

BRE, Feb '08 *Note: this worksheet is protected by a password, but cells may still be copied and pasted.*
 Consistent with CERT BREDEM calculations

Results - CERT savings for Isothane Technitherm cavity wall stabilisation and insulation system

Annual CO ₂ savings for Isothane Technitherm cavity wall stabilisation and insulation system (kgCO ₂ /yr)							
Dwelling type	no. of beds	Gas	LPG	Electric	Oil	Coal	Wtd ave
Flat	1	249	280	488	312	637	272
Flat	2	300	338	588	376	768	328
Flat	3	362	408	711	454	928	396
Mid-Terrace	2	319	359	611	397	801	348
Mid-Terrace	3	357	403	684	444	897	390
End-Terrace	2	553	623	1,140	697	1,442	609
End-Terrace	3	619	697	1,276	780	1,615	682
Semi-bungalow	2	418	471	888	532	1,115	463
Semi-bungalow	3	451	508	959	575	1,204	500
Det-bungalow	2	517	582	1,089	656	1,378	572
Det-bungalow	3	558	628	1,175	708	1,487	617
Det-bungalow	4	599	675	1,262	760	1,597	662
Semi-house	2	602	678	1,241	759	1,569	663
Semi-house	3	647	729	1,334	816	1,687	713
Semi-house	4	693	780	1,429	874	1,806	763
Det-house	2	976	1,100	2,008	1,231	2,557	1,076
Det-house	3	1,050	1,182	2,159	1,324	2,749	1,156
Det-house	4	1,128	1,270	2,319	1,422	2,953	1,242

Savings from installing Technitherm cavity wall insulation assume:-
 Thermal Conductivity of Technitherm (thickness <80mm) $\lambda = 0.028$ W/mK
 (From BBA Agrément Certificate No. 97 / 3426)

Age of dwelling for CWI	U-value W/m ² K		Weighted average
	Before	After	
Pre 1976 Cavity Walls	1.44	0.36	78%
Cavity Walls from 1976 to 1983	1.00	0.33	8%
Post 1983 Cavity Walls	0.694	0.277	14%

Fuel	Emissions kg/kWh	
	C	CO ₂
Gas	0.0518	0.1899
Elect	0.1175	0.4308
Oil	0.0680	0.2493
Coal	0.0817	0.2996
LPG	0.0584	0.2140

15% Comfort Factor is included
 All other assumptions identical to CERT calculations done by BRE for OFGEM in 2007

Evaluated by BRE using BREDEM
 Feb-08