

Annex to Life Cycle Assessment Verification

Statement

Standard ISO 14040:2006, ISO 14044:2006

Certificate Registr. No. GRGTLCA2025019

Report No. GRGT-LCA-2025019

Result:

Stage	Raw materials	Production	Distribution / Retail	Consumer use	Disposal/ Recycling	Total
Climate change, short term (kg CO2 eq)	1.60E+02	1.04E+00	1.56E+00	2.88E+01	8.05E-01	1.92E+02
Climate change, long term (kg CO2 eq)	1.52E+02	9.93E-01	1.47E+00	2.74E+01	8.03E-01	1.82E+02
Fossil and nuclear energy use (MJ deprived)	2.14E+03	1.16E+01	1.99E+01	6.77E+02	5.54E-01	2.85E+03
Mineral resources use (kg deprived)	7.55E+00	4.52E-03	2.39E-02	2.50E-01	2.73E-03	7.83E+00
Photochemical oxidant formation (kg NMVOC eq)	7.31E-01	3.60E-03	3.38E-02	7.36E-02	5.74E-04	8.42E-01
Ozone layer depletion (kg CFC-11 eq)	6.74E-06	5.44E-09	2.44E-08	5.75E-07	7.30E-10	7.34E-06
Freshwater ecotoxicity (CTUe)	3.15E+07	3.96E+04	4.83E+03	9.27E+05	7.71E+04	3.26E+07
Human toxicity cancer (CTUh)	1.73E-04	2.30E-07	3.17E-07	5.85E-06	1.92E-07	1.79E-04
Human toxicity non-cancer (CTUh)	2.02E-04	3.24E-07	1.02E-07	9.79E-06	1.95E-07	2.12E-04
Freshwater acidification (kg SO2 eq)	2.34E-06	1.18E-08	8.22E-08	3.20E-07	7.64E-10	2.75E-06
Terrestrial acidification (kg SO2 eq)	1.96E-03	9.58E-06	6.77E-05	2.58E-04	6.59E-07	2.30E-03
Freshwater eutrophication (kg PO4 eq)	2.87E-02	4.45E-06	2.39E-06	4.92E-05	9.02E-06	2.87E-02
Marine eutrophication (kg N eq)	2.70E-01	7.18E-05	6.28E-04	1.53E-03	2.16E-05	2.72E-01
Particulate matter formation (kgPM2.5eq)	1.07E-01	7.68E-04	1.44E-03	9.12E-03	3.18E-05	1.19E-01

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Ionizing radiation (Bq C-14 eq)	1.45E+03	1.13E+06	8.10E-01	1.82E+03	7.32E-02	1.13E+06
Land transformation biodiversity (m2yr arable)	2.97E-02	1.05E-04	8.03E-05	3.25E-03	7.88E-06	3.31E-02
Land occupation, biodiversity (m2yr arable)	6.62E+00	1.26E-02	4.75E-03	7.84E-01	1.41E-03	7.42E+00
Water scarcity (m3 world eq)	3.91E+01	4.14E-01	4.32E-02	6.86E+00	6.01E-02	4.65E+01
Geography boundary	China	China	EU	Worldwide	Worldwide	
Analysis method	IMPACT World+ Midpoint V1.06			System boundary of product	Cradle to Grave	

Stage	Raw materials	Production	Distribution/ Retail	Consumer use	Disposal/ Recycling	Total
Global warming (kg CO2 eq)	1.60E+02	1.04E+00	1.56E+00	2.88E+01	8.05E-01	1.92E+02
Stratospheric ozone depletion (kg CFC11 eq)	7.59E-05	2.57E-07	7.40E-07	1.33E-05	8.03E-07	9.10E-05
Ionizing radiation (kBo Co-60 eq)	1.24E+01	2.10E+04	6.82E-03	1.70E+01	6.21E-04	2.11E+04
Ozone formation Human health (kg NOx eq)	5.00E-01	3.18E-03	2.93E-02	5.23E-02	5.14E-04	5.86E-01
Fine particulate matter formation (kg PM2.5eq)	4.08E-01	1.81E-03	9.15E-03	4.51E-02	9.95E-05	4.64E-01
Ozone formation, Terrestrial ecosystems (kg NOx eq)	5.23E-01	3.20E-03	2.97E-02	5.39E-02	5.20E-04	6.10E-01
Terrestrial acidification (kg SO2 eq)	8.72E-01	4.10E-03	2.84E-02	1.13E-01	2.58E-04	1.02E+00

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Freshwater eutrophication (kg P eq)	2.04E-01	4.96E-04	7.33E-05	2.86E-02	1.59E-04	2.34E-01
Marine eutrophication (kg N eq)	3.61E-02	1.37E-05	8.38E-06	1.98E-03	1.69E-05	3.82E-02
Terrestrial ecotoxicity (kg 1,4-DCB)	1.86E+03	1.21E+00	3.56E+00	7.49E+01	5.53E-01	1.94E+03
Freshwater ecotoxicity (kg 1,4-DCB)	8.07E+01	5.67E-02	1.95E-02	4.00E+00	4.40E-01	8.52E+01
Marine ecotoxicity (kg 1,4-DCB)	1.05E+02	7.25E-02	2.78E-02	5.05E+00	5.73E-01	1.11E+02
Human carcinogenic Toxicity (kg 1,4-DCB)	1.30E+02	1.72E-01	2.42E-01	4.29E+00	1.33E-01	1.35E+02
Human non-carcinogenic toxicity (kg 1,4-DCB)	1.46E+03	1.33E+00	4.18E-01	6.13E+01	8.46E+00	1.53E+03
Land use (m ² a crop eq)	1.18E+01	1.99E-02	1.16E-02	1.06E+00	1.50E-03	1.29E+01
Mineral resource scarcity (kg Cu eq)	5.82E+00	1.58E-03	3.14E-03	1.24E-01	2.99E-04	5.95E+00
Fossil resource scarcity (kg oil eq)	4.18E+01	2.35E-01	4.33E-01	7.84E+00	1.19E-02	5.03E+01
Water consumption (m ³)	1.29E+00	1.01E-02	1.36E-03	4.25E-01	1.68E-03	1.73E+00
Geography boundary	China	China	EU	Worldwide	Worldwide	
Analysis method	ReCiPe 2016 Midpoint (H) V1.11 / World (2010) H			System boundary of product	Cradle to Grave	



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