

# MSA Cairns® Fire Helmets

Product Specification



## Cairns N5A New Yorker Fire Helmet

### PURPOSE

To supply a uniform, standard purchasing specification for a resin reinforced leather, structural firefighter's helmet.

### SCOPE

The scope of this purchasing specification encompasses the design, construction, materials and performance criteria deemed necessary for helmets utilized for structural firefighting.

### GENERAL

Helmets manufactured in accordance with this specification are designed to mitigate adverse environmental effects to the firefighter's head while providing the specifying authority with what are, in their opinion, essential requirements.

### NO EXCEPTIONS, DEVIATIONS OR DELETIONS TO THIS SPECIFICATION WILL BE ACCEPTED.

### MANUFACTURES WARRANTY

Mine Safety Appliances Company, LLC (MSA) warrants MSA Cairns Fire Helmets manufactured on or after January 1, 2015, to be free from defects in materials and/or faulty workmanship for a period of ten (10) years from the date of manufacture by MSA. This warranty applies to all original assembled components of the fire helmet including: shell; impact cap assembly; suspension; retroreflective trim; ear laps; and faceshield or goggle. Refer to the official warranty policy #3600-72 for details.

### HELMET SHELL

The Cairns N5A New Yorker Fire Helmet shall be of a Traditional American Fire Service style. The shell shall be made of a four piece crown section with rib-type reinforcement and a brim section with a short visor in front continuing around the sides with a large rear area. The crown section shall be compromised of eight combs, or ribs. There shall be one folded comb (rib) in each of the four crown sections and four joint combs between these sections to form four major reinforcing ribs. Stitching to be 4 cord mercerized cotton thread in #8-10 gauge, to have not more than 10 nor less than 8 stitches per inch.

The brim section shall be a one piece leather section, stitched to the crown section with two rows of stitching. The outside edge of the brim shall be folded over and stitched around an 11 gauge, rust resistant, endless steel wire. The brim shall be embossed with the traditional vine scroll work and subjected to 10 tons of pressure to get its shape and make it rigid. The leather helmet shall be 11-13 oz., vegetable tanned, top grain domestic steer hide, treated with strengthening hardeners. The shell is made in two sizes: medium and large.



The exterior of the shell shall be completely coated with a high gloss, high heat, and chemical- and abrasion-resistant, flame-retardant finish coat, by using either a color-pigmented paint coat or a clear lacquer. The Cairns N5A New

Yorker Fire Helmet shall be available in the following colors; black, white, red, yellow, orange, blue, green and natural.

The Cairns N5A New Yorker Fire Helmet shall be furnished with a formed brass front-piece holder which shall be attached to the shells front main rib, and positioned to support the top of a standard 6" fire department identification shield. The options shall include eagle, beaver, dragon, or bulldog; each option shall be made from carved brass.

The shell shall have two threaded studs mounted to the center of the front visor of the brim. These shall provide for positioning and retention of a standard 6" fire department identification shield once placed and attached by two acorn nuts.

The shell shall have a helmet hanger comprised of a 3/4", nickel plated "D" ring which will be riveted to the center rear edge of the brim.

### IMPACT LINER

The impact liner shall be comprised of a rigid cell, high temperature urethane foam cap which is attached to a flame-resistant thermoplastic inner liner. The impact liner shall include a brass-retaining ring fastened to the base of the inner liner. The impact liner shall be fastened to the leather shell by mean of four brass rivets located at the base of the crown of the helmet shell.

### HEAD SUSPENSION

The Cairns N5A New Yorker Fire Helmet suspension shall be made of three fixed, 3/4" wide nylon web straps mounted at 6 points on the impact liner to form a six-way overhead strap assembly. Each of the straps shall be fastened to the brass retaining ring, located at the base of the impact liner, by means of a brass rivet.

### SIZING ADJUSTMENT

The Cairns N5A New Yorker Fire Helmet is made in 2 adjustable size ranges; medium and large. The size of the headband may be adjusted to fit the wearer's head by means of a ratchet adjustment system. The headband shall have a head size range of 6 3/8 to 8, adjustable in 1/8 increments. The headband is attached to the sides of the impact cap liner extension tabs by thermoplastic split-buttons. The sizing adjustments range shall be as follows: MEDIUM = 6 1/2 to 7 1/2 & LARGE = 7 3/8 to 8.

*Because every life has a purpose...*

## COMFORT LINER

The lining shall be of one-piece construction, comprised of cotton sateen sewn to a foam neoprene ring. A piece of chrome-tanned goat leather shall be sewn to the area of the sateen liner that rests against the forehead. There will also be leather foam cored ratchet pad, which is removable.

