

ASSOCIATION OF PROFESSIONAL PATROLLERS

CERTIFICATION TESTING CRITERIA FOR EXPLOSIVES

BASIC KNOWLEDGE AND SKILLS NEEDED TO ATTAIN **ASSOCIATE** STATUS:

1. Identify and describe the use of: primers, safety fuse, caps, detonation cord, and igniters.
2. Describe the handling of explosive from a magazine to a control point.
3. Describe safety fuse crimping and the use of hand crimper. Make a cap and fuse assembly.
4. Describe primary safety concerns.
5. Know the burning rate of safety fuse and detonation velocity of various explosives.
6. Describe basic storage concerns.
7. Know the Bureau of Alcohol, Tobacco, Firearms and Explosives (BATF&E):
 - a. Responsible Party
 - b. Employee Possessor
8. Describe how to handle a no-light.
9. Describe how to handle a misfire (dud).
10. Describe how to arm gelatin dynamites and cast primers.
11. Describe the standard slope charge and what it means.
12. Know the applicable state laws governing the use of explosives for snow avalanche blasting.

ADVANCED KNOWLEDGE AND SKILLS NEEDED TO ATTAIN **CERTIFIED** STATUS:

1. Describe the construction and characteristics of: primers, safety fuse, caps, detonation cord and igniters.
2. Describe the advantages and disadvantages of different types of primers.
3. Describe the use of detonation cord in avalanche control.
4. Have an understanding of the relationship between density, detonation velocity and detonation pressure of explosives.
5. Know explosive regulatory agencies and organizations.
6. Know proper reporting procedures involved in explosive accidents.
7. Know the Occupational Safety and Health Administration (OSHA) Blaster's License requirements.
8. Describe proper record keeping for storage and handling explosives.
9. Describe proper storage of explosives: Table of Distances, construction requirements of magazines.
10. Describe proper transportation of explosives.
11. Describe the advantages, disadvantages and types of artillery used for avalanche control.
12. Describe the function, advantages and disadvantages of the avalauncher.

APP CERTIFICATION TESTING CRITERIA FOR EXPLOSIVES, Continued

Note:

Confirmation of actual explosives experience and/or training will be needed to obtain a certified score in this testing area. This is typically an indoor, oral test that is about one and half hours in length. Inert explosives props may be used for demonstration and need to be identified by the candidate. As with all practical tests you may be asked if your evaluation can be audited by a non-testing person for education purposes. You have the right to deny this opportunity. More than one judge may be present during your evaluation for consistency of evaluation.

Required Items for Testing:

1. If new to testing you will need your Patrol Director's sign-off to confirm that you have the skills and knowledge to perform the testing criteria.
2. The ability to show and discuss practical and/or training related to explosives use in avalanche control to meet certification requirements.

References:

- The Avalanche Handbook: McClung and Schaerer
- Bureau of Alcohol, Tobacco, Firearms and Explosives (BATF&E) www.atf.gov
- International Society of Explosives Engineers (ISSE) Blaster's Handbook
- Occupational Safety and Health Administration (OSHA) Explosives General Industry Safety Orders www.osha.gov
- Explosives Manufacturers' websites
- State Explosives Regulations
- Federal Explosives Law and Regulations
www.atf.gov/publications/download/p/atf-p-5400-7.pdf
- Employee Possessor Questionnaire www.atf.gov/forms/download/atf-f-5400-28.pdf
- American Avalanche Association (AAA)
- Local Ski Area Protocol
- Association of Professional Patrollers – Study Guide