

AIR PURIFYING RESPIRATORS *Found on Farms*

This document is intended to help farmers and ranchers better understand the different types of air purifying facepiece respirators and assist them in selecting the appropriate type of respirator for the factors and conditions present on their farm.

AgSafe Alberta recognizes that in many instances, facial hair has religious and cultural importance; if this applies to your operation, you may want to proceed directly to the Powered Air Purifying Respirator (PAPR) section and begin investigating if this option will be suitable for the tasks and respiratory hazards present on your farm

N95 RESPIRATOR



Protection From 	Description 	Limitations 	Facial Hair 
Particles, such as dusts and dander.	Designed to fit the face closely. The edges of the respirator form a tight seal around the nose and mouth, and efficiently filter out airborne particles as air is drawn through the filter material.	N95 respirators are labeled "single-use." If it becomes soiled, damaged or breathing becomes difficult, it should be removed and replaced with a new one.	Worker must be clean shaven and not have anything interfering with where the respirator seals against the skin of the face.
Pros 	Cons 	Important Notes 	IDLH Environments 
Low initial cost. No need to clean or decontaminate.	Regularly need to be purchased. Straps are not adjustable.	Must be NIOSH approved. Requires fit testing. Models that have exhalation valves tend to be more comfortable to wear but should not be used in environments that must be kept sterile.	Must not be used in IDLH environments.

ELASTOMERIC HALF-FACEPIECE RESPIRATOR



Protection From 	Description 	Limitations 	Facial Hair 
Depending on the type of filters or cartridges used, can protect from particulates as well as gases and vapours.	Pliable silicone or latex facepiece that covers from the nose to below the chin. Designed to be re-usable, which means that the filters or cartridges can be replaced, as can other parts, such as valves and head pieces, depending on the manufacturer.	Filters, cartridges and combination cartridges must be approved for the respiratory hazard(s) the worker may be exposed to.	Worker must be clean shaven and not have anything interfering with where the respirator seals against the skin of the face.
Pros 	Cons 	Important Notes 	IDLH Environments 
Re-usable. Latex and silicone facepiece options. Conforms better to the face than an N95 respirator would. Adjustable straps.	Higher initial cost. Must be handled, stored and cleaned regularly as directed by the manufacturer.	Must be NIOSH approved. Requires fit testing. Filters, cartridges and combination cartridges used ARE NOT reusable.	Must not be used in IDLH environments.

ELASTOMERIC FULL-FACEPIECE RESPIRATOR



Protection From 	Description 	Limitations 	Facial Hair 
<p>Depending on the type of filters or cartridges used, can protect from particulates as well gases and vapours.</p> <p>Provides a degree of eye protection.</p>	<p>Covers the face from above the eyes to below the chin. Where it seals against the face is commonly made of silicone or natural rubber. Designed to be re-usable, which means that the filters or cartridges can be replaced, as can other parts, such as valves and head pieces, depending on the manufacturer.</p>	<p>Filters, cartridges and combination cartridges must be approved for the respiratory hazard(s) the worker may be exposed to.</p>	<p>Worker must be clean shaven and not have anything interfering with where the respirator seals against the skin of the face.</p>
Pros 	Cons 	Important Notes 	IDLH Environments 
<p>Offers a degree of eye protection.</p> <p>Silicone and natural rubber options.</p> <p>Adjustable straps.</p>	<p>Higher initial cost.</p> <p>Must be handled, stored and cleaned regularly as directed by the manufacturer.</p> <p>Special inserts are needed for workers who wear prescription eyeglasses.</p>	<p>Must be NIOSH approved. Requires fit testing. Filters, cartridges, and combination cartridges used ARE NOT reusable.</p> <p>May reduce the field of vision (compared to a half-facepiece respirator).</p>	<p>Must not be used in IDLH environments.</p>

POWERED AIR PURIFYING RESPIRATOR (PAPR)



Protection From 	Description 	Limitations 	Facial Hair 
<p>Depending on the type of filters or cartridges used, can protect from particulates as well as gases and vapours.</p>	<p>Uses a battery powered blower to draw air through the filter or cartridge.</p>	<p>Added weight due to battery and blower.</p> <p>Can be awkward to wear.</p>	<p>Loose fitting options exist, which may be worn with a degree of facial hair and glasses.</p>
Pros 	Cons 	Important Notes 	IDLH Environments 
<p>Requires less effort from the user to breathe.</p> <p>More comfortable to wear.</p> <p>Some parts can be replaced.</p>	<p>Higher initial cost.</p> <p>Must be handled, stored and cleaned regularly as directed by the manufacturer.</p>	<p>Must be NIOSH approved. Requires fit testing. Requires battery charging and airflow testing with a proper flow device prior to use.</p>	<p>Must not be used in IDLH environments.</p>

GLOSSARY

Fit Test: The use of a qualitative or quantitative measure to assess the fit of a particular make, model and size of respirator on a respirator user. It is performed to assess if an adequate respirator fit has been achieved.

Immediately Dangerous to Life or Health Atmosphere (IDLH): An atmosphere immediately dangerous to life or health, such as being oxygen deficient (containing less than 19.5% oxygen), highly toxic and/or produces an irreversible and debilitating effect on the health of a person.

Respirator: A type of personal protective equipment worn by the respirator user that protects them from breathing in airborne contaminants and/or inhaling a hazardous atmosphere. In Alberta, respirators must be NIOSH approved.