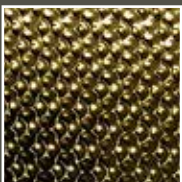


# FMH STAINLESS

Stainless Steel Safety Overview and  
Fire Performance



Specialists in Metal Finishes

Dynamic metal finishes suitable for:

Architecture • Elevators • Engineering  
Machinery • Refrigeration • Signage • Transport

## Stainless Steel Safety Overview

The following safety overview applies to stainless steel in sheet and coil formats from which Rimex supplies its stainless steel products:

- Under **REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals)** stainless-steel products are considered to be '**Articles**' and therefore do not require a safety data sheet.
- Stainless steel is harmless in solid form and is non-hazardous. For this reason it is utilised where safety and hygiene are of key importance such as for medical, food preparation and drinking water applications.
- Stainless steel is odourless.
- Solid stainless steel is insoluble and does not leach into soil or ground water. Therefore, 'Articles' produced from solid stainless steel are not considered to be an ecological hazard.
- Stainless steel is 100% recyclable and the recycled content of stainless is as high as 85% from some European mill sources (**source:** [www.outokumpu.com](http://www.outokumpu.com)) and consequently has limited impact when disposed of.
- A low percentage of stainless steel is not recycled and such materials are classified as a non-hazardous waste. As much as 94% is recovered from UK building sites (**source:** 'Stainless Steel and Sustainable Construction', BSSA 2004).
- Solid state stainless steels are stable and non-reactive under normal ambient atmospheric conditions as all alloy elements are firmly bound in the metallic structure. Due to this bonding and the presence of a passive and naturally forming oxide film, the release of the alloying constituents is negligible when used appropriately.
- Solid stainless steel does not contain Cr(vi) compounds.
- There are no occupational exposure limits for solid stainless steel.
- During the processing of stainless steel by cutting, grinding or welding, dust and fumes may be generated and if inhaled over an extended period can affect health. The process of welding should be performed with appropriate PPE. If information is required on this or on stainless steel dust and alloying elements, please refer to the mill safety information sheet available from the **Outokumpu** website at [www.outokumpu.com](http://www.outokumpu.com) or request a copy from the sales team.

## Stainless Steel Fire Performance

Below is a brief overview of the suitability and performance of stainless steel in fire situations according to its material properties.

Rimex is a manufacturer of stainless-steel finishes supplied in flat sheets, and is not involved in the fabrication or installation of stainless-steel cladding. On that basis, this document addresses only the basics of stainless steel in its solid form.

Stainless steel is not ignitable and also does not assist in the propagation of fires by flame spread. The surface of stainless steel is normally inert and stable in oxidizing conditions, such as those found in most flames and heat sources. (source: [bssa.org.uk](http://bssa.org.uk))

Furthermore, and as indicated below, stainless steel has a relatively high melting point and as a metal outperforms the common metal alternatives used in cladding applications in this respect.

Fire Test	
Stainless Steels	Melting Point °C
304 (1.4301)	1400-1450
316 (1.4404)	1375-1400
Other Metals	
Aluminium	659
Aluminium Alloy	463-671
Copper	1085
Zinc	419
Brass	927

For fire performance of specific cladding panels and systems, the cladding contractor should be contacted.



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## FMH STAINLESS



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