

3M X5012-ANSI

3M SecureFit Safety Helmet X5012-ANSI Instruction Manual

Model: X5012-ANSI

1. INTRODUCTION

This manual provides essential information for the proper use, adjustment, maintenance, and care of your 3M SecureFit Safety Helmet X5012-ANSI. This helmet is designed to provide head protection in various industrial and construction environments, including working at height. It features a climbing helmet-inspired design, a 6-point ratchet suspension system, and Pressure Diffusion Technology for enhanced comfort and security. The 3M SecureFit Safety Helmet X5012-ANSI meets ANSI Z89.1 performance requirements and is tested to select impact and penetration requirements of the European EN12492 Mountaineering Helmet Standard for industrial climbing applications.

2. SAFETY INFORMATION

WARNING:

- Always inspect the helmet for damage before each use. Do not use if damaged.
- This helmet is intended for industrial and occupational use by trained personnel.
- Misuse of this product may result in injury, sickness, or death.
- Ensure the helmet is properly fitted and adjusted for maximum protection.
- The UVicator sensor on the helmet indicates UV exposure. When the sensor changes from red to white, the helmet should be replaced as its protective capabilities may be compromised.
- Do not modify or alter the helmet. Use only 3M approved accessories.
- This helmet is designed to protect against small falling objects and meets specific impact and penetration standards. It is not a substitute for other personal protective equipment (PPE) required for specific tasks.

For additional product information and safety guidelines, consult your on-site safety professional or visit www.3M.com.

3. PRODUCT OVERVIEW

The 3M SecureFit Safety Helmet X5012-ANSI is engineered for comfort and protection in demanding work environments. Key features include:

- **Climbing Helmet-Inspired Design:** Offers enhanced awareness and a secure fit.
- **6-Point Ratchet Suspension System:** Allows for precise adjustment of height and fit.
- **Pressure Diffusion Technology:** Reduces pressure on the forehead by an average of 20% compared to conventional 3M helmet suspensions, enhancing comfort.
- **Chin Strap:** Provides additional security, especially when working at height.
- **UVicator Sensor:** A proprietary indicator that changes color from red to white when the helmet has been exposed to sufficient UV radiation, signaling the need for replacement.
- **Accessory Slots and Clips:** Compatible with a variety of 3M accessories such as faceshields and earmuffs.



Figure 3.1: Front view of the 3M SecureFit Safety Helmet X5012-ANSI. This image shows the overall design of the black, non-vented helmet.



Figure 3.2: Illustration of the Pressure Diffusion Technology within the helmet's suspension system, designed to reduce pressure on the wearer's forehead.

4. SETUP

Before using your 3M SecureFit Safety Helmet, ensure it is properly adjusted for a secure and comfortable fit.

1. **Inspect the Helmet:** Visually check the helmet shell, suspension, and chin strap for any signs of damage, cracks, or wear. Do not use a damaged helmet.
2. **Adjust the Ratchet Suspension:**



Figure 4.1: The smooth, easy-turning ratchet suspension system for head size adjustment.

Place the helmet on your head. Turn the knob on the back of the suspension system clockwise to tighten the headband until it feels snug but comfortable. Turn counter-clockwise to loosen.

3. **Adjust Height and Front-to-Back Position:** The 3M SecureFit Helmet X5000 series offers 15 adjustment settings for different height and front-to-back positions. Adjust these settings to ensure the helmet sits low on your head, reducing pressure and increasing security. Refer to the detailed instructions provided with the helmet for specific adjustment points on the suspension system.
4. **Secure the Chin Strap:** Fasten the chin strap and adjust its length to ensure a snug fit under your chin. The strap should be tight enough to prevent the helmet from shifting during movement but not uncomfortably restrictive.

A properly fitted helmet should not move freely on your head when you shake it, and it should feel balanced and comfortable.

5. OPERATING INSTRUCTIONS

Once the helmet is properly fitted, it is ready for use in appropriate work environments.

