

General information

Remover name	greenSand (Liv-Tech Co., Ltd.)		
Project code	GSJ-R-001		
Project name	Narusawa Festival sand-spreading project		
Location	Narusawa, Takasaki, Japan		
Area	TBD	m2	
Year	2026		
Duration	>100	years	estimated permanence of removal and storage
Material dosage	1,000.00	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	0.852	tCO ₂	storage potential per ha x area x storage duration 100 year equivalent
LCA emissions	0.00	tCO ₂	project related emissions compared to reference material
Net storage potential	0.852	tCO ₂	project storage -/- emissions over 20 years

Removal credits issued

Credits issued	0.852	tCO ₂
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Material description			
Material type	Olivine		
Material name	Olivine Sand – Grade No.7		
Material dossage	1000	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%

Carbon Calculation for		GSJ-R-001											
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		Weathering		Olivine Dissolved (/yr)	Net storage	Holding percentage			
(year)	(um)	(kg) (%)		(kg)	(ton)	(um/yr)		(kg/yr)	kg	(%)			
1	1	127	12.70%	108	0	1		127	108.000	5%			
2	3	230	23.00%	196	0.00	1		103	196.000	5%			
3	4	319	31.90%	271	0	1		89	271.000	5%			
4	6	398	39.80%	339	0	1		79	339.000	5%			
30	44	997	99.70%	849	1	1		2	2.000				
100	148	1,000	100.00%	852	1	1		0.000	0.000	20%			

Sources					
Location dependant value					
	DOC	60.000	Dissolved Organic Carbon		Assumption Diss https://doi.org/10.3390/min13020235
	pH value	5.50			pH of rainwater https://www.knmi.nl/kennis-en-datacentrum/uitleg/zure-regen
	Rate	1.00	kg CO ₂ /kg Olivine		Afh. Olivijn samenstelling (100% Forsteriet)
	Olivine	100%	off total feedstock		Hoeveelheid olivijn aan mengsel (m/m)
	Dosage	1	ton		
	Magnesium percentage	43%			

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)			