

# Control measures Chromium-6 and/or Lead during operations



Risk classification		Measures	Personal Protection Equipment (PPE)	Surroundings
0	No risk of creating dust. Loose parts can be removed entirely.	None	Standard PPE*	None
1a	Wrenching, drilling, cutting and machining (such as milling, lathing, grinding, broaching).	None	Standard PPE*	<ul style="list-style-type: none"> <li>Clean up waste (such as scales, steel shavings, sawdust), ref. 4</li> </ul>
1b	Sawing (short-term = less than 15 minutes).	None	Standard PPE*+ <ul style="list-style-type: none"> <li>FFP3 dust mask<sup>1</sup></li> </ul>	<ul style="list-style-type: none"> <li>Clean up waste (such as scales, steel shavings, sawdust), ref. 4</li> </ul>
2a	Sanding and brushing and / or chipping of painted object	Use a brushmachine or sander <b>with</b> integrated spot extraction connected to an industrial vacuum cleaner / extraction with HEPA filter (filter efficiency 99,995%)	Standard PPE* + <ul style="list-style-type: none"> <li>FFP3 dust mask<sup>1</sup></li> </ul> <p>Note: Clean or dispose gloves after work</p>	<ul style="list-style-type: none"> <li>Cleaning, ref. 4.</li> </ul>
2b	Sanding and brushing and / or chipping of painted object <1 hour per day	<b>If 2a is not possible:</b> Use a brushmachine or sander <b>without</b> integrated spot extraction.	Standard PPE* + <ul style="list-style-type: none"> <li>FFP3 dust mask<sup>1</sup></li> <li>Fire-retardant disposable coverall</li> </ul> <p>Note: Clean or dispose gloves after work</p>	<ul style="list-style-type: none"> <li>Cleaning, ref. 4.</li> </ul>
2c	Sanding and brushing and / or chipping of painted object >1 hour per day	<b>If 2a is not possible:</b> Use a brushmachine or sander <b>without</b> integrated spot extraction.	Standard PPE* + <ul style="list-style-type: none"> <li>Fire-retardant disposable coverall</li> <li>Full face mask<sup>3</sup> or airshield with dependent breathing air with P3 filters<sup>4</sup> or full face mask with self-contained breathing air<sup>5</sup>.</li> </ul> <p>Note: Clean or dispose gloves after work Clean footwear</p>	<ul style="list-style-type: none"> <li>Cleaning, ref. 4.</li> <li>Shield the workspace.</li> </ul>
2d	Sanding or brushing of stainless steel without sparks <1 hour per day	<b>If 2a is not possible:</b> Use a brushmachine or sander <b>without</b> integrated spot extraction.	Standard PPE* + <ul style="list-style-type: none"> <li>FFP3 dust mask<sup>1</sup></li> </ul>	<ul style="list-style-type: none"> <li>Cleaning, ref. 4.</li> </ul>
2e	Sanding or brushing of stainless steel without sparks >1 hour per day	<b>If 2a is not possible:</b> Use a brushmachine or sander <b>without</b> integrated spot extraction.	Standard PPE* + <ul style="list-style-type: none"> <li>FFP3 dust mask<sup>1</sup></li> <li>Fire-retardant disposable coverall</li> </ul>	<ul style="list-style-type: none"> <li>Cleaning, ref. 4.</li> <li>Shield the workspace.</li> </ul>
2f	Blasting work through sponge blasting	Use a blasting pistol <b>without</b> integrated spot extraction.	Standard PPE* + <ul style="list-style-type: none"> <li>Fire-retardant disposable coverall</li> <li>Full face mask<sup>3</sup> or airshield with dependent breathing air with P3 filters<sup>4</sup> or full face mask with self-contained breathing air<sup>5</sup>.</li> </ul> <p>Note: Clean or dispose gloves after work Clean footwear</p>	<ul style="list-style-type: none"> <li>Cleaning, ref. 4.</li> <li>Shield the workspace</li> </ul>
2g	Blasting work through shot blasting	Use a blasting pistol <b>without</b> integrated spot extraction.	Standard PPE* + <ul style="list-style-type: none"> <li>Fire-retardant disposable coverall</li> <li>Full face mask<sup>3</sup> or airshield with dependent breathing air with P3 filters<sup>4</sup> or full face mask with self-contained breathing air<sup>5</sup>.</li> </ul> <p>Note: In case of leaving the shield work-place, a decontamination unit must be passed through a lock in which (disposable) clothing is rinsed off on the dirty side, PPE is cleaned and the body is showered. Clean clothing is then put on on the clean side of the unit.</p>	<ul style="list-style-type: none"> <li>Cleaning, ref. 4.</li> <li>Shield the workspace completely</li> </ul>