1. **Wearing the Helmet:** Always wear the helmet with the brim (if applicable, this model is brimless) facing

forward. Ensure the chin strap is securely fastened.

2. **Accessory Integration:** If using 3M approved accessories (e.g., faceshields, earmuffs), attach them to the designated slots and clips on the helmet according to their respective instructions.
3. **Environmental Awareness:** The brimless design of this helmet helps to allow for enhanced awareness of some hazards, particularly when working overhead.



Figure 5.1: A worker demonstrating proper wear of the 3M SecureFit Safety Helmet in an industrial setting, highlighting its use in construction and at height.

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Video 5.1: Official 3M video demonstrating the features and proper use of the 3M X5000 Climbing Style Inspired Safety Helmet, including its suspension system and overall design.

6. MAINTENANCE

Regular maintenance ensures the longevity and effectiveness of your safety helmet.

- **Cleaning:** Clean the helmet shell and suspension system with mild soap and water. Avoid harsh chemicals or solvents, as these can degrade the helmet material. Rinse thoroughly and air dry.
- **Inspection:** Periodically inspect all components for wear, cracks, dents, or discoloration. Pay close attention to the shell, suspension straps, and chin strap. Replace any damaged parts immediately or replace the entire helmet if significant damage is found.
- **UVicator Sensor:** The UVicator sensor is located on the back of the helmet. It changes color from red to white as the helmet is exposed to ultraviolet (UV) light. When the sensor turns completely white, it indicates that the helmet's shell may have become brittle due to UV exposure and its protective capabilities are compromised. At this point, the helmet must be replaced, regardless of its apparent condition.



Figure 6.1: Close-up of the proprietary UVicator sensor on the rear of the helmet. This sensor changes color to indicate when the helmet needs replacement due to UV exposure.

- **Storage:** Store the helmet in a cool, dry place away from direct sunlight, extreme temperatures, and chemicals.

7. TROUBLESHOOTING

Common Issues and Solutions

Issue	Possible Cause	Solution
Helmet feels loose or unstable.	Improper suspension adjustment or chin strap not secured.	Tighten the ratchet suspension system. Adjust the height and front-to-back settings. Ensure the chin strap is snug.
Helmet is uncomfortable or causes pressure points.	Incorrect suspension adjustment.	Loosen the ratchet slightly. Re-adjust the height and front-to-back settings to find a comfortable position. Ensure no hair or clothing is caught under the suspension.

Issue	Possible Cause	Solution
UVicator sensor has turned white.	Helmet has been exposed to excessive UV radiation.	Replace the helmet immediately. Its protective capabilities are compromised.
Visible cracks or damage to the helmet shell or suspension.	Impact, wear, or material degradation.	Do not use. Replace the helmet.

8. SPECIFICATIONS

- **Model Number:** X5012-ANSI
- **Brand:** 3M
- **Color:** Black
- **Style:** Non-Vented
- **Size:** Universal Fit
- **Material Type:** Acrylonitrile Butadiene Styrene (ABS)
- **Closure Type:** Ratchet
- **Included Components:** Safety Helmet
- **Compliance Standards:** Meets ANSI Z89.1. Tested to select impact and penetration requirements of European EN12492 Mountaineering Helmet Standard.

9. WARRANTY AND SUPPORT

Warranty: The 3M SecureFit Safety Helmet X5012-ANSI comes with a warranty "As Labeled". Please refer to the specific warranty information provided with your product packaging for full details.

Legal Disclaimer: 3M industrial and occupational products are intended for sale to trained industrial and occupational customers for workplace use. These products must be selected and used in compliance with applicable health and safety regulations and standards (e.g., U.S. OSHA, ANSI), as well as all product literature, user instructions, warnings, and limitations.

Support: For assistance with product selection, use, or any other inquiries, please consult your on-site safety professional, industrial hygienist, or other subject matter expert. You can also visit the official 3M website for additional product information and support resources: www.3M.com.