

SHEET METAL CHANNELS AND PARTS, VALVES, REGULATORS AND FIRE SHEETS

The requirements apply to sheet metal channels and related parts that are manufactured using ordinary techniques (oil-based friction-reduction agents). Products that are made using other methods are subject to general requirements and the criteria presented as applicable.

Channels and channel parts with a cleanliness classification must fulfil the following requirements as regards their internal surfaces:

Impurity	Classification criterion
Oiliness of channels ¹⁾	0.05 g/m ²
Oiliness of channel parts, regulators and fire sheets ¹⁾ <ul style="list-style-type: none"> Parts that are manufactured by cutting, bending or connecting Deep drawn parts, processes that require oil 	0.05 g/m ² 0.3 g/m ²
Mineral fibres (MMVF) that detach into the air stream ²⁾	< 0.1 piece/m ³
Amount of surface dust	< 0.5 g/m ²
Chemical emissions <ul style="list-style-type: none"> Products manufactured from materials other than metal 	Building materials M1: <ul style="list-style-type: none"> Ammonia Formaldehyde TVOC Odour

¹⁾ The odour threshold of the friction-reducing agent that is used must be higher than that for the Solvac friction-reducing agent!

²⁾ Products containing materials other than mineral fibres are subject to general requirements.

The odour criterion may be used as an alternative to the oiliness criterion. These measurements are relevant to sheet metal channels when the product is manufactured from materials other than sheet metal or when friction-reducing agents other than mineral oils are used in the product's manufacturing process. Using a trained odour panel, the odour intensity must be lower than 4 on a scale of 0–20. When an untrained odour panel is used, the acceptability value of the air that flows through the product or the product combination must be > 0.1.

In addition to the measurable requirements, products must fulfil the following special requirements (see [the application form](#))

- Any insulation materials that are used inside the channel must fulfil the requirements set for fireproof building materials and requirements in accordance with combustibility Sh1 and fire spread class PII 1 (B-s1,d0) (RakMK E1).
- It must be possible to clean channels, channel parts, regulators and fire sheets in accordance with SFS-EN 12097:2006 or Finnish construction regulations or type approval instructions. This also applies to cleaning openings and hatches.
- Labels and similar items must not be affixed to the internal surfaces of products.

- Channels and channel parts must be able to withstand at least 10 cleaning cycles (in special cases, such as professional kitchens, this must be more) using the cleaning procedures intended for them without their structure being subject to harmful changes. Channels and channel parts must not allow fibres to become detached into air intakes during or after cleaning by more than 0.01 piece/cm³ (Testing instructions for ventilation products 2000).
- Regulators and fire sheets must not prevent channels from being cleaned. It must be possible to restore regulators to their original regulation position after cleaning. It must be possible to check the position of the sheet without opening the channel.
- The internal surface of the products must be of a type that does not promote the accumulation of dirt within them. The roughness of the channel material must be less than 1 mm. The seams of channels of diameter 200 mm or less and related connecting parts must not be more than 2 mm high inside the channel. The seams of channels of diameter 315 mm or more and related connecting parts must not be more than 3 mm high inside the channel. The products must not contain burrs that could complicate cleaning or break cleaning equipment.
- The seals of products must fulfil the requirements of class C of the SFS 4699 standard.
- Sealants must not discharge harmful materials into the air flow or any agents that may cause poor air quality. Excessive use of filler should be avoided. It is recommended that sealants with emission classifications M1 or M2 for building materials or with otherwise low identified emissions be used to manufacture products with cleanliness classifications.
- Classified products must be marked in such a way that they can be clearly distinguished from unclassified supplies. The marking must be able to withstand normal transportation, storage and handling on construction sites.
- The products must be protected from becoming dirty on the inside during factory storage and transportation by means of closing off the ends of the channels or packing the parts in closed boxes and protecting the load by covering it or using similar methods. The technique used for protection (such as plugs) and the storage boxes must be of a type that can withstand the prevailing conditions during transportation and on construction sites, as well as being opened and closed several times. If channels are transported inside each other, the cleanliness of their external surfaces must be the same as that of their internal surfaces.
- Product-specific storage, installation and servicing instructions must be issued and the instructions must cover essential matters related to cleanliness.