

# Ultra Elite®

## APR/CBRN Respirator

### RESPIRATOR APPLICATION

P100 Respirator  
GME-P100 Respirator  
Ultra-Twin Respirator

### GAS MASK APPLICATION

Chin-Type Canister  
CS/CN Canister

### CBRN APPLICATION

APR/CBRN Respirator  
PAPR/CBRN Respirator

## OPERATION AND INSTRUCTIONS

### ⚠ WARNING

This manual must be carefully read and followed by all persons who have, or will have, the responsibility for using or servicing Ultra Elite APR Respirators. These Ultra Elite APR Respirator will perform as designed only if used and serviced according to the instructions; otherwise, the respirator could fail to perform as designed, and persons who rely on the Ultra Elite APR Respirator could sustain serious personal injury or death.

The warranties made by MSA with respect to the product are voided if the product is not installed, used and serviced in accordance with the instructions in this manual. Please protect yourself and your employees by following the instructions. Please read and observe the WARNINGS and CAUTIONS inside. For any additional information relative to use or repair, write or call 1-800-MSA-2222 during regular working hours.

See separate insert for NIOSH Approval Information:

P/N 10035719 (P100, GME-P100), P/N 818204 (Ultra Twin), P/N 817241 (Gas Mask),  
P/N 818082 (CS/CN), P/N 10046605 (APR/CBRN), P/N 10080165 (PAPR/CBRN),  
P/N 10071373 (PAPR)

Also see User Instructions P/N 10072074 for PAPR Application.

For More Information, call 1-800-MSA-2222 or Visit Our Website at [www.MSAnet.com](http://www.MSAnet.com)



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# INTRODUCTION

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## NIOSH APPROVAL INFORMATION CAUTIONS AND LIMITATIONS

### Ultra Elite Industrial and Gas Mask Applications

**Note:** All cautions and limitations do not apply to all applications. Refer to the NIOSH approval insert to verify the applicable cautions and limitations.

- A- Not for use in atmospheres containing less than 19.5 percent oxygen.
- B- Not for use in atmospheres immediately dangerous to life or health.
- C- Do not exceed maximum use concentrations established by regulatory standards.
- F – Do not use powered air-purifying respirators if airflow is less than four cfm (115 lpm) for tight fitting facepieces or six cfm (170 lpm) for hoods and/or helmets.
- H- Follow established cartridge and canister change out schedules or observe ESLI to ensure that cartridges and canisters are replaced before breakthrough occurs.
- I - Contains electrical parts that may cause an ignition in flammable or explosive atmospheres.
- J- Failure to properly use and maintain this product could result in injury or death.
- L- Follow the manufacturer's User's Instructions for changing canisters.
- M- All approved respirators shall be selected, fitted, used, and maintained in accordance with MSHA, OSHA and

other applicable regulations.

- N- Never substitute, modify, add, or omit parts. Use only exact replacement parts in the configuration as specified by the manufacturer.
- O- Refer to User's Instructions, and/or maintenance manuals for information on use and maintenance of these respirators.
- P- NIOSH does not evaluate respirators for use as surgical masks.
- S- Special or critical User's Instructions and/or specific use limitations apply. Refer to User's Instructions before donning.
- LL- This respirator contains filter or cartridge components that are not approved for all protections in all configurations. Check the specific row on the NIOSH approval label to ensure proper use.

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## APR/CBRN APPLICATION

- A- Not for use in atmospheres containing less than 19.5 percent oxygen.
- I - Contains electrical parts that may cause an ignition in flammable or explosive atmospheres.
- J- Failure to properly use and maintain this product could result in injury or death.
- L- Follow the manufacturer's User's Instructions for changing canisters.
- M- All approved respirators shall be selected, fitted, used, and maintained in accordance with MSHA, OSHA and other applicable regulations.

# INTRODUCTION

- N- Never substitute, modify, add, or omit parts. Use only exact replacement parts in the configuration as specified by the manufacturer.
- O- Refer to User's Instructions, and/or maintenance manuals for information on use and maintenance of these respirators.
- R- Some CBRN agents may not present immediate effects from exposure, but can result in delayed impairment, illness, or death.
- T- Direct contact with CBRN agents requires proper handling of the respirator after each use and between multiple entries during the same use. Decontamination and disposal procedures must be followed. If contaminated with liquid chemical warfare agents, dispose of the respirator after decontamination.
- V- Not for use in atmospheres immediately dangerous to life and health or where hazards have not been fully characterized.
- W- Use replacement parts in the configuration as specified by the applicable regulations and guidance.
- X- Consult manufacturer's User's Instructions for information on the use, storage, and maintenance of these respirators at various temperatures.
- Y- This respirator provides respiratory protection against inhalation of radiological and nuclear dust particles. Procedures for monitoring radiation exposure and full radiation protection must be followed.
- Z- If during use, and unexpected hazard is encountered such as a secondary CBRN device; pockets of entrapped hazard or any unforeseen hazard, immediately leave the area for clean air.
- HH- Used when at defined occupational exposure limits, the rated service time cannot be exceeded. Follow established canister change-out schedules or observe End-Of-Service-Life Indicators to ensure that canisters are replaced before breakthrough occurs.

- QQ- Use in conjunction with personal protective ensembles that provide appropriate levels of protection against dermal hazard. Failure to do so may result in personal injury even when the respirator is properly fitted, used, and maintained.
- UU- The respirator should not be used beyond eight (8) hours after initial exposure to chemical warfare agents to avoid possibility of agent permeation. If liquid exposure is encountered, the respirator should not be used for more than two (2) hours.

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## PAPR/CBRN APPLICATION

- A- Not for use in atmospheres containing less than 19.5 percent oxygen.
- F- Do not use powered air-purifying respirators if air flow is less than four cfm (115 lpm) for tight fitting facepieces or six cfm (170 lpm) for hoods and/or helmets.
- H- Follow established cartridge and cartridge change schedules or observe ESLI to ensure cartridges and canisters are replaced before breakthrough occurs.
- I- Contains electrical parts that may cause an ignition source in flammable or explosive atmospheres.
- J- Failure to properly use and maintain this product could result in injury or death.
- L- Follow the manufacturer's User's Instructions for changing canisters.
- M- All approved respirators shall be selected, fitted, used, and maintained in accordance with MSHA, OSHA and other applicable regulations.
- N- Never substitute, modify, add, or omit parts. Use only exact replacement parts in the configuration as specified by the manufacturer.
- O- Refer to User's Instructions, and/or maintenance manuals for information on use and maintenance of these respirators.

# INTRODUCTION

- R- Some CBRN agents may not present immediate effects from exposure, but can result in delayed impairment, illness, and death.
- S- Special or critical User's Instructions and/or specific use limitations apply. Refer to User's Instructions before donning.
- T- Direct contact with CBRN agents requires proper handling of the respirator after each use and between multiple entries during the same use.  
Decontamination and disposal procedures must be followed. If contaminated with liquid chemical warfare agents, dispose of the respirator after decontamination.
- Y- This respirator provides respiratory protection against inhalation of radiological and nuclear dust particles. Procedures for monitoring radiation exposure and full radiation protection must be followed.
- Z- If during use, and unexpected hazard is encountered such as a secondary CBRN device; pockets of entrapped hazard or any unforeseen hazard, immediately leave the area for clean air.
- BB- Not for use in entry into atmospheres immediately dangerous to life or health.
- CC- For entry, do not exceed maximum use concentrations established by regulatory standards.
- GG- Direct contact with CBRN agents requires proper handling of the respirator after use. Correct disposal procedures must be followed.
- QQ- Use in conjunction with personal protective ensembles that provide appropriate levels of protection against dermal hazard. Failure to do so may result in personal injury even when the respirator is fitted properly, used, and maintained.
- UU- The respirator should not be used beyond eight (8) hours after initial exposure to chemical warfare agents to avoid the possibility of agent permeation. If liquid exposure is encountered, the respirator should not be used for more than two (2) hours.
- VV- PAPRS with TC-23C approvals may NOT be used for escape from IDLH atmospheres.