## CHINSTRAP

The chinstrap shall be equipped with a three piece chinstrap, made from ¾" Nomex webbing which are attached by a quick-release buckle system constructed of high-temperature, super-tough nylon on the left side of the helmet and by a die cast zinc postman's slide buckle on the right hand side. The two (short) chinstrap sections, located on the left and the right hand sides of the helmet, shall be fastened to the impact liner. The middle (long) section shall bayonet into the quick release buckle on the left-hand side and feed through the postman's slide buckle on the right. The middle section shall be a minimum of 23" in length and the total length of the chinstrap shall be 35" at full extension, end to end.

## EAR/NECK PROTECTION

Ear and neck protection shall be provided by a full-cut, 19.0" long, 6.5" wide earlap. The earlap shall consist of a 4.5oz. Nomex or PBI/Kevlar outer-shell sewn to a flame-resistance, black flannel inner liner. The earlap shall be secured to the brass retaining band inside the impact liner. A pattern shall be cut into the earlap to that, when sewn together, an opening is created so that the wearer can more easily access the ratchet knob.

## EYE PROTECTION

### *Faceshield*

The faceshield shall be a wrap-around, high pivot design, 4.5" wide, 18.0" long and 0.150" thick. The lens material shall be high performance, high temperature resistant thermoplastic. The lens shall be coated with a scratch resistant coating on both inner and outer surfaces to protect the lens from abrasions.

### *Faceshield Hardware*

The faceshield shall be mounted to the helmet shell by means of two (2) glass-reinforced, high-temperature and flame-resistant thermoplastic bracket assemblies, one (1) on either side of the helmet shell. The brackets allow the faceshield to pivot above the helmet shell when it is not in use.

### *Goggle System*

The goggle system shall be comprised of a high-temperature, flame- and impact-resistant goggle lens and frame, a flame-resistant, elastic goggle strap, and a goggle retention system.

Note: This Bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products.



ID 3601-001-MC / August 2016

© MSA 2016 Printed in U.S.A.

**MSA – The Safety Company**  
1000 Cranberry Woods Drive  
Cranberry Township, PA 16066 USA  
Phone 724-776-8600  
[www.MSAFire.com](http://www.MSAFire.com)

**U.S. Customer Service Center**  
Phone 1-800-MSA-FIRE  
Fax 1-800-967-0398

**MSA Canada**  
Phone 1-800-672-FIRE  
Fax 1-800-967-0398

**MSA Mexico**  
Phone 01 800 672 7222  
Fax 52 - 44 2227 3943



This retention system will lock the goggle onto the helmet at the back brim, which will prevent loss of the goggle when it is stowed or in the donned position. Both inner and outer surfaces of the goggle lens will have an antiscratch and anti-fog coating. Both ends of the lens will be reinforced with a fiberglass-insulating label for extra durability at elevated temperatures. The lens will be low profile, optically correct with a nominal thickness of 1/16". The goggle strap will require a one-time adjustment, which facilitates donning while wearing gloves.

### *Bourke Eye Shields*

The Bourke Eye Shield is comprised of dual (2), 2.85" wide x 5.15" long x 0.115" thick, transparent polycarbonate lenses that pivot up and down at 90° simultaneously to provide eye protection when the shield is down, and are low-profile against the underside of the front brim when the lenses are flipped up. The inner edges of both lenses are designed to connect when the lenses are flipped down. The lenses are fastened to a single key and cable (spring) system that allows the two (2) lenses to move simultaneously. The entire assembly is mounted to a brass plate, which is fastened to the center of the front brim of the helmet shell.

## RETRO-REFLECTIVE TRIM

The helmet shall have eight tetrahedron shaped pieces of Lime-Yellow, retro-reflective, fluorescent Reflexite® trim around the exterior of the crown of the helmet shell for maximum daytime and nighttime visibility. Red-Orange & Lime-Yellow, retro-reflective, fluorescent Scotchlite® tetrahedrons are also available.

## PERFORMANCE CRITERIA

The Cairns N5A New Yorker Fire Helmet shall meet the requirements of US-OSHA (CFR 1920) NBSIR 1977, and CAL-OSHA.

## OPTIONS

A full array of products are available. Please see our catalog and contact a Cairns representative for a custom configuration.

## MAINTENANCE, REPAIR and RETIREMENT

Upon the customer's request, a Cairns representative will conduct a training class explaining the proper maintenance, repair and retirement of this helmet for the dealer.

