

# Life Cycle Assessment (LCA) for Lime Mortar

## CO<sub>2</sub> Emissions pounds per cubic yard of mortar

	Portland Cement : Sand 1 : 2	Cement Hydrated Lime : Sand 1 : 1 : 5	NHL 2 : Sand 1 : 2	NHL 3.5 : Sand 1 : 2	NHL 5 : Sand 1 : 2
CO <sub>2</sub> emission (Fuel)	381	206	68	62	75.5
CO <sub>2</sub> emission (de-carbonation of product)	250	244.5	90	85	99
Total CO <sub>2</sub> emission	631	450.5	158	147	174.3
CO <sub>2</sub> Re-Absorption	Negligible	44.5	74	65	60.5
<b>Total resulting emission of CO<sub>2</sub> (including fuel)</b>	<b>631<sup>1</sup></b>	<b>406</b>	<b>84</b>	<b>81.5</b>	<b>114</b>
	<b>Saves 0%</b>	<b>Saves 36%</b>	<b>Saves 87%</b>	<b>Saves 87%</b>	<b>Saves 82%</b>
<sup>1</sup> Source: Portland Cement Association, U.S. Cement Industry Fact Sheet from EBN Volume 2, No.2					
Shipping from France to East Coast (NHL) or average trucking from plant to distributor plant (cement)	60	60	21	25	28
<b>Total resulting emission of CO<sub>2</sub> (including transportation)</b>	<b>691</b>	<b>466</b>	<b>105</b>	<b>106.5</b>	<b>142</b>
	<b>Saves 0%</b>	<b>Saves 33%</b>	<b>Saves 85%</b>	<b>Saves 85%</b>	<b>Saves 79%</b>
Shipping from France to West Coast (NHL) or average trucking from plant to distributor plant (cement)	40	40	42	48.5	56
<b>Total resulting emission of CO<sub>2</sub> (including Transportation)</b>	<b>671</b>	<b>446</b>	<b>126</b>	<b>130</b>	<b>170</b>
	<b>Saves 0%</b>	<b>Saves 33%</b>	<b>Saves 81%</b>	<b>Saves 81%</b>	<b>Saves 75%</b>