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## S- SPECIAL OR CRITICAL USER'S INSTRUCTIONS

Mersorb-P100 cartridges can be used against a mixture of chlorine and mercury that are both present simultaneously, but cannot be used if alternating between mercury-contaminated atmospheres and chlorine-contaminated atmospheres.

Mersorb-P100 respirators utilize an end-of-service-life indicator for use against metallic mercury vapor. The band around the side of each Mersorb-P100 cartridge consists of chemically-treated paper. In use, as the paper is exposed to metallic mercury vapor it changes from orange to brown. When the indicator color changes to brown, the cartridge is beginning to lose its effectiveness against metallic mercury vapor and must be replaced. Thus, the wearer has a constant, positive check on the condition of the cartridge.

Do not enter any atmospheres with this respirator unless you know that; you are not colorblind and can distinguish between the beginning and ending colors of the end-of-service-life indicator (when using Mersorb-P100/Mersorb respirators only).

# INSTRUCTIONS FOR USE AND CARE

## **⚠ WARNING**

1. An adequate respiratory protection program must include knowledge of hazards, hazard assessment, selection of proper respiratory protective equipment, instruction and training in the use of equipment, inspection and maintenance of equipment, and medical surveillance.
  2. This respirator will perform as designed only if used and maintained according to the manufacturer's instructions. The Program Administrator and the users must read and understand these instructions before using or servicing this product.
  3. If the respirator does not perform as specified in this manual, it must not be used until it has been checked by authorized personnel.
  4. **DO NOT** alter, modify, or substitute any components.
  5. Inspect the respirator regularly and maintain it according to the instructions. Repairs must only be made by properly trained personnel.
  6. This respiratory protective device does not supply oxygen. Use only in adequately ventilated areas which conform to the appropriate standard.
  7. This respirator must be used in conjunction with the proper chemical or particulate canister/cartridge(s) for protection against specific contaminants. If you cannot determine that the filter canister/cartridge(s) used with this device is designed for the contaminant, or if you do not know the identity of the contaminant, do not use this device.
  8. **DO NOT** use when concentrations of contaminants are unknown.
  9. **DO NOT** use when appropriate exposure limit (PEL, REL, TLV, etc.) is not known.
  10. Leave the contaminated area immediately if:
    - a. Breathing becomes difficult
    - b. Dizziness or other distress occurs
    - c. You taste or smell the contaminant
    - d. You experience nose or throat irritation
    - e. Instructed by responsible individuals
  12. Use strictly according to the instructions, labels, and limitations pertaining to this device. Follow an established canister/cartridge(s) change-out schedule.
  13. This respirator may not provide a satisfactory seal with certain facial characteristics, such as beards or large sideburns, that prevents direct contact between the skin and the sealing surface of the facepiece. Do not use this facepiece if such conditions exist.
  14. **DO NOT** wear eyeglasses under the facepiece. The temples or sidebars on eyeglasses will prevent an air-tight seal. If you must wear glasses, install the spectacle kit.
  15. The user must perform a respirator fit test (Quantitative Test or Qualitative Test) and follow all warnings and limitations specified.
  16. Wear impermeable protective clothing to prevent exposure to gases and vapors which can poison by skin absorption.
  17. **DO NOT** use this full facepiece with self-contained breathing apparatus (SCBA).
  18. **DO NOT** use this respiratory protective device in explosive atmospheres.
  19. **DO NOT** use for urethane paints or other paints containing diisocyanates unless an appropriate cartridge change-out schedule is developed. Due to their poor warning properties, over exposure can occur without user awareness and result in severe permanent damage to the respiratory system. If unable to develop an appropriate change-out schedule, use an air-supplied respirator or SCBA.
- Failure to follow all warnings, instructions, and established protective measures can result in serious personal injury or death.

# INSTRUCTIONS FOR USE AND CARE

## WARNING

- This respirator/filter provides **LIMITED** protection. It may help reduce exposure to airborne biological agents, including H1N1 (swine) flu virus, avian (bird) flu virus, other types of influenza, SARS, or other bacterial or viral biological agents and help reduce the risk for influenza infection during a pandemic, but will **NOT** eliminate the risk of exposure, infection, illness, or death.
- This respirator/filter is certified by NIOSH to comply with the requirements specified for the designated filter efficiency level; however, appropriate authorities have **NOT** established a safe level of exposure to biological agents. Therefore, the respirator may **NOT** prevent transmission of influenza virus.
- Refer to the Centers for Disease Control and Prevention (CDC) at [www.cdc.gov](http://www.cdc.gov) for guidance on the use of respirators to help decrease exposure to H1N1 virus or other airborne biological agents in community, home, and occupational settings. The CDC recommends fit testing, medical evaluations, and training for optimal effectiveness when a respirator is used in a non-occupational setting. Neglecting these preparatory measures may cause an unsafe condition. Respirators used in an occupational setting **MUST** be used in accordance with a complete respiratory protection program as required by OSHA, which includes proper selection, training, fit-testing, and fit-checking. Detailed information on a respiratory protection program is available by contacting OSHA or visiting [www.osha.gov](http://www.osha.gov).
- Do **NOT** remove respirator in contaminated areas. The outer surface of the respirator **MUST** be treated as if it is

contaminated at all times. Tight-fitting safety goggles, or a full-face-piece respirator, may further help prevent transmission of influenza virus.

- The CDC recommends frequent hand washing and wearing gloves to help prevent transmission of disease due to exposure to surfaces where contaminants may be present, and also immediately following removal of the respirator.
- Do **NOT** reuse or share maintenance-free respirators. **ALWAYS** clean cartridge-style respirators before reuse in accordance with the instructions provided.
- This respirator/filter is **NOT** for use by (a) children, or (b) people with a medical condition that may be adversely affected by using it.

Failure to follow all warnings and instructions can result in serious personal injury or death.

## CAUTION

When using filters in an application that produces sparks, ensure that they are protected by a shield. Contact with sparks can damage filters and reduce protection.

## FOR CBRN APPLICATION ONLY

## DANGER

- This respirator provides **LIMITED** protection. It is NIOSH approved for respiratory protection against atmospheres containing CBRN (chemical, biological, radiological, & nuclear) warfare agents; however, it can not protect against all possible warfare agents.

## INSTRUCTIONS FOR USE AND CARE

- Some CBRN agents may not present immediate effects from exposure, but can result in delayed impairment, illness, or death.
- **DO NOT** use without a complete understanding of the instructions and limitations for this respirator and proper training. Misuse can prevent the respirator from providing the necessary protection.
- CBRN agents may **NOT** be detectable by smell or sight. Don respirator before entering an area suspected of containing CBRN agent. Follow procedures established by proper authorities.
- **DO NOT** use this respirator beyond eight (8) hours after initial use in an atmosphere containing CBRN agents or beyond two (2) hours after initial

use in an atmosphere containing CBRN agents in liquid or mist form; otherwise, agent permeation may occur.

- Follow decontamination and disposal procedures established by appropriate authorities. **DO NOT** remove respirator until respirator and clothing are decontaminated; otherwise, exposure to CBRN agents may result.
- **DO NOT** replace canister/cartridge in a contaminated area. Be sure to follow applicable decontamination procedures.

