

# TI-PURE™ EXPERIMENTAL HOUSE SETUP

Monterrey, Mexico

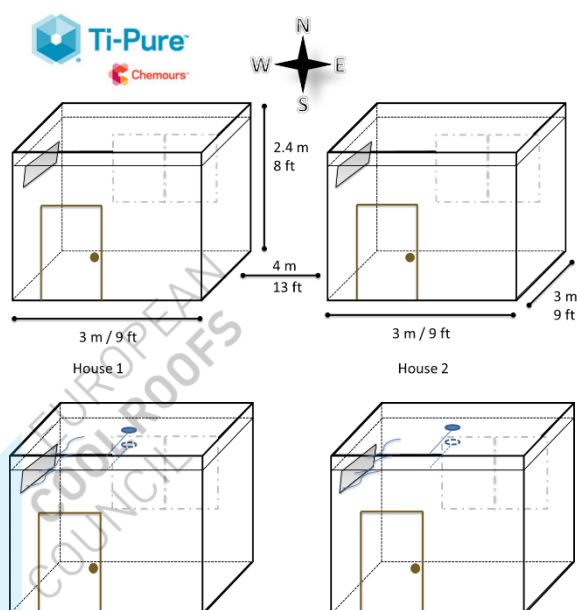
2013

House setup

Ti-Pure™ Roof Coatings

## PROJECT DESCRIPTION / NEEDS

North Mexico with its cold semi-arid climate which represents the same climate zone in North Spain based on Koppen-Geiger climate classification, consumes 8.5% of national energy consumption on HVAC. It is estimated that 80% of residential buildings in Northern Mexico have HVAC installations. Chemours Titanium Technologies has developed an elegant methodology for realistic quantification of energy savings using highly reflective coatings in edifications. Furthermore, monetary savings with the use of this technology in the north Mexico region has been calculated.



## APPLICATION / UTILIZATION

House setup was with double paned windows (5 cm profile), flush doors, 30.5 cm cinder brick wall with 2.5 cm poly-isocyanate insulation. 1 ton mini split AC equipment (12,000 BTU) was used. To record weather measurements, a weather station was located approximately 9 meters away. Watt-hour meters were located outside the house for daily measurements.

Main products / systems used:

- Conventional White Waterproof Coating
- Conventional Red / Black Waterproof Coating
- Highly reflective Ti-Pure™ Waterproof Coating

Day	kWh House 1	kWh House 2
1	4	3
2	8	8
3	9	8
4	9	9
5	9	8
6	8	9
7	9	9
8	8	8
9	7	8
10	8	9
<b>TOTAL</b>	<b>79</b>	<b>79</b>

Date	Conventional White Waterproof Coating				Highly Reflective Waterproof Coating				Conventional Red Waterproof Coating				Highly Reflective Waterproof Coating				Conventional Black Waterproof Coating				Highly Reflective Waterproof Coating			
	Energy Reading House 1	Energy Reading House 2	kWh House 1	kWh House 2	Energy Reading House 1	Energy Reading House 2	kWh House 1	kWh House 2	Energy Reading House 1	Energy Reading House 2	kWh House 1	kWh House 2	Energy Reading House 1	Energy Reading House 2	kWh House 1	kWh House 2	Energy Reading House 1	Energy Reading House 2	kWh House 1	kWh House 2				
28-jan	2014	120	9	9	27-jul	2101	198	9	7	26-jul	2206	267	11	7										
29-jan	2023	128	9	8	28-jul	2114	205	10	7	28-jul	2229	283	11	8										
30-jan	2031	136	8	8	29-jul	2123	211	9	6	29-jul	2240	290	11	7										
01-jul	2038	141	7	5	30-jul	2133	218	10	7	30-jul	2250	297	10	7										
02-jul	2044	147	6	6	31-jul	2142	224	9	6	31-jul	2261	304	11	7										
03-jul	2048	150	4	3	01-ago	2149	229	7	5	01-ago	2272	311	11	7										
04-jul	2053	155	5	5	02-ago	2149	229	7	5	02-ago	2283	319	11	8										
05-jul	2059	160	6	5	03-ago	2152	231	3	2	03-ago	2296	341	33	22										
06-jul	2066	166	7	6	04-ago	2155	233	3	2	04-ago	2327	349	11	8										
07-jul	2079	177	13	11	05-ago	2171	243	10	6	05-ago	2358	356	11	7										
08-jul	2083	180	4	3	06-ago	2161	237	6	4	06-ago	2350	365	12	9										
09-jul	2089	186	6	6	07-ago	2171	243	10	6	07-ago	2362	373	12	8										
10-jul	2089	186	6	6	08-ago	2179	248	8	5	08-ago	2387	388	25	15										
					09-ago	2186	254	7	6	09-ago	2393	392	6	4										
					10-ago					10-ago	2403	398	10	6										
					<b>Total kWh</b>	<b>84</b>	<b>75</b>	<b>Total kWh</b>	<b>91</b>	<b>63</b>	<b>Total kWh</b>	<b>208</b>	<b>138</b>											

## CUSTOMER BENEFITS

Using highly reflective coatings brings a high value in terms of energy consumption. Monetary savings can be as high as 600 USD/year. The use of Ti-Pure™ titanium dioxide in highly reflective coatings can create significant electricity savings for home owners, commercial buildings and offices, reducing costs, diminishing the heat island effect and reducing the Greenhouse Gas emissions.