1. Periodic Building Unit:

MFS can be built using the saw chain (bold in Figure 1) running parallel to \( a \). The repeat distance along the saw chain is about 7.5 Å. The repeat unit in the chain consists of 3 T atoms. Six saw chains are connected into a one-dimensional Periodic Building Unit (PerBU) depicted in Figure 1. [In TON the saw chains are replaced by zigzag chains]. The PerBU can also be built using two 5-1 units and a 6-ring (bold in Figure 1 (right)). [See Alternative description]

2. Connection mode:

Neighboring PerBUs, related by a shift of \( \frac{1}{2}(a \pm b \pm c) \), are connected through a system of fused 4-, 5- and 6-rings as shown in Figure 2.
3. Projections of the unit cell content: See Figure 3.

Figure 3. Unit cell content projected along \( a \) (left), and along \( b \) (right).

4. Channels and/or cages:

One-dimensional 10-ring channels are parallel to \( a \), and one-dimensional 8-ring channels are parallel to \( b \). The intersection of channels is shown in Figure 4 together with the cavity that interconnects the 10-ring channels. The pore descriptor is added. The linkage of the channel intersection and cavity is illustrated in Figure 5.

Figure 4. Channel intersection viewed along \( a \) (left), and along \( b \) (middle) and interconnecting cavity between 10-ring channels (right) viewed along \( a \) (top), and along \( b \) (bottom).
Figure 5. 10-Ring channels, parallel to \( a \), are interconnected along \( b \) through cavities composed of fused 5- and 6-rings that are part of the wall of an 8-ring channel parallel to \( b \) (top). View along \( a \) (left), and along \( b \) (right); fusion of channel intersections along \( a \) (bottom), viewed along \( b \) (left) and along \( a \) (right).

5. Supplementary information:

**Other framework types containing saw chains**

In several framework types at least one of the unit cell dimensions is about \( n \times 7.5 \) Å (where \( n = 1, 2, 3\ldots \) etc.). In many cases this indicates the presence of saw chains.

In the INTRO pages links are given to descriptions of other framework types containing (twisted) saw chains (choose: Saw chains). There is also a link provided to a summary of the Periodic Building Units used in the building schemes of these framework types (choose: Appendix; Figure 2).

**Alternative description using (modified) 5-rings**

Several framework types, like MFS, can be constructed using (modified) 5-rings.

In the INTRO pages links are given to detailed descriptions of these framework types (choose: 5-Rings). There is also a link provided to a summary of the Periodic Building Units used in the building schemes of these framework types (choose: Appendix; Figure 6).