Failure to follow the above, in addition to all instructions and established CBRN agent protective measures, can result in serious personal injury or death.



## GENERAL DESCRIPTION

The Ultra Elite APR Respirator is an air purifying respirator intended for use in atmospheres which are not immediately dangerous to life or health (non-IDLH). This respirator is intended for applications which may require the user to enter or exit a hazardous area, or work within the area for a limited time.

Inhaled air is drawn through the canister/cartridge(s), which is designed to remove, neutralize, and/or trap specific contaminants as listed on the NIOSH approval insert. Exhaled air leaves the facepiece through the facepiece exhalation valve.

It is important that the user becomes familiar with the application and operation of the Ultra Elite APR Respirator and ensures that it fits properly before use.

When properly fitted to the user, the Ultra Elite full facepiece with the baffle or optional noseclip and head harness, combined with the appropriate canister/cartridge(s), becomes a complete respiratory protective device. The baffle is required when the noseclip is not installed in the Ultra Elite full facepiece.

The respirator consists of the following sub-assemblies:

- full facepiece (with optional noseclip)
- filter canister/cartridge(s)

**Note:** A noseclip must be used in a CBRN application.

### WARNING

**These facepieces do not pertain to the NIOSH-approved CBRN application. Contact MSA at 1-800-MSA-2222 for the correct facepiece. Failure to follow this warning can result in serious personal injury or death.**

Facepiece size is identified on the front of the facepiece above the lens area.

### WARNING

**Facepieces with the “C” in the model number listed below are ONLY approved for use in Industrial applications when a PAPR is being used. Failure to follow this warning can result in serious personal injury or death.**

Facepieces are available in the following sizes and head harness configurations

Ultra Elite APR Respirator Facepiece Model Number	Ultra Elite APR Respirator Facepiece with Rubber Head Harness	Ultra Elite APR Respirator Facepiece with E-Z Don Head Harness	Facepiece Blank Material
7-934-2	P/N 493064 SM (small)	P/N 491146 SM (small)	Hycar
7-934-1	P/N 493020 MD (medium)	P/N 491145 MD (medium)	Hycar
7-934-3	P/N 493108 LG (large)	P/N 491147 LG (large)	Hycar
7-934-2	P/N 493072 SM (small)	P/N 491505 SM (small)	Silicone
7-934-1	P/N 493028 MD (medium)	P/N 491502 MD (medium)	Silicone
7-934-3	P/N 493116 LG (large)	P/N 491508 LG (large)	Silicone

UltraElite APR/CBRN Respirator Facepiece ModelNumbers	UltraElite APR/CBRN Respirator Facepiece with Rubber Head Harness	UltraElite APR/CBRN Respirator Facepiece with Speed-ON® Head Harness
7-934-3C	P/N 10052776 SM (small)	P/N 10052780 SM (small)
7-934-1C	P/N 10052781 MD (medium)	P/N 10052779 MD (medium)
7-934-2C	P/N 10052778 LG (large)	P/N 10052777 LG (large)

# GENERAL DESCRIPTION

Only facepieces with the “C” in the model numbers listed below are NIOSH approved for CBRN applications, when used as directed in this manual.

## **⚠ WARNING**

**Do not use facepieces labeled “Silicone” on the rubber just above the lens ring for CBRN applications. Failure to follow this warning can result in serious personal injury or death.**

## RESPIRATOR USE LIMITATIONS

The wearer must comply with the following MSA respirator use limitations:

- A. **MAXIMUM USE CONCENTRATION** – Do not exceed any of the following:
1. Routine Use –
    - a. 50 times the exposure limit for the contaminants present if using a quan-

titative fit test method. Using a qualitative fit test may reduce the maximum use concentration. See the Respirator Fit Test section.

- b. Immediately Dangerous to Life or Health (IDLH) concentration for any contaminant present.
2. Escape (for Gas Mask only) –
- B. The limitations outlined in the applicable NIOSH approval
- C. Any applicable limitation contained in a standard established by regulatory agency (such as OSHA) with jurisdiction over the wearer.

## **⚠ WARNING**

**An appropriate cartridge change-out schedule must be developed by a qualified professional, unless the cartridge/canister utilizes an end-of-service-life indicator. The change-out schedule must take into account all factors that may influence respiratory protection including specific work practices and**

## Canister for Chin-Type Gas Masks

Canister for Chin-Type Gas Masks						
Part No.	MSA Canister Identification	Purifying Protection Code	Approval	Maximum Escape Conditions		Gas/Vapors
				% Volume	PPM	
815994	GMA-C-N95	OV	TC-14G-0197	0.50%	5000	Organic Vapors*
815996	GMC-C-N95	OV/AG	TC-14G-0196	0.50%	5000	Organic Vapors and Acid Gases*
816051	GMF-C-N95	AG/FM	TC-14G-0207	0.50% 0.05% 0.15%	5000 500 1500	Acid Gases* Formaldehyde* Phosphine*
815993	GMD-C-N95	AM	TC-14G-0198	0.50%	5000	Ammonia*
815995	GML-C-N95	CL2	TC-14G-0199	0.50%	5000	Chlorine*
915999	GMDL-C-N95	OV/CL2/AM	TC-14G-0200	0.50%	5000	Ammonia, Chlorine, and Organic Vapors*
815998	GMR-I-P100	OV/I2	TC-14G-0204	0.50%	5000	Organic Vapors†
816000	GMHF-C-P100	HF	TC-14G-0239	0.10%	1000	Hydrogen Fluoride†
10059903	Phosphine/ Ammonia/Chlorine/ P100	PH/AM/CL	TC-14G-0274	0.50% 0.15%	5000 1500	Ammonia and Chlorine† Phosphine†
10067469	Organic Vapor/ P100	OV	TC-14G-0279	0.50%	5000	Organic Vapors†
10067491	Hydrogen Fluoride/P100	HF	TC-14G-0280	0.10%	1000	Hydrogen Fluoride†
10067470	Formaldehyde Acid Gas/Chlorine Dioxide/Escape from Hydrogen Sulfide P100	FM/AG/CD/HS	TC-14G-0282	0.05% 0.50% 0.10%	500 5000 1000	Formaldehyde† Acid Gases and Hydrogen Sulfide† Chlorine Dioxide†

\*Canister contains an N95-Particulate Filter (95% filter efficiency level) effective against particulate aerosols free of oil.

†Canister contains a P100-Particulate Filter (99.97 filter efficiency level) effective against all particulate aerosols.

## GENERAL DESCRIPTION

other conditions unique to the workers' environment. If using against substances having poor warning properties, there is no secondary means of knowing when to replace the cartridge/canister. In such cases, take appropriate additional precautions to prevent overexposure, which may include a more conservative change-out schedule or using an air-supplied respirator or SCBA. Failure to follow this warning can result in serious personal injury or death. As a reference, a partial list of substances having poor warn-

Acrolein	Phosphorous
Nitro compounds:	trichloride
Aniline	Hydrogen selenide
Nitrogen oxides	Stivine
Arsine	Methanol
Nitroglycerin	Sulfur chloride
Bromine	Methyl bromide
Nitromethane	Urethane or other
Carbon monoxide	Methyl chloride
Ozone	diisocyanate
Diisocyanates	Methylene chloride
Phosgene	containin paints
Dimethyl sulfate	Nickel carbonyl
Phosphine	Vinyl chloride
Hydrogen cyanide	Nitric Acid

ing properties follows:

- D. MIXTURES OF CONTAMINANTS – This gas mask can be used for protection against a mixture of contaminants that are present simultaneously or alternately against one contaminant then another (using the same canister) if the mixture meets the following conditions:
1. The canister/cartridge(s) must be approved for all contaminants present.
  2. NIOSH permits mixing of the following contaminants: organic vapors, chlorine, chloride dioxide, hydrogen sulfide, acid gases, ammonia, and carbon monoxide.
  3. Particulates can be mixed with any other particulate or any gas or vapor for which the canister is approved.
  4. Contaminants present simultaneously must be below IDLH levels for the specific contaminants. If any one contaminant in the mixture exceeds the IDLH

concentration, then the entire mixture must be treated as IDLH and the respirator cannot be used (except for escape when using respirator in a gas mask configuration).