3a	Grinding, flame cutting and other treatments where, in addition to dust and sparks, also heat can cause vapors <1 hour per day	If 2a is not possible: Use a brushmachine or sander <u>without</u> integrated spot extraction.	Standard PPE* + • FFP3 dust mask <sup>1</sup>	<ul style="list-style-type: none"> <li>Shield the workspace with fire-retardant sails.</li> <li>Cleaning, ref. 4.</li> </ul>
3b	Grinding, flame cutting and other treatments where, in addition to dust and sparks, also heat can cause vapors >1 hour per day	If 2a is not possible: Use a brushmachine or sander <u>without</u> integrated spot extraction.	Standard PPE* + <ul style="list-style-type: none"> <li>Half mask with P3 filter<sup>2</sup> or full face mask with P3 filter<sup>3</sup>.</li> <li>Fire-retardant disposable coverall</li> </ul> Note: Clean or dispose gloves after work	<ul style="list-style-type: none"> <li>Shield the workspace with fire-retardant sails.</li> <li>Cleaning, ref. 4.</li> </ul>
3c	Electrode welding, MIG-MAG < 1 hour per day		Standard PPE* + <ul style="list-style-type: none"> <li>Improved welding shield (connects well to the face, with leather sealing)<sup>6</sup></li> <li>FFP3 dust mask<sup>1</sup></li> <li>Fire-retardant disposable coverall is allowed but not required</li> </ul> Note: Clean or dispose welding gloves after work	<ul style="list-style-type: none"> <li>Shield the workspace with fire-retardant sails.</li> <li>Cleaning, ref. 4.</li> </ul>
3d	Electrode welding, MIG-MAG > 1 hour per day  <i>Note: If MIG-MAG torch is equipped with integrated extraction, measures for &lt;1 hour per day may be used (3c).</i>		Standard PPE* + <ul style="list-style-type: none"> <li>Full face mask with P3 filter<sup>3</sup>.</li> <li>Fire-retardant disposable coverall</li> </ul> Note: Clean or dispose welding gloves after work	<ul style="list-style-type: none"> <li>Shield the workspace with fire-retardant sails.</li> <li>Cleaning, ref. 4.</li> </ul>
3e	Welding TIG		Standard PPE* + <ul style="list-style-type: none"> <li>Improved welding shield (connects well to the face, with leather sealing)<sup>6</sup></li> <li>FFP3 dust mask<sup>1</sup></li> <li>Fire-retardant disposable coverall is allowed but not required</li> </ul> Note: Clean or dispose welding gloves after work	<ul style="list-style-type: none"> <li>Shield the workspace with fire-retardant sails.</li> <li>Cleaning, ref. 4.</li> </ul>
3f	Working on stainless steel in confined space  3a to 3e are applicable	<ul style="list-style-type: none"> <li>Active extraction of the confined space where the flow of refreshed air must be guaranteed.</li> <li>Monitor the output of the extraction to a direction where no work is being performed.</li> </ul>	Standard PPE* + <ul style="list-style-type: none"> <li>Improved welding shield (connects well to the face, with leather sealing)<sup>6</sup></li> <li>FFP3 dust mask<sup>1</sup></li> <li>Fire-retardant disposable coverall</li> </ul> Note: Clean or dispose welding gloves after work	<ul style="list-style-type: none"> <li>Cleaning, ref. 4.</li> </ul>
4	Cleaning the workspace	<ul style="list-style-type: none"> <li>After work clean the workspace with a vacuum cleaner with a HEPA filter (filter efficiency 99.995%) wherever possible</li> </ul>	Standard PPE* + <ul style="list-style-type: none"> <li>FFP3 dust mask<sup>1</sup></li> </ul> Note: Clean or dispose gloves after work Clean footwear	

**Note:**







The measures mentioned in the PPE column are the minimum prescribed PPE for Chromium 6 / Lead at Yara.

It is allowed at all times, for example, to replace a FFP3 dust mask<sup>1</sup> / half or full face mask with P3 filter with an air-operated hood with dependent air provided with P3 filter or self-contained breathing air.

If non-welders (fitter, helper, etc.) come into the shielded workplace during welding, they have to wear a FFP3 dust mask<sup>1</sup> in addition to the standard PPE.

**Additional explanation:**

\* = Standard PPE, by this we mean the standard PPEs that are prescribed for the work, for example when grinding you always wear goggles or face shield.

<div>1. Example of a FFP3 dust mask:</div> <div></div>	<div>2. Example of a half mask with P3-filter:</div> <div></div>
<div>3. Example of a full face mask with P3-filter:</div> <div></div>	<div>4. Example of an airshield with dependent breathing air with P3 filter:</div> <div></div>
<div>5. Example of a full face mask with self-contained breathing air:</div> <div></div>	<div>6. Example of a improved weldingshield (with leather sealing):</div> <div></div>