

# Synthetic vitreous fibres— guidelines now available

**CSAO has published new construction guidelines for the safe use and control of synthetic vitreous fibres (SVF)**

## Background

Synthetic vitreous fibres are also known as man-made mineral fibres (MMMMF), synthetic mineral fibres (SMF), and man-made vitreous fibres (MMVF). Regardless of the name, the material is used extensively in the construction industry for insulation and fire protection. In construction, the main types are mineral wool, glass wool, and refractory ceramic fibres (RCF). Mineral wool can be further subdivided into rock wool and slag wool.

Glass and mineral wools are used in a range of thermal and sound insulation applications in homes and commercial buildings. RCF and high-temperature non-RCF are used mainly for specialized applications involving very high temperatures.

The guidelines do not address the new biosoluble high-temperature replacements for SVF. But many of the prevention and protection measures outlined for mineral wool and glass wool can be used with these replacements.

## Hazards

Workers handling SVF can experience temporary irritation of the skin, eyes, nose, and throat. The most common effect is

temporary skin irritation caused by fibres penetrating the skin's outer layers. Higher exposure may cause congestion, chest tightness, and difficulty in breathing.

## Controls

Manufacturers should prepare and distribute labels and material safety data sheets (MSDSs) that meet Workplace Hazardous Materials Information System (WHMIS) requirements.

### Suppliers should

- ▶ ensure that MSDSs are transmitted to customers and that SVF products are properly labelled
- ▶ pass on any health and safety instructions or guidance provided by the manufacturer.

### Employers must

- ▶ comply with the *Occupational Health and Safety Act* by ensuring that all workers and supervisors receive adequate instruction and training on the safeguards necessary when exposed, or potentially exposed, to SVF
- ▶ select for use products or work practices that minimize the generation of fibres wherever possible (for example, use preformed products that

require minimal cutting and handling or that are fully encapsulated)

- provide the necessary personal protective equipment and offer washing facilities with clean water, soap, and individual towels for workers exposed to SVF
- ensure that appropriate housekeeping, removal, and disposal procedures are in place to minimize the generation of fibres and dust
- follow any manufacturers' instructions that exceed the requirements outlined in CSAO's new guidelines.

The general contractor is obligated to inform other trades of the potential hazards of all controlled products present at the construction site, including, where applicable, those associated with SVF.

### Workers must

- carry out their work with SVF in accordance with the instructions and training they have received
- wear the personal protective equipment (PPE) provided by the employer.

For information on general and specific measures of protection and prevention, refer to *Synthetic Vitreous Fibres: Guidelines for Construction* (DS036). The publication is available at no charge to labour and management in Ontario construction. Download it from [www.csao.org](http://www.csao.org), or contact Customer Service at 1-800-781-2726 or [customerservice@csao.org](mailto:customerservice@csao.org).

To indicate the kind of information available, the PPE requirements for RCF, glass fibre, and mineral wool are shown on the next page.

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## Refractory ceramic fibres (RCF)—summary of PPE requirements

Type of work	Respirator type	Coveralls	Gloves	Eye protection
<b>Installing RCF insulation</b>				
Cutting and installing RCF blanket, block, board, or modules	N100 dual-cartridge half-mask respirator	Disposable coveralls	Cotton	Dust-resistant safety goggles
Gunning RCF	This work practice is not recommended.			
<b>Cutting and installing fully encapsulated duct wrap</b>				
Cutting and installing fully encapsulated duct wrap	N95 air-purifying respirator	Disposable coveralls	Cotton	Safety glasses with side shields
Cutting and installing un-encapsulated duct wrap	N100 dual-cartridge half-mask respirator	Disposable coveralls	Cotton	Safety glasses with side shields
<b>Removing refractory insulation</b>				
Removing refractory insulation	N100 full-facepiece respirator or a powered air-purifying respirator (PAPR) with HEPA filters	Disposable coveralls	Cotton	

## Glass fibre and mineral wool—summary of PPE requirements

Type of work	Respirator type	Clothing	Gloves	Eye protection
<b>Fireproofing spray application</b>				
Sprayer	N95 air-purifying respirator	Disposable coveralls	Cotton	Dust-resistant safety goggles
Feeder	N95 air-purifying respirator	Disposable coveralls	Cotton	Dust-resistant safety goggles
<b>Trades walking around or disturbing sprayed fireproofing material</b>				
Drywall/Bricklayer/Sheetmetal worker/ Electrician/Pipefitter	N95 air-purifying respirator optional	Loose-fitting, full-body clothing	Optional	Safety glasses with side shields
<b>Blown insulation in attics</b>				
Installer	N95 air-purifying respirator	Disposable coveralls	Cotton	Dust-resistant safety goggles
Feeder	N95 air-purifying respirator	Disposable coveralls	Cotton	Dust-resistant safety goggles
<b>Pipe, duct, and boiler insulation</b>				
Insulating pipes	N95 air-purifying respirator	Loose-fitting, full-body clothing	Cotton	Safety glasses with side shields
<b>Installing ceiling tiles</b>				
Installing ceiling tiles	N95 air-purifying respirator	Loose-fitting, full-body clothing	Cotton	Safety glasses with side shields
<b>Removal, maintenance, and demolition</b>				
Removal and storage of batt insulation	N95 air-purifying respirator	Disposable coveralls	Cotton	Safety glasses with side shields
Removal, storage, and clean-up of ceiling tiles	N95 air-purifying respirator	Disposable coveralls	Cotton	Safety glasses with side shields
Demolition	N95 air-purifying respirator	Disposable coveralls	Cotton	Dust-resistant safety goggles