5. Mersorb-P100 cartridges can be used against a mixture of chlorine and mercury that are both present simultaneously, but cannot be used if alternating between mercury-contaminated atmospheres and chlorine-contaminated atmospheres.
- E. TIME USE LIMITATION
1. Canisters and cartridges with an N95 or R95filter shall be limited to 12 hours of use (continuous or intermittent) against particulates. (Service time can be extended by performing an evaluation in the specific workplace setting that demonstrates (a) that the extended use will not degrade the filter efficiency below 95%, or (b) that the total mass loading of the filter is less than 200mg for a single canister application or less than 100 mg each for a dual cartridge application).
  2. GMHF-C-P100 and Hydrogen Fluoride/P100: Canister must be replaced after each use against hydrogen fluoride (not to exceed 12 hours) to ensure the integrity of the P100 filter.
- F. MULTI-USE LIMITATIONS (OptiFilter XL only)
1. Approved as a high efficiency particulate air filter on approved Powered Air Purifying Respirators. Also, approved as a P100 filter, but ONLY when used with an approved negative pressure respirator. Do not exceed maximum use concentrations established by regulatory standards.

## EXPOSURE LIMITS

A listing of applicable exposure limits from the following sources is provided in MSA's Response® Respirator Selector: available online at [www.MSAnet.com](http://www.MSAnet.com).

- American Conference of Governmental

## GENERAL DESCRIPTION

Industrial Hygienists (ACGIH)

- Occupational Safety and Health Administration (OSHA)
- National Institute for Occupational Safety and Health (NIOSH)
- American Industrial Hygiene Association (AIHA)

Contact MSA at 1-800-MSA-2222 for information.

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### EXPOSURE LIMITS FOR MIXTURES

The American Conference of Governmental Industrial Hygienists (ACGIH) publishes the following information to determine the TLV of a mixture.

First, determine the total concentration of the chemical mixture ( $C_{\text{Mixture}}$ ) from the individual contaminant concentrations ( $C_1$ ,  $C_2$ ,  $C_3...$ ) using the following formula:

$$C_{\text{Mixture}} = C_1 + C_2 + C_3 + \dots$$

The TLV of the mixture is found by using the following formula where  $T_1$ ,  $T_2$ ,  $T_3$ , ... are the individual contaminant TLVs and  $C_1$ ,  $C_2$ ,  $C_3...$  are the individual contaminant concen-

$$T_{\text{Mixture}} = \frac{C_{\text{Mixture}}}{\frac{C_1}{T_1} + \frac{C_2}{T_2} + \frac{C_3}{T_3} + \dots}$$

trations:

Only use these equations if the contaminants present are actually mixed. Some substances do not mix and may be present separately, for example, in pockets or at different levels. In that case, the lowest TLV of the substances present must be used to determine the appropriate respirator category for protection against all contaminants present.

See MSA's *Response Respirator Selector* for additional information.

# SIZE SELECTION

Regardless of facial dimensions and respirator sizing charts, an actual respirator fit test, either qualitative or quantitative must be performed to ensure the correct respirator size selected.

Fit test the respirator size relative to your facial features and dimensions. The Safety Administrator or Program Manager might assist in selecting the initial size to try.

Carefully don the mask and conduct a negative pressure seal test. See donning instructions for procedure.

If the facepiece does not pass the Negative Pressure Seal Test or feels uncomfortable, try the next nearest size relative to your face.

Passing the Negative Pressure Seal Test does not verify the size is correct. The size selected must be verified by successfully passing a Respirator Fit Test, either qualitative or quantitative. If the respirator passes a Negative Pressure Seal Test but DOES NOT pass a Respirator Fit Test, the next nearest size relative to your facial features and dimensions should be tried.

Once the proper size is selected, the respirator must pass a Negative Pressure Seal Test every time the facepiece is donned to ensure proper fit before using the respirator.

If other than facial seal leakage is detected, the condition must be investigated and corrected before another test is made.

The facepiece must also pass the tightness test before the user attempts to enter an toxic atmosphere.

The facepiece will not furnish protection unless all inhaled air is drawn through a suitable canister/cartridge(s).

## RESPIRATOR FIT TEST

### WARNING

**The user must perform a respirator fit test (Quantitative Test or Qualitative Test) and follow all warnings and limitations specified. Failure to do so can result in serious personal injury or death.**

A qualitative or quantitative respirator fit test must be routinely carried out for each wearer of this respirator to determine or confirm the amount of protection that the respirator provides. A qualitative or quantitative respirator fit test must also be conducted after installing the Clear Command communications system and after repairs or maintenance to verify the amount of protection that the respirator provides. The fit test method chosen may impact the maximum use concentration.

**Quantitative Test** – If a quantitative fit test is used:

For use in a CBRN application a fit factor of at least 2000, based on ambient aerosol fit test methods or equivalent, is required before any type of respirator is assigned to an individual.

**Qualitative Test** – If a qualitative fit test is used, only validated protocols are acceptable.

### CAUTION

**A qualitative or quantitative respirator fit test must be performed after installing the Clear Command communications system and after repairs or maintenance to verify the amount of protection that the respirator provides.**

For use in a CBRN application only, the individual must pass a test designed to assess a fit factor of at least 2000.

## SIZE SELECTION

Respirator fit tests are explained fully in the American National Standard Practices for Respiratory Protection, ANSI Z88.2-1992 which is published by the American National Standards Institute, 11 West 42nd Street, New York, New York, 10036 and Occupational Safety and Health Standards, OSHA 1910.134, which is published by the Occupational Safety and Health Administration, 200 Constitution Avenue, NW, Washington DC, 20210.

# PREPARING THE RESPIRATOR FOR USE

## CHECKPOINTS BEFORE USE

1. Check that all parts of the respirator are complete and undamaged. See the Inspection section for Inspections Procedures. Check head harness straps for physical degradation.
2. Check that the filter canister/cartridge(s) approval is appropriate and effective against the contaminant in the environment.
3. In CBRN applications a noseclip **must** be installed in the facepiece.
4. If the Clear Command communications system is present, ensure that a quantitative or qualitative fit test has been conducted prior to use to verify the amount of protection that the respirator provides. See the Respirator Fit Test section for fit test procedures.

## INSTALLING/REPLACING THE CANISTER/CARTRIDGE(S)

### WARNING

**Know the contaminant(s) in the environment before entering. Always check that the filter canister/cartridge(s) is appropriate for use in the environment. A filter canister/cartridge(s) which is not designed for the contaminant present may not provide protection. Failure to follow this warning can result in serious personal injury or death.**

**After verifying that the canister/cartridge(s) type is appropriate for use in the environment:**

1. Verify shelf life expiration date on carton, bag, and canister/cartridge(s) label has not been exceeded.

### WARNING

**DO NOT use an expired canister/ cartridge(s). Failure to follow this warning can result in serious personal injury or death.**

### WARNING

**DO NOT use the canister/cartridge(s) if the bag is opened, damaged, or missing. The canister/cartridge(s) must be in its original packaging prior to use in a contaminated environment. Do not reuse the canister/cartridge(s). Failure to follow this warning can result in serious personal injury or death.**

2. Remove canister/cartridge(s) from its packaging.
3. Inspect the canister/cartridge(s) to be sure that it is not damaged.
4. Thread the filter canister/cartridge(s) into the facepiece port and hand-tighten. If the canister has a standard 40mm thread, remove adapter P/N 96547 (if applicable).

