

General information

Remover name	greenSand (Liv-Tech Co., Ltd.)		
Project code	GSJ-R-002		
Project name	Ichijo Housing Gunma olivine sand-spreading project		
Location	Isesaki, Gunma, Japan.		
Area	2500	m2	
Year	2026		
Duration	>100	years	estimated permanence of removal and storage
Material dosage	6.00	ton	
Holding buffer	20%		freed up when measurements confirm projection pathways
Project emissions	0.025	t CO ₂ e	LCA estimate
Reference material emissions	0.067	t CO ₂ e	LCA estimate

Per project

Projected storage	5.112	tCO ₂	storage potential per ha x area x storage duration 100 year equivalent
LCA emissions	0.00	tCO ₂	No emissions (avoided emissions out of scope)
Net storage potential	5.112	tCO ₂	project storage -/- emissions over 20 years

Removal credits issued

Credits issued	5.112	tCO ₂
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Material description				
Material type	Olivine			
Material name	Olivine Sand – Grade No.7			
Material dosage	6	ton		
Material origin	Japan, Liv-Tech Inc			
Properties				
Magnesium percentage	43%			
Grain size distribution	< 0.15	mm	28%	
	< 0.10	mm	47.50%	
	< 0.07	mm	20%	
	< 0.05	mm	2.50%	
Area & dosage				
Total	2500	m ²		
Area 1 - staff parking lot	1000	m ²	5	tonnes
Area 2 - entrance / roads	1500	m ²	1	tonnes

Carbon Calculation for		GSJ-R-002					
The following values are calculated with the Vink&Knops model (Vink & Knops, 2023; see https://doi.org/10.3390/min13020235)							
Duration	Erosion rate	Olivine dissolved (cumulative)		CO2 sequestered			
(year)	(um)	(kg)	(%)	(kg)	(ton)		
1	1	762	12.70%	650	1		
2	3	1380	23.00%	1175	1		
3	4	1911	31.90%	1629	2		
4	6	2385	39.80%	2032	2		
30	44	5979	99.70%	5094	5		
100	148	6,000	100.00%	5112	5		

[illegible]

GHG emissions (kg CO ₂ e/t oli	24.7	kg CO ₂ e/t		
Reference material defined?	<i>Yes - Tohoku produced Silica sand (20kg per m2)</i>			
GHG emissions of the referen	67.1	kg CO ₂ e/t		
	-42.4	kg CO ₂ e		
	No emissions (avoided emissions out of scope)			