

Roof Tile Cutting Guide

Controlling workplace exposure of respirable crystalline silica



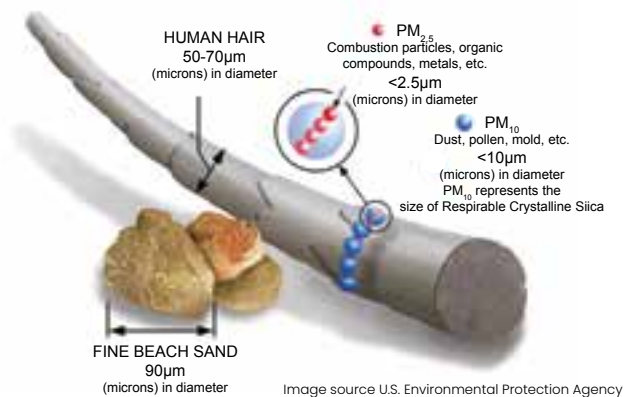
WHAT IS CRYSTALLINE SILICA?

Crystalline Silica is found naturally in stone, rocks, sand, gravel and clay.










WHAT IS RESPIRABLE CRYSTALLINE SILICA DUST?

Respirable crystalline silica is dust generated from materials and products containing crystalline silica. It is released when mechanically treated (e.g. cutting, sawing, abrading such as rasping, scraping, grinding down, chasing or crushing). This dust is of concern due to its size as it gets caught deep in your lungs and can cause long term damage. .

CSR has conducted tests which have determined the amount of crystalline silica that may become respirable size particles when cutting or grinding terracotta and concrete tiles.



CSR has made the following recommendations, in order of the hierarchy of controls.

<p>ELIMINATION TILE CUTTER</p>	<p>Process below exposure limits when using the controls shown</p>  <ul style="list-style-type: none"> • Cut roof tiles using a hand tile cutter 	
<p>ENGINEERING DUST EXTRACTION</p>	<p>Process below exposure limits when using the controls shown</p>  <ul style="list-style-type: none"> • Create a 5mm score using a 5inch grinder with attached on tool extraction (M or H Class industrial vacuum) • 1 person activity (maximum 2 hours work duration) 	
<p>PPE RESPIRATORY PROTECTION</p>	<p>Short Duration Controlled Cutting below exposure limits</p>  <ul style="list-style-type: none"> • 5mm depth cut using a 5 inch grinder • 1 person activity for maximum 1 hour duration • Clean shaven, fit tested P2 mask critical control 	
<p>NO CONTROLS</p>	<p>Uncontrolled Cutting exceeds exposure limits</p>  <ul style="list-style-type: none"> • Tiles cut completely through with grinder • Grinder used without on tool extraction over 1 hour • Respirator mask DOES NOT adequately protect 	
<p>CLEAN UP</p>	 <ul style="list-style-type: none"> • Eliminate dry sweeping • Use vacuum system with HEPA filter fitted to clean up where required • Dust extraction – vacuum bag is sealed (double bag for additional safety) and safely disposed of with trade waste • Worker must be clean shaven and wear a fit tested P2 mask 	

Independent testing was conducted by Safe Environments Pty Limited to EN 689 and ISO 16258-1 (NATA accreditation 17139).



The activity of grinding both concrete and terracotta tiles has been assessed and is considered low risk when people are trained in the task, equipment is used and maintained to manufacturer requirements and all controls as indicated are correctly in place.

Regular monitoring of people conducting this activity is required to verify controls are effective in managing the risk of exposure to respirable crystalline silica.

Disclaimer. It is the responsibility of the user to review and confirm applied controls meet exposure standards.