Use the canister/cartridge(s) immediately upon opening the bag.

**Note:** For gas mask canister, refer to the shelf life section for storing the canister outside the packaging.

Discard canister/cartridge(s) after each use.

Replace the canister/cartridge(s) after each use. Follow the established canister/cartridge(s) change-out schedules to ensure that canister/cartridge(s) are replaced before breakthrough occurs. When used at defined occupational exposure limits, the rated service time cannot be exceeded.

Replacement of the Mersorb-P100 cartridge must occur at or before the end-of-service-life indicator turns brown in color.

The GMT cartridge must not exceed a 60 minute use time.

After using the respirator in a gas mask application for escape, the canister must be replaced before reusing the respirator.

## PREPARING THE RESPIRATOR FOR USE

### For Ultra-Twin Adapter (P/N 803622)

1. Check to ensure the spider gasket is in place in the inlet assembly.

#### **⚠ WARNING**

**DO NOT use unless the spider gasket is in place. An air-tight seal cannot be achieved without the spider gasket. Use without the spider gasket can result in the user suffering serious respirator injury or death.**

2. Remove the adapter from bag and position in the inlet of the facepiece.
3. Hand-tighten the plastic nut on the adapter making sure the mail portion of the adapter seals against the spider gasket in the facepiece inlet.
4. If using the Duo-Twin plug as described in the following section.
5. Remove the replacement cartridges from the storage bags and insert them into the threaded receptacles making sure the gaskets are in place in the

receptacles.

6. Carefully hand-tighten the cartridges to prevent damage to threads. To ensure a good seal against the gaskets, tighten each cartridge by gripping as much of the circumference of the receptacle as possible and then slowly turn the cartridge until tight.
7. If applicable, place a new filter in each filter cover. Never load filters into the receptacles.

### **FOR USE WITH C420 POWERED AIR PURIFYING RESPIRATOR (PAPR)**

Ultra Elite Facepieces are approved for use with C420 PAPR motor blower. Refer to the NIOSH approval label for approved configurations. In addition to this manual, the C420 manual (P/N 10072074) must be carefully read and followed by all persons who have, or will have, the responsibility for using or servicing the respirator.

# DONNING

## ⚠ WARNING

**DO NOT wear eyeglasses under the facepiece. The temples or sidebars on eye glasses will prevent an air-tight seal. If you must wear glasses, install an approved spectacle kit listed on the NIOSH approval matrix insert. Failure to follow this warning can cause inhalation of contaminated air, resulting in serious respiratory injury or death.**

## ⚠ WARNING

**Verify that the respirator is properly prepared before donning. Check harness headstraps for physical degradation. Extreme tension to harness head straps may cause damage. See Preparing the Respirator for Use section. Failure to follow this warning can result in serious personal injury or death.**

## DONNING PROCEDURES

1. Loosen the harness head straps on the facepiece so that the strap end tabs are approximately 1" (inch) from the buckles.



2. With the facepiece lens facing away, grasp the temple straps and neck straps in each hand.



3. Slightly expand the harness straps, place chin into the facepiece, and pull the harness over the back of the head.

4. Support the weight of the facepiece by holding the outlet valve assembly in the palm of the hand, with the free hand; adjust the facepiece securely to the face, making sure the chin and nose are

seated securely.

5. While holding the facepiece securely in position, tighten one temple strap at a time by pulling straight back (not out) with small jerks until facepiece feels snug on that side.



6. Tighten the other temple strap in same manner until both sides feel equally secure.

7. Ensure facepiece is centered on face by looking down at the nosecup, it should be uniform on each side of the face. If not, readjust the temple straps.

**Note:** Ensure that no hair is under the tabs and sealing surface. Ensure the harness tabs are flush to the face and not folded under the facepiece seal. Also, the straps should not cut into the ears. Extreme tension on the harness head straps may cause damage.

8. Evenly tighten the neck straps by pulling them straight back.



9. Check that head pad is centered in the middle of the back of the head.



10. If applicable, tighten the top straps for best visibility and fit.

**Note:** The Speed-ON Head Harness does not have a top strap to tighten.



# DONNING

## NEGATIVE PRESSURE SEAL TEST

The Negative Pressure Seal Test must be performed each time the facepiece is donned. A good face-to-facepiece seal must be verified before entering a hazardous area.

### Perform the test as follows:

1. Ensure respirator is assembled properly.
2. Block off canister/cartridge(s) inlet using the palm(s) of the hand(s).
3. Inhale gently and hold breath for 10 seconds. If the seal is good, the facepiece will collapse and remain collapsed against face. Remove hand and breathe normally.
4. If the facepiece did not remain collapsed during the test, or any leakage is noticed, readjust straps and perform Negative Pressure Seal Test again.
5. If this does not correct the leak, the facepiece will not provide protection. If the leakage is from the face seal, a different size mask may provide a good seal. If other than face seal leakage is detected, the condition must be corrected before performing another test.

### **⚠ WARNING**

**This device may not seal properly with your face if you have a beard, gross sideburns or similar physical characteristics (see ANSI Z88.2). An improper facial seal may allow contaminants to leak into the facepiece, reducing or eliminating respiratory protection. Do not use this device if such conditions exist. The negative pressure seal test must be conducted and passed before each use. Never remove the facepiece except in a safe, non-hazardous, non-toxic atmosphere. Failure to follow this warning can result in serious personal injury or death.**

## DONNING THE BUTYL COATED NYLON HOOD ACCESSORY

### **⚠ WARNING**

**Ensure a complete Negative Pressure Seal Test is conducted and passed. Failure to follow this warning can result in serious personal injury or death.**

1. Position the hood so that the lens opening of the hood is facing forward. Be sure that the hood is right side out with the draw string exposed on the outside of the hood.
2. Fold the back panel of the hood upward to expose the inside of the hood at the lens opening. Next, in each hand, grasp the sides of the hood at the lens opening.



**Note:** If using the ClearCommand voice amplifier accessory with the RI Connection, place the cable through the lens opening of the hood and move the ear phone toward the lens of the facepiece. This will allow the lens opening of the hood to slide over the ear phone and amplifier.

3. Expand and slide the lens opening of the hood over the canister/cartridge(s) component. Ensure the facepiece seal is maintained.



## DONNING

4. Using both hands, grasp the back panel of the hood and pull it over the facepiece and head. The lens opening of the hood should coincide with the lens opening of the facepiece. (If the situation permit, another person can assist with donning).



5. Carefully tuck the elastic lens opening of the hood around the back of the facepiece lens rings, component housing assembly, and applicable accessory. The rain shield of the hood should be uniformly over the upper lens ring of the facepiece. The elastic lens opening should be in contact with the rubber surface of the facepiece. Be sure to smooth out any wrinkles or folds that might exist along the edge of the elastic.
6. Conduct a successful Negative Pressure Seal Test.



7. Attach each of the arm straps to the front of the hood shroud using the Velcro attachment pads. Adjust the arm strap, using the buckle slides, so that the arm straps provide a snug fit but still allow for easy movement.



8. Tighten the draw string cord by securing the bottom of the cord and sliding the cord tightener toward the front of the neck. The draw string should provide a snug comfortable fit. Ensure draw string is not twisted or knotted.



