

CEMENT SUSTAINABILITY INITIATIVE INDICATORS

	2014	2015	2016
EMPLOYEE HEALTH AND SAFETY			
No. of fatalities (directly employed)	1	1	1
No. of fatalities per 10,000 directly employed	1.11	1.08	1.01
No. of fatalities (indirectly employed)	2	0	0
No. of fatalities (3rd party)	0	6	4
No. of lost time injuries (directly employed)	111	62	34
Lost time injuries per 1m man-hours (directly employed)	4.35	2.5	1.39
No. of lost time injuries (indirectly employed - contractors and sub-contractors)	75	42	19
Lost time injuries per 1m man-hours (indirectly employed)	3.49	1.67	0.78
Total no. of lost time injuries	186	104	53
LOCAL IMPACTS			
% of sites with community engagement plans in place	N.D.	55%*	70%
CLIMATE PROTECTION			
Total CO ₂ emissions - gross (million tons)	6.59	7.12	6.60
Total CO ₂ emissions - net (million tons)	6.44	6.97	6.45
Specific CO ₂ emissions - gross (kg/t cementitious material product)	598	614	614
Specific CO ₂ emissions - net (kg/t cementitious material product)	589	601	600
BIODIVERSITY			
% of active quarries with closure plan	74	74	78
% of active quarries with high biodiversity value	51	54	48
% of active quarries with high biodiversity value and a Biodiversity Management Plan in place	38	57	63
FUELS AND RAW MATERIALS			
Specific heat consumption of clinker production (MJ/ton clinker)	3,849	3,900	3,755
Alternative fuel rate (%)	4.4%	5.9%	6.5%
Biomass fuel rate (%)	0.2%	0.2%	0.4%
Alternative raw materials rate (%)	9.19%	10.3%	10.5%
Clinker / cement ratio (%)	71.5%	71.5%	72.9%
EMISSIONS REDUCTION			
KPI 3 - Absolute emissions of NO _x (t/year)	12,951	11,300	11,854
KPI 3 - Specific NO _x emissions (g/t clinker)	1,679	1,399	1,576
KPI 4 - Coverage rate of NO _x emissions (%)	100%	100%	100%
Absolute emissions of SO ₂ (t/year)	1,730	2,474	1,723
KPI 3 - Specific SO ₂ emissions (g/t clinker)	224	306	229
KPI 4 - Coverage rate of SO ₂ emissions (%)	100%	100%	100%
KPI 3 - Absolute dust emissions from kiln (t/year)	1,784	1,399	637
KPI 3 - Specific dust emissions (g/t clinker)	219	173	84.7
KPI 4 - Coverage rate of dust emissions (%)	100%	100%	100%
KPI 1 - Overall coverage rate :the percentage of clinker produced in by kilns covered by a monitoring system(continuous or discontinuous measurements) (%)	75%	16%	61%

*Note: 2015 figure was reviewed taking into account the total amount of sites with engagement plans / Total sites

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KPI 2 – Coverage rate continuous measurement : the percentage of clinker produced by kilns which have installed continuous measurement for dust, NO _x and SO ₂ . (%)	68%	87%	91%
KPI 3 -VOC / THC - Absolute emissions (t/year)	N.D.	91.23	251.60
KPI 3 -VOC / THC - Specific emissions in (g/t clinker)	N.D.	26.28	50.29
KPI 4 -VOC / THC - Coverage rate (%)	N.D.	43%	67%
KPI 3 -PCDD / F - Absolute emissions (mg/year)	N.D.	54.31	24.03
KPI 3 -PCDD / F - Specific emissions in (ng/t clinker)	N.D.	20.08	4.15
KPI 4 -PCDD / F - Coverage rate (%)	N.D.	34%	77%
KPI 3 Hg - Absolute emissions (kg/year)	N.D.	166.2	224.4
KPI 3 Hg - Specific emissions (mg/t clinker)	N.D.	40.63	36.24
KPI 4 Hg - Coverage Rate (%)	N.D.	51%	82%
KPI 3 HM1 (Cd + TI) - Absolute emissions in (kg/year)	N.D.	172.3	26.3
KPI 3 HM1 (Cd + TI) - Specific emissions (mg/t clinker)	N.D.	33.63	4.84
KPI 4 HM1 (Cd + TI) - Coverage rate (%)	N.D.	63%	82%
KPI 3 HM2 (Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V) - (kg/year)	N.D.	514	2678
KPI 3 HM2 (Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V) - Specific emissions (mg/t clinker)	N.D.	100	432
KPI 4 HM2 (Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V) – coverage rate (%)	N.D.	63%	82%
WATER			
Total water withdrawal according to source (m ³)	N.D.	10,606,830	13,407,143
Total water discharge according to quality and destination (m ³)	N.D.	2,532,501	4,823,563
Total water consumption (m ³)	N.D.	8,074,329	8,583,580
% Of plants with recirculation system	N.D.	72%	72%
% Of sites with process water – aggregates	N.D.	100%	100%
% Of sites with water recycling system – aggregates	N.D.	80%	33%