

# Acoustic Sealing System Data for Non-Rated Sound Lock Door Assemblies

The combination of a double door system to provide a 'sound lock' achieves very high acoustic insulation. The addition of acoustic seals to these door assemblies can further enhance the sound insulation achieved. Experience has shown that a sound lock assembly is a preferable way to achieve and maintain high acoustic performance with good trafficability compared to that of a single, very high performance acoustic door.

Sound lock doors are typically used as interconnecting doors between hotel apartments. Our experience indicates that these doors should be at least 200mm apart.

| Sealing System | STC | RW | Centre Frequency (Hertz) / STL (dB) |     |     |     |     |     |     |     |     |     |    |      |     |    |     |      |    |    |
|----------------|-----|----|-------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|------|-----|----|-----|------|----|----|
|                |     |    | 100                                 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1K | 1.25 | 1.6 | 2K | 2.5 | 3.15 | 4K | 5K |

## 35mm Sound Lock Doors

|                     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|---------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| IS1212 + IS8011si   | 42 | 42 | 22 | 28 | 27 | 33 | 31 | 34 | 35 | 36 | 40 | 43 | 48 | 51 | 55 | 59 | 61 | 64 | 66 | 67 |
| IS7025si + IS8090si | 42 | 42 | 21 | 28 | 27 | 33 | 31 | 34 | 35 | 36 | 40 | 43 | 49 | 52 | 55 | 53 | 56 | 57 | 58 | 64 |

## 40mm Sound Lock Doors

|                     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|---------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| IS1212 + IS8011si   | 45 | 45 | 23 | 28 | 31 | 35 | 35 | 33 | 39 | 40 | 42 | 45 | 50 | 57 | 58 | 60 | 60 | 57 | 58 | 60 |
| IS7025si + IS8090si | 46 | 45 | 23 | 23 | 33 | 37 | 36 | 36 | 40 | 40 | 41 | 44 | 49 | 54 | 57 | 61 | 64 | 61 | 61 | 63 |

## 35mm Sound Lock Doors (Pairs)

|                                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|--------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| IS1212 + IS7061 + IS8011si     | 42 | 42 | 22 | 28 | 27 | 33 | 31 | 34 | 35 | 36 | 40 | 43 | 48 | 51 | 55 | 59 | 61 | 64 | 66 | 67 |
| IS1212 + IS7071si + IS8011si   | 42 | 42 | 21 | 28 | 27 | 33 | 31 | 34 | 35 | 36 | 40 | 43 | 48 | 51 | 55 | 59 | 61 | 60 | 61 | 64 |
| IS7025si + IS7061 + IS8090si   | 42 | 42 | 22 | 28 | 27 | 33 | 31 | 34 | 35 | 36 | 40 | 43 | 49 | 53 | 57 | 60 | 63 | 64 | 67 | 67 |
| IS7025si + IS7071si + IS8090si | 42 | 42 | 21 | 28 | 27 | 33 | 31 | 34 | 35 | 36 | 40 | 43 | 49 | 52 | 55 | 53 | 56 | 57 | 58 | 64 |

## 40mm Sound Lock Doors (Pairs)

|                                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|--------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| IS1212 + IS7061 + IS8011si     | 45 | 45 | 23 | 28 | 31 | 35 | 35 | 33 | 39 | 40 | 42 | 45 | 50 | 57 | 58 | 60 | 60 | 57 | 58 | 60 |
| IS1212 + IS7071si + IS8011si   | 45 | 45 | 23 | 28 | 33 | 37 | 36 | 35 | 40 | 40 | 42 | 44 | 48 | 54 | 57 | 60 | 62 | 61 | 62 | 64 |
| IS7025si + IS7061 + IS8090si   | 46 | 45 | 24 | 28 | 33 | 38 | 36 | 36 | 40 | 40 | 42 | 45 | 49 | 56 | 56 | 52 | 56 | 57 | 57 | 64 |
| IS7025si + IS7071si + IS8090si | 46 | 45 | 23 | 23 | 33 | 37 | 36 | 36 | 40 | 40 | 41 | 44 | 49 | 54 | 57 | 61 | 64 | 61 | 61 | 63 |

Kilargo has conducted an extensive testing program of door panels and door seals at the N.A.T.A accredited Acoustic Facilities of RMIT University Melbourne. Tests were performed in accordance with Australian Standard AS1191:2002 and ISO 140-3:1995. The door systems tested included standard commercially available 35mm and 40mm (2040mm x 820mm) solid core timber doors.