### **⚠ WARNING**

**DO NOT over tighten the draw string. Over tightening the draw string can restrict breathing. Failure to follow this warning can cause serious injury or death.**

9. Pull the shroud of the hood uniformly over the shoulders.



10. Repeat the Negative Pressure Seal Test to ensure a sufficient face-to-facepiece seal is achieved before exposure to a hazardous agent. If using the ClearCommand voice amplifier accessory with the RI connection, reposition the ear phone closer to the ear.

### **Donning the C420 PAPR**

For Donning and Negative Pressure Seal Test Instructions, refer to the Ca420 PAPR User's Instructions (P/N 10072074)



# REMOVING THE RESPIRATOR

## DECONTAMINATION

### WARNING

**DO NOT** remove respirator until respirator and protective clothing are decontaminated; otherwise, exposure to contaminants may result. Follow decontamination and disposal procedures established by appropriate authorities. Failure to follow this warning may result in serious personal injury or death.

Once the protective equipment has been decontaminated, proper disposal of affected equipment must be performed. Disposal is to be performed as required by federal, state, and/or local laws.

## PROCEDURE FOR REMOVING THE RESPIRATOR

1. To remove the facepiece, insert your thumbs under each of the harness head straps end tab and fully extend the harness head straps.
2. Grasp the facepiece by the component housing or bottom head harness straps (not the exhalation valve or canister/cartridge(s)).
3. Pull it up and away from your face.

**Note:** Before the next use, check the respirator facepiece and if necessary, clean and disinfect. Always use a new canister/cartridge(s). Do not reuse the canister/cartridge(s).



# CLEANING AND DISINFECTING

## **⚠ CAUTION**

**DO NOT use alcohol as a germicide because it may deteriorate rubber parts.**

Depending on the cleaning policy adopted, either a designated person or the user should clean the respirator after each use. Non-sudsing Confidence Plus® Cleaning Solution (P/N 10009971) from MSA is recommended. It is a germicidal cleaner that cleans and disinfects in one operation. It retains its germicidal efficiency in hard water to inhibit the growth of bacteria. It will not deteriorate rubber, plastic, glass, or metal parts. Refer to the label for use instructions. A solution as effective as Confidence Plus Cleaning Solution and compatible with MSA respirator components may be substituted. ANSI suggests that users be trained in the cleaning procedure.

## **⚠ WARNING**

**Be careful not to breathe or touch the contaminant in handling the respirator or its parts. If necessary, use equipment disposal to protect you from the specific contaminant. Failure to follow this warning can result in serious personal injury or death.**

1. Preparing Solution
  - a. Follow the instructions with the Confidence Plus Cleaning Solution.
  - b. If the Confidence Plus Cleaning Solution is not used, wash in a mild cleaning solution, rinse thoroughly, and submerge in a germicide solution for the manufacturer's recommended time.

2. Clean and Disinfect the Facepiece
  - a. Remove the canister/cartridge(s) from the facepiece.
  - b. Thoroughly wash the facepiece (and nose cup) in the cleaning solution. A soft brush or sponge can be used to clean the soiled facepiece. Be sure to include cleaning the exhalation valve and seat.
  - c. Rinse the facepiece and components in clean, warm (110°F), water (preferably running and drained).

## **⚠ CAUTION**

**If not rinsed thoroughly, cleaning agent residue may irritate the wearer's skin.**

- d. Allow the facepiece to air dry. Do not dry the parts by placing them near a heater or in direct sunlight. The rubber will deteriorate.
- e. Operate the exhalation valve by hand to be sure it works properly.
- f. Harness (straps and buckles)
- g. The facepiece and components should be air-dried or hand-dried with a clean lint-free cloth.

## **⚠ CAUTION**

**DO NOT force-dry the parts by placing them in a heater or in direct sunlight. The rubber will deteriorate. When facepiece is thoroughly dried, store the facepiece in the clam shell in which it was shipped.**



# INSPECTION

## INSPECTION

(Before and After Each Use)

- Inhalation valve disc
- Exhalation valve disc
- Harness straps
- Lens
- Canister/cartridge(s)
- Facepiece blank
- Faceseal
- Accessories

## INSPECTION PROCEDURES

1. Look for breaks or tears in the facepiece head-strap material.
2. Make sure all straps, fasteners, and adjusters are in place and not damaged.
3. Check the facepiece for dirt, cracks, tears, or holes.
4. Check the lens for cuts, scratches, or damage which would impair vision. Check that the lens is secured in the facepiece.
5. Look at the shape of the facepiece for distortion due to improper storage.
6. Check the faceseal for distortion that may cause an improper face to facepiece seal.
7. Unthread the canister/cartridge(s) (if installed), and check that the spider gasket, and inhalation valve are installed and undamaged.

8. Grasp the spider gasket by the raised tab and pull it gently out of the facepiece. The gasket must be free of cracks, tears, dirt, and distortion. The gasket must be soft and flexible.



9. Ensure the white inhalation disc valve is attached to the spider gasket. The disc must be free of cracks, tears, dirt, and
10. Set the gasket with inhalation valve disk aside in a clean location.
11. Expose the exhalation valve by lifting the tab on the bottom door of the component housing away from the face-

piece.

12. Lift the exhalation valve and inspect the seat and valve.
13. Securely close the door of the component housing.
14. While holding the spider gasket in one hand, gently stretch the inhalation valve disk onto the post in the center of the spider gasket.
14. Install the spider gasket into the inlet port with the white inhalation valve disk into the facepiece. Check around the entire gasket to be sure the gasket lays flat and that the groove in the gasket is entirely captured by the component housing rim.
16. Inspect the speaking diaphragm.

- a. Remove the nose-cup from inside the facepiece.
- b. Loosen and remove the speaking diaphragm retaining ring.



- c. Turn the facepiece upside down and shake out the metal speaking diaphragm and gasket assembly.
- d. Check the speaking diaphragm and gasket assembly for damage. Replace it if it is worn or damaged.
- e. Be sure that the gasket is on the diaphragm assembly. Place the diaphragm in the retaining ring. Be sure that the gasket side of the speaking diaphragm will be facing the component housing.
- f. Replace the retaining ring and hand-tighten.
- g. Re-install the nose cup into the facepiece. Don the facepiece and check the face-to-facepiece seal. Follow the Facepiece Fit Check Procedure.

17. If any part is damaged or deteriorated, it must be replaced. Store only undamaged respirators for further use. When not in use, store the respirator in cool, dry, and clean ambient air in the original clamshell packaging. Keep new filters in their packing.



# STORAGE

Store only undamaged respirators for further use. When not in use, store the respirator in cool, dry, and clean ambient air.

Do not distort the facepiece during storage. When disposing of the respirator or its components, do so in accordance with local, state, and federal regulations.

Discard the canister/cartridge(s) if the original bag or carton is opened or damaged. For gas mask application only, see Storage and Shelf Life information below.

## Storage for CBRN Application Only

CBRN canisters must be stored in ONE of the configurations listed:

- Canister must be stored in original, unopened foil bag and in the extended clamshell (P/N 10046578), or
- Canister must be stored in original, unopened foil bag and in the original, unopened carton.

Facepiece must be stored in the extended clamshell (P/N 10046578).

The clamshell is provided as a convenient storage container to protect the facepiece and canister. Replace the clamshell if it becomes damaged.

## SHELF LIFE

Follow the shelf life expiration date stamped on the carton, bag, and/or canister/cartridge(s) as applicable. The expiration date will only apply if factory sealed and undamaged or the proper procedure is followed, otherwise the canister must be discarded.

