Steel >> Decking	5.0%	30.0%	2.1%	5.0%	5.0%	3.0%	3.0%	openIMPACT analysis of galvanized sheet as the closest proxy production chain.	In progress	6/14/2023

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Steel >> Coil	5.0%	30.0%	2.1%	5.0%	5.0%	3.0%	3.0%	openIMPACT analysis of galvanized sheet as the closest proxy production chain.	In progress	6/14/2023