

# CSI & ADDITIONAL KEY PERFORMANCE INDICATORS 2017

April 2018



LafargeHolcim

Indicator	2017 performance
<b>Climate protection</b>	
Total CO2 emissions - gross (million tonnes)	133
Total CO2 emissions - net (million tonnes)	128
Specific CO2 emissions - gross (kg / tonne cementitious material)	602
Specific CO2 emissions - net (kg / tonne cementitious material)	581
Total Scope 2 emissions (million tonnes)	10
Total Scope 3 emissions (million tonnes)	27
<b>Responsible use of fuels and raw materials</b>	
Specific heat consumption of clinker production (MJ/tonne clinker)	3'498
Alternative fuel rate (incl. Biomass) (%)	17
Biomass fuel rate (%)	6
Alternative raw materials rate – cement production (%)	10
Clinker / cement ratio (%)	73
Alternative raw materials contained in concrete (%)	14
Alternative raw materials contained in asphalt (%)	13.3
<b>Employee health and safety</b>	
Number of fatalities (directly employed)	10
Number of fatalities per 10,000 directly employed	1.22
Number of fatalities (indirectly employed)	21
Number of fatalities (third party)	34
Number of lost time injuries (directly employed)	173
Lost time injuries per 1 million manhours (directly employed)	0.93
Lost time injuries (indirectly employed - contractors and sub-contractors)	169
Lost time injuries per 1m manhours (indirectly employed)	0.89
Total Number of lost time injuries	342
<b>Emissions reductions</b>	
Overall coverage rate: percentage (%) of clinker produced with monitoring of all pollutants mentioned in the CSI emissions guidelines	70
Coverage rate continuous measurement: percentage (%) of clinker produced with continuous monitoring of main pollutants: dust, NOx, SOx	83
Dust - absolute emissions (tonnes / year)	13'217
Dust - specific emissions (grams / tonne clinker)	83
Dust - coverage rate (%)	97
NOx - absolute emissions (tonnes / year)	221'306
NOx - specific emissions (grams / tonne clinker)	1384

NOx - coverage rate (%)	97
SO2 - absolute emissions (tonnes / year)	38'855
SO2 - specific emissions (grams / tonne clinker)	243
SO2 - coverage rate (%)	97
VOC/THC - absolute emissions (tonnes / year)	8'776
VOC/THC - specific emissions (grams / tonne clinker)	52
VOC/THC - coverage rate (%)	84
PCDD/F - absolute emissions (g / year)	3.5
PCDD/F - specific emissions (ng / tonne clinker)	21
PCDD/F - coverage rate (%)	83
Hg - absolute emissions (t / year)	2
Hg - specific emissions (mg / tonne clinker)	11
Hg - coverage rate (%)	84
HM1 - absolute emissions (t / year) <sup>1</sup>	2
HM1 - specific emissions (mg / tonne clinker)	15
HM1 - coverage rate (%)	81
HM2 - absolute emissions (t / year) <sup>2</sup>	53
HM2 - specific emissions (mg / tonne clinker)	308
HM2 - coverage rate (%)	76
<b>Local impacts on land and communities</b>	
Percentage (%) of sites with quarry rehabilitation plans in place	83
Percentage (%) of sites with community engagement plans in place in cement operations	78
<b>Biodiversity KPIs</b>	
Number of quarries within, containing, or adjacent to areas designated for their high biodiversity value	330
Percentage (%) of quarries with high biodiversity value where biodiversity management plans are actively implemented	76
<b>Environmental expenses</b>	
Environmental capital expenditures (million CHF)	160
Environmental operational expenditures (million CHF)	126

<sup>1</sup> HM1: Sum of Cd and TI

<sup>2</sup> HM2: Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V