### WARNING

**DO NOT use an expired canister/cartridge(s). Failure to follow this warning can result in serious personal injury or death.**

## Storage and Shelf Life for Canister Part Numbers 10067469, 10059903, 10067469, 10067470, 10067491 are Stored Outside the Original Foil Packaging:

These canisters have a 5 year shelf life with the expiration date printed on the foil bag. The canisters may be stored outside the original factory packaging by using the following procedure:

Approved Storage Configurations Outside the Original Foil Packaging

## Storage using the supplied cap/plug component

- Remove the canister from the box and bag.
- Locate the white block on the canister label.
- Mark on the canister, in the white block, an expiration date of 1 year (for formaldehyde canister an expiration date of 6 months) from the date the canister was removed from the packaging. This expiration date must not to exceed the original expiration date printed on the foil packaging.
- Using the enclosed cap and plug assembly as shown in Figure A, place the cap end over the threaded outlet of the canister as shown in Figure B.



Figure A



Figure B

- Insert the plug end on the inlet of the canister as shown in Figure C.



Figure C

## STORAGE

- Using thumbs, press in the center of both the cap and the plug ends to ensure the cap/plug is firmly in place and the canister is sealed.
- Discard cap/plug after each use.

### Storage in user supplied case

- Remove the canister from the box and bag.
- Locate the white block on the canister label.
- Mark on the canister, in the white block, an expiration date of 1 year (for formaldehyde canister an expiration date of 6 months) from the date the canister was removed from the packaging. This expiration date must not to exceed the original expiration date printed on the foil packaging.
- The canister must be attached to the facepiece with the plug side of the cap and plug component secured into position.

- The respirator must be placed upright in the plastic case.
- 10075204 Phosphine/Ammonia/Chlorine/P100
- 10075205 Hydrogen Fluoride/P100
- 10075206 Formaldehyde/Acid Gas/Chlorine Dioxide/Escape from Hydrogen Sulfide/P100
- 10075207 Organic Vapor/P100
- Ensure the lid is snapped tight and the case is closed.

### WARNING

**DO NOT store the canister above 120°F. Failure to follow this warning can alter the performance of the canister and result in serious personal injury or death.**

# ACCESSORIES

## ACCESSORIES

The facepiece may be equipped with the following accessories:

1. ESP® Communication System
2. Lens (tinted), in small, medium, or large
3. Spectacle Kit
4. Hood

### ⚠ CAUTION

Refer to the NIOSH Approval Matrix for a complete list of Approved Accessories. If you must wear corrective eyewear, install an approved spectacle kit, listed on the NIOSH approval matrix insert.

### ⚠ WARNING

Know the contaminant(s) in the environment before entering. Always check that the filter canister/cartridge(s) is appropriate for use in the environment. A filter canister/cartridge(s) which is not designed for the contaminant present may not provide protection. Failure to follow this warning can result in serious personal injury or death.

### Installing the Nosecup for Ultra Elite Facepiece

1. Place the nosecup in the facepiece and position it so its rubber ring faces toward the plastic retainer ring.
2. Starting at the top, stretch and push the rubber ring of the nosecup under the plastic retainer ring of the speaking diaphragm assembly.
3. Continue stretching the nosecup ring and work it into place.
4. For Ultra Elite facepieces only, stretch the oval opening in the nosecup around the lip on its component housing.



### Spectacle Kit

Spectacle kits are available for the Ultra Elite (P/N 804638). The kit includes the support assembly, a rubber block, and the spectacle frame. Prescription lenses can be obtained locally or through MSA.

### Adjusting the Spectacles

1. To move the spectacles closer to your face, pull the frame prongs out of the rubber block.
2. To move the spectacles farther from your face, push the frame prongs into the rubber block.
3. To move the spectacles up or down, slide the rubber block up or down on the support arms.



### Gas Mask Application Only

#### Attaching the Gas Mask Chin Canister to the Belt

This conversion kit consists of:

Qty	Item	Part Number
1	Belt Clip	10068195
1	Breathing Tube	10068129
1	Belt	473902, 9961, 492827
1	Spark Cover	10068152

### Installation Instructions

**Note:** Before installation, check breathing tube for cracks or tears. If a crack or tear is present, replace the breathing tube before use.

1. Attach the male thread end of the breathing tube securely to the facepiece component housing.
2. Slide the belt clip over the neck of the canister.
3. Securely fasten the female end of the breathing tube to the male end of the canister.
4. Attach the belt around the waist and attach the belt clip to the belt.

## ACCESSORIES

### Spark Cover (Recommended for Belt-Mounted Chin Style Gas Mask Canister)

1. Remove canister and spark cover from the packaging.
2. Attach the canister to the facepiece or breathing tube depending on the configuration being used.

3. Once the canister is attached, align the feet of the spark cover with the inlet hole of the canister.



motion for attaching spark cover

4. Grasp the outside of the canister, twist and push on the spark cover. The spark cover will snap in place.



check for optional spark arresting material

5. To remove the spark cover, gently squeeze the outside of the cover, twist, and pull the spark cover off.
6. Check the spark cover before each use to ensure no sparks have created holes or warped the part. If holes are created or the part is warped, replace the spark cover with a new one.

