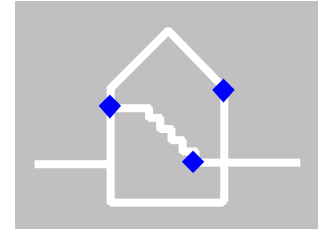


4 CDM – RESILIENT STRIPS



CDM-ISO-STRIP

1. APPLICATIONS

CDM-ISO-STRIP is the ideal material to be used in the decoupling of (bearing) walls, structural floor elements, stairs etc. from the supporting structure.

2. CDM PRODUCTS AND SYSTEMS

Depending on the loads (static as well as dynamic loads) the following CDM materials can be used:

- CDM-25: under light walls with loads up to 0.50 N/mm²
- CDM-15: under non-bearing walls with loads up to 0.80 N/mm²
- CDM-17: under heavy, bearing walls with loads up to 2.00 N/mm²

These materials are all used in the shape of a strip with a thickness of 5, 10, 15 or 20 mm and with varying width.

Properties	CDM-25	CDM-15	CDM-17
Density [kg/m ³]	160	550-700	900 – 1020
Shore hardness [A]	40 – 55	50 – 65	64 – 78
Minimum tensile strength [MPa]	0.3	0.7	3.2
Elongation at break [%]	10	15	100
Compressibility [%]	30 – 50 (0.7 MPa)	35 – 50 (2.8 MPa)	10 – 20 (2.8 MPa)
Recovery [%]	min. 75 (0.7 MPa)	70 – 80 (2.8 MPa)	80 – 90 (2.8 MPa)
Compression set 50%/70h/23°C [%]	-	10 – 15	8 – 12
Young modulus [MPa] 50-200 Hz	-	8.8 – 9.4	11.8 – 12.7
Shear modulus [MPa] 50-200 Hz	-	3.8 – 4.1	4.7 – 5.1
tg δ 50-200 Hz	-	0.25 – 0.40	0.28 – 0.45

3. PERFORMANCES

The isolation performances to be expected depend on the thickness of the strip. This thickness is limited (max. 20 mm) by the allowed movement of the suspended mass under dynamic action. It is recommended to fix free-standing isolated walls with a height over 2.50 m to the ceiling with e.g. ties of the type ISO-WH.

Generally the following impact noise reductions can be obtained in comparison with the non-isolated situation:

CDM-ISO-STRIP	Load range (N/mm ²)	DL (dB) 5 mm	DL (dB) 10 mm	DL (dB) 15 mm	DL (dB) 20 mm
CDM-25	0 - 0.5	8	12	16	20
CDM-15	0.5 - 0.8	8	12	16	20
CDM-17	0.8 - 2.0	8	12	16	20



The creep rate of these CDM products remains quite low: $< 2\%$ / decade, so there is practically no modification of the material characteristics in time to be expected.

4. INSTALLATION

It is essential that all structural elements are isolated from each other by the CDM strips and that all stiff contacts are avoided. Some examples of the use of CDM strips are given below:

Floating structure

Reduced space requirement for heavy and critical transfer of loads.

Stair flight isolation against impact noise.

The CDM bearings can also have a structural function:

- In case of expansion joint, the CDM makes possible lateral movement.

- The application of CDM reduces likelihood of bearing section uplift, permitting a better stress distribution and avoiding structural risks.

Pugging

Stress concentration
Fissuration
WALL

Pugging

Stress is carried over on the complete bearing area.
WALL

