



The DIOGEN and CIOGEN works, a specific approach in environmental assessment of civil engineering structures

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Abstract

DIOGEN¹ is an open access database from AFGC², providing impacts of production materials used in France for civil engineering works. DIOGEN is designed to provide reliable and representative environmental data, established according to standard EN 15804. Based on values provided by the industry or scientific studies, the working group determines a scoring reflecting the level of reliability and representativeness of the data, according to the Ecoinvent methodology.

Based on the database DIOGEN and developed in web format, the tool CIOGEN³, in its current version, offers an assessment of the stages of production and construction of road bridges according to EN 15804. To preserve the representativeness and reliability of the calculations, several representative worksites were used to measure inventory flows and then calculate standard values of processes for different types of structures. A second version is being developed to perform an LCA assessment on the full life cycle of different bridges structures.

Keywords: Life Cycle Assessment, bridges, database, assessment tool.

¹Environmental impacts data of civil engineering works

² French civil engineering association

³ Environmental impacts calculation of civil engineering works