**Note:** The spark arresting material inside the spark cover is optional.

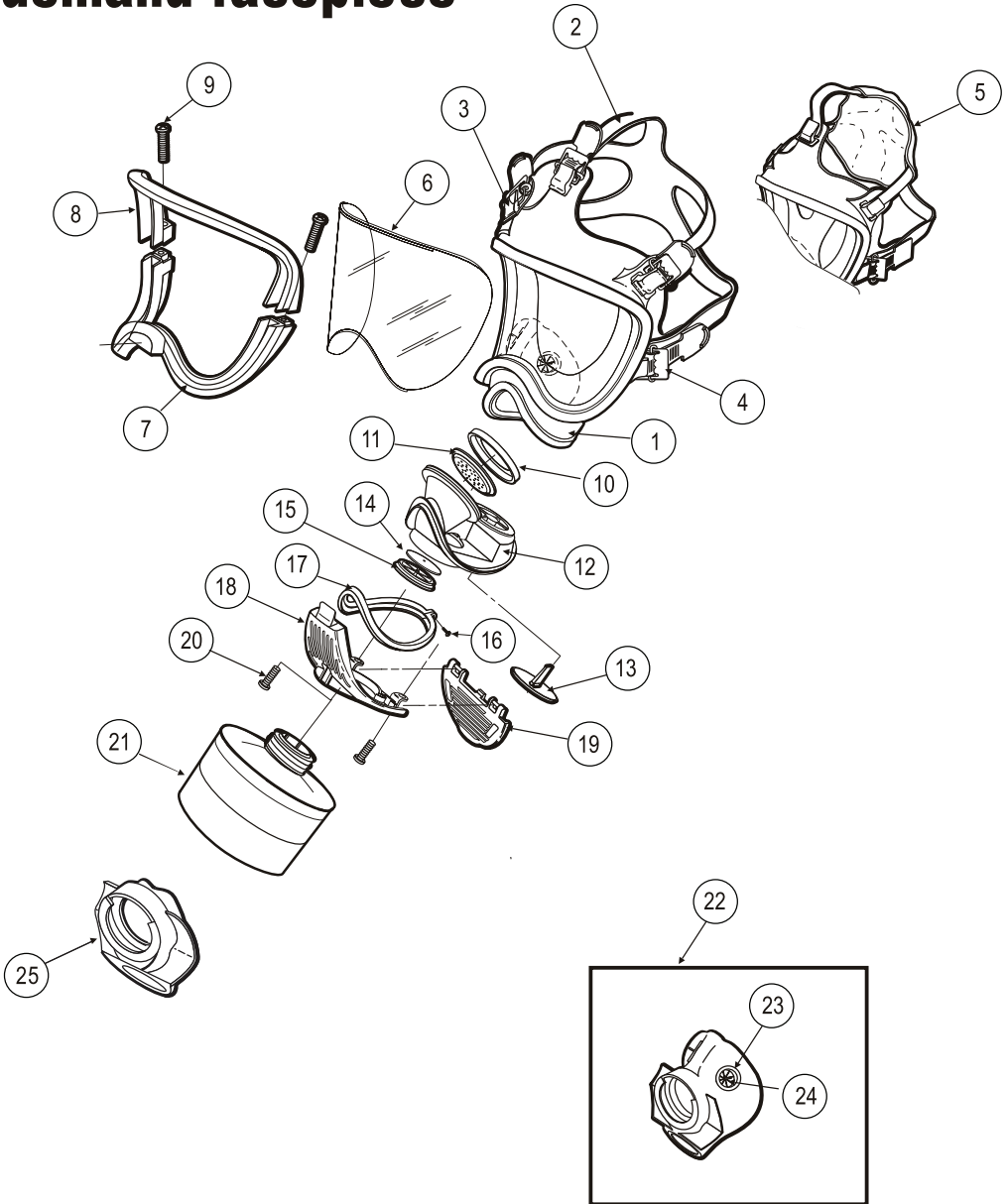
### OTHER RESPIRATOR CONFIGURATIONS

This respirator can be used in other configurations that stated in these User's Instructions. Below is a list of these other configurations and the part number for the User's Instructions. Review the NIOSH matrix to verify the configuration that is being used is an approved configuration.

Approved Respirator	User's Instructions Part Number
OptimAir 6HC PAPR	10045100
OptimAir 6A PAPR	490883
OptimAir MM2K PAPR	10020949
OptimAir Mask-Mounted PAPR	10090982
OptimAir TL PAPR	10077289

# Ultra Elite<sup>®</sup>

## demand facepiece



## APR Ultra Elite Facepiece Respirator Assemblies

Part Number	Description
493064	Small, Hycar - with Rubber Head Harness
493020	Medium, Hycar - with Rubber Head Harness
493108	Large, Hycar - with Rubber Head Harness
491146	Small, Hycar - with E-Z Don Head Harness
491145	Medium, Hycar - with E-Z Don Head Harness
491147	Large, Hycar - with E-Z Don Head Harness
493072	Small, Silicone - with Rubber Head Harness
493028	Medium, Silicone - with Rubber Head Harness
493116	Large, Silicone - with Rubber Head Harness
491505	Small, Silicone - with E-Z Don Head Harness
491502	Medium, Silicone - with E-Z Don Head Harness
491508	Large, Silicone - with E-Z Don Head Harness

### Ultra Elite Facepiece Parts

Item No.	Part Number	Description
1	491028	Small, Faceblank, Hycar
	490138	Medium, Faceblank, Hycar
	491039	Large, Faceblank, Hycar
	491388	Small, Faceblank, Silicone
	491387	Medium, Facepiece, Silicone
	491389	Large, Facepiece, Silicone
2	804830	Rubber Head Harness (with buckles)
3	804828	Buckle Assembly
4	804807	Buckle Assembly with D-Ring
5	805015	E-Z Don Head Harness, Medium
	805016	E-Z Don Head Harness, Small
	805017	E-Z Don Head Harness, Large
	10031102	Speed-On Head Harness CBRN
6	805019	Lens, Hardcoated
7	804805	Lower Lens Ring
8	804804	Upper Lens Ring
9	804806	Lens Ring Screw
10	804808	Speaking Diaphragm Retainer
11	804809	Speaking Diaphragm
12	804810	Component Housing
13	804832	Exhalation Valve
14	804813	Inlet Disc
15	805011	Valve Spider
16	804812	Component Housing Ring Screw
17	804811	Component Housing Ring
18	804820	Cover, Component Housing
19	804844	Door, Component Housing
20	804821	Component Housing Screw
22	495188	Nosecup Medium (with valves)

<b>Ultra Elite Facepiece Parts</b>		
<b>Item No.</b>	<b>Part Number</b>	<b>Description</b>
	495189	Nosecup Large (with valves)
23	804822	Nosecup Valve Seat
24	804823	Nosecup Valve Disc
25	805018	Baffle
<b>Approved Cartridge/Canister(s)</b>		
21		See separate insert for NIOSH Approval Information
<b>Accessories</b>		
Not Shown	10024074	Clearcommand Amplifier Kit
Not Shown	10024073	Clearcommand Amplifier Radio Interface Kit
Not Shown	10023055	Clearcommand Bracket and Voicemitter Kit
Not Shown	804638	Spectacle Kit with Wrap Around Wire Frame
	493581	Spectacle Kit with Center Bar
Not Shown	491500	Cover Lens, Clear, 25 per package
	805456	Cover Lens, Tinted, 25 per package
Not Shown	305022	Butyl Coated Nylon Hood
Not Shown	806168	Veri-Clear Personal Communication System

# WARRANTY

## Mine Safety Appliances Company General Express Warranty and Terms of Sale

- 1. Express Warranty** - MSA warrants that the product furnished under this order is free from mechanical defects or faulty workmanship for a period of one (1) year from first use or eighteen (18) months from date of shipment, whichever occurs first, provided it is maintained and used in accordance with MSA's instructions and/or recommendations. This warranty does not apply to expendable or consumable parts whose normal life expectancy is less than one (1) year such as, but not limited to, non-rechargeable batteries, filament units, instrument filters, lamps, fuses, helmet suspensions, limited-use clothing, gloves, etc. or to products whose life is controlled by government regulations such as cylinders. Safety Products Division rubber products including, but not limited to, facepieces, head harnesses, and nose cups are warranted against defects in workmanship for dry rotting of the rubber for a period of 5 years from the date of manufacture. Replacement parts and repairs are warranted for ninety (90) days from the date of repair of the product or sale of the replacement part, whichever occurs first. MSA shall be released from all obligations under this warranty in the event repairs or modifications are made by persons other than its own or authorized service personnel or if the warranty claim results from misuse of the product. No agent, employee or representative of MSA may bind MSA to any affirmation, representation or modification of the warranty concerning the goods sold

under this contract. MSA makes no warranty concerning components or accessories not manufactured by MSA, but will pass on to the Purchaser all warranties of manufacturers of such components. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, AND IS STRICTLY LIMITED TO THE TERMS HEREOF: MSA SPECIFICALLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.

- 2. Exclusive Remedy** - It is expressly agreed that the Purchaser's sole and exclusive remedy for breach of the above warranty, for any tortious conduct of MSA, or for any other cause of action, shall be the repair and/or replacement, at MSA's option, of any equipment or parts thereof, that after examination by MSA are proven to be defective. Replacement equipment and/or parts will be provided at no cost to the purchaser, F.O.B. MSA's plant. Failure of MSA to successfully repair any non-conforming product shall not cause the remedy established hereby to fail of its essential purpose.

- 3 Exclusion of Consequential Damages** - Purchaser specifically understands and agrees that under no circumstances will MSA be liable to Purchaser for economic, special, incidental or consequential damages or losses of any kind whatsoever, including but not limited to, loss of anticipated profits and any other loss caused by reason of the nonoperation of the goods. This exclusion is applicable to claims for breach of warranty, tortious conduct or any other cause of action against MSA.



For More Information, call 1-800-MSA-2222 or Visit Our Website at [www.MSAnet.com](http://www.MSAnet.com)



**MINE SAFETY APPLIANCES COMPANY**  
**PITTSBURGH, PENNSYLVANIA, U.S.A. 15230**