# Embodied Carbon Calculator: Mid-level Report

(CIBSE TM65 Digital Tool)

If Section A of the 'Input' tab is correctly completed, the results will be shown here.
Please complete all purple and yellow cells.

If you would like to assist CIBSE in building knowledge on the embodied carbon of products used in building services, please complete as directed above, name this file as instructed in the 'Introduction and Instructions' tab, and email this file to embodiedcarbon@cibse.org.

If you are a manufacturer and would like to share the results of your calculations with clients, please create PDFs of the relevant tabs ONLY (instructions are available in the 'Introduction and Instructions' tab). You may not share any CIBSE tool with clients. Instead, please refer any interested party to www.cibse.org/TM65, where they will be able to download the most up-to-date version of the relevant CIBSE tool.

## Mid-level report for S4T-710 as manufactured by Honeywell Gent

| 'Mid-level' calculation | | Notes/source |
|---|---|---|
| Date of assessment | 23/03/2024 | *Form "dd/mm/yy"* |
| Name of assessor and assessor organisation | Self Assessment | |
| Contact email address of assessor | sustainabilitycoe.ba@honeywell.com | *0* |

| Product information | | |
|---|---|---|
| Type of product | Fire Alarm Devices | |
| Capacity of equipment/size (kW; $m^3$; litres; etc.) | | |
| Product weight (kg) | 0.16 kg | |
| Material % breakdown for at least 95% of the product weight? (Y/N) | Y | |
| Product service life (years) | 12 Years | |
| If refrigerant based, type of refrigerant used and GWP | No refrigerant, 0 kgCO2e | |
| Refrigerant charge (kg) | 0.00 kg | |
| Energy consumption of the factory* per unit of product | 0.26 kWh | *Electricity - Europe,Natural gas* |
| Location of manufacture* | Timişoara, Timiş, Romania | |
| Product complexity category | Category 1 | *See CIBSE TM65 Table 4.3* |

| Embodied carbon results (kg $CO_2e$) — breakdown | | |
|---|---|---|
| A1: Material extraction | 3 kgCO2e | *TM65 assumption* |
| A2: Transport | 0 kgCO2e | *TM65 assumption* |
| A3: Manufacturing | 0 kgCO2e | |
| A4: Transport to site | 0 kgCO2e | *TM65 assumption* |
| A5: Construction | n/a | |
| B1: Refrigerant leakage during use | 0 kgCO2e | *TM65 leakage Type 0* |
| B2: Maintenance (if information given by manufacturer) | n/a | |
| B3: Repair | 0 kgCO2e | *TM65 assumption* |
| B4: Replacement | n/a | |
| B5: Refurbishment | n/a | |
| B6: Operational energy | n/a | |
| B7: Operational water | n/a | |
| C1: Refrigerant leakage when decommissioning | 0 kgCO2e | *TM65 leakage Type 0* |
| C2: Transport | 0 kgCO2e | |
| C3: Waste processing | 0 kgCO2e | |
| C4: Disposal | 0 kgCO2e | *TM65 assumption* |

| Embodied carbon results (kg $CO_2e$) — without refrigerant leakage | | |
|---|---|---|
| A1-C4 without buffer factor (excluding B1, C1) | 3 kgCO2e | |
| A1-C4 with buffer factor (excluding B1, C1) | 4 kgCO2e | |

| Embodied carbon result (kg $CO_2e$) — refrigerant leakage only | | |
|---|---|---|
| B1 (refrigerant leakage during use) + C1 (refrigerant leakage at end of life) | 0 kgCO2e | |

| Embodied carbon result with 'mid-level' calculation method (kg $CO_2e$) — total | | |
|---|---|---|
| Result of 'mid-level' calculation method | 4 kgCO2e | |

| Assumptions | | |
|---|---|---|
| A1: Material carbon coefficient source | Source = CIBSE TM65, Table 2.1 | *E.g.: Source = CIBSE TM65, Table 2.1* |
| B1: Refrigerant annual leakage rate (%) | 0% | *E.g.: Source = CIBSE TM65, Table 4.13 type 2* |
| C1: Refrigerant end of life recovery rate (%) | 100% | *E.g.: Source = CIBSE TM65, Table 4.13 type 2* |
| B3: Materials replaced as part of repair (%) | 10% | *E.g.: Source = CIBSE TM65* |
| C4: Percentage of product going to landfill (%) | 55% | *E.g.: Source = CIBSE TM65* |

| Details | |
|---|---|
| Please provide any relevant details | |

* Please provide information on the final assembly factory. If you have more information on energy consumption of factories in the supply chain, email embodiedcarbon@cibse.org.

| Information disclosure | Select Yes if you agree | Notes |
|---|---|---|
| I consent to CIBSE's use of the data contained in this form for research purposes, on the condition that all identifying information is removed from any published output. | No | |
| I consent to CIBSE's use of the data contained in this form in order to establish an embodied carbon database for products used in building services. | No | |