



The INGAA Foundation, Inc.

## Construction Safety & Quality Consensus Guidelines

# Basic Personal Protective Equipment (PPE)

Document	Revision	Date
CS-G-01	2	10/22/18

### 1.0 ACTIVITY DESCRIPTION

- 1.1 The purpose of this document is to describe basic Personal Protective Equipment (PPE) and to identify specialized or activity-based PPE which is described in separate activity-specific consensus guidance documents.
- 1.2 The basic PPE described in this document is to be worn by all individuals (company personnel, contractor employees, agency personnel, visitors, etc.) during and near all construction-related activities on the pipeline right-of-way, in warehouse yards, pipe and lay down yards, during loading and unloading of trucks and trailers (anywhere), except as otherwise described.
- 1.3 The guidelines in this document are not meant to supersede or replace regulatory requirements, nor is the document intended to be all inclusive of the applicable regulatory requirements. Instead, the guidelines are intended to be supportive and complimentary to such requirements.

### 2.0 HAZARD ASSESSMENT

- 2.1 Hazard assessments are performed to identify operational hazards and prescribe the appropriate PPE to address the identified hazard(s).
- 2.2 Hazard assessments are conducted, reviewed, and/or updated:
  - For each new task and/or when there is a change in how a task is performed.
  - At the beginning of each shift.
  - As needed.

### 3.0 RESPONSIBILITIES

- 3.1 Management Responsibilities
  - 3.1.1 Verify that employees are fitted and trained in the proper use, care, and disposal of PPE.
  - 3.1.2 Verify that PPE, as required by the hazard assessment, is available.
  - 3.1.3 Immediately stop and correct any non-compliant activities.
- 3.2 Health and Safety Responsibilities
  - 3.2.1 Complete a Hazard Assessment or designate a qualified individual to complete one.
  - 3.2.2 Provide technical support for interpretation, selection, and implementation of PPE guidelines.
  - 3.2.3 Develop, coordinate, conduct and/or approve PPE training.
  - 3.2.4 Evaluate the effectiveness of the PPE program.
  - 3.2.5 Immediately stop and correct any non-compliant activities.



The INGAA Foundation, Inc.

## Construction Safety & Quality Consensus Guidelines

# Basic Personal Protective Equipment (PPE)

Document	Revision	Date
CS-G-01	2	10/22/18

### 3.3 Employee Responsibilities

- 3.3.1 Follow the procedures described in this consensus guidelines document.
- 3.3.2 Complete the training associated with job assignments and responsibilities.
- 3.3.3 Utilize the basic PPE:
  - As described in this document.
  - As required for your job assignments and responsibilities.
  - As required by the hazard assessment.
- 3.3.4 Inspect, maintain, and replace PPE, as needed.
- 3.3.5 Immediately stop and correct any non-compliant PPE activities.
- 3.3.6 Report any recognized PPE Hazard that cannot be immediately corrected to the Supervisor.

### 4.0 SITUATIONAL OR SPECIALIZED PERSONAL PROTECTIVE EQUIPMENT

- 4.1 The selection and use of specialized PPE are activity-based and is driven by results of the corresponding hazard assessment and applicable regulations.
- 4.2 Should comply with the latest regulatory and industry standards (e.g., ANSI, ASTM, CSA, local).
- 4.3 Examples of situational or specialized PPE include:
  - Chemical / splash protection.
  - Drowning protection / personal flotation devices (PFD).
  - Fall protection.
  - Flame Resistant Clothing (FRC).
  - Hearing protection.
  - Respiratory protection.
  - Welding protection.
- 4.4 Refer to the applicable activity-based specialized Construction Safety Consensus Guidelines documents (as available) for descriptions of PPE used to mitigate potential hazards of each activity.



The INGAA Foundation, Inc.

## Construction Safety & Quality Consensus Guidelines

## Basic Personal Protective Equipment (PPE)

Document	Revision	Date
CS-G-01	2	10/22/18

### 5.0 BASIC PPE REQUIREMENTS

#### 5.1 General

5.1.1 The basic, or minimum, PPE to be worn by everyone at the pipeline construction site includes:

- Head protection (hard hat).
- Eye protection (safety glasses with rigid side shields).
- Safety footwear.
- Hand protection (gloves based on exposure presented).
- Long pants and shirts with sleeves extending over the shoulders.
- High visibility vest or other outer most high visibility clothing.

5.1.2 Never use PPE that is defective or damaged. If found to have lost its integrity to protect, dispose or replace it immediately.

5.1.3 Employee-owned PPE should meet the standards referenced below and should be inspected and maintained in the same manner as company-supplied PPE.

#### 5.2 Head Protection

5.2.1 Hard hats should comply with current ANSI Z89.1 and/or CSA Z94-1-052, unless an activity-specific hard hat is more appropriate.

5.2.2 Approved for hard hats:

- Approved liners.
- Welder's caps that do not impede the effectiveness of the hard hat.
- Inspect hard hats regularly and clean with mild soap and water.

5.2.3 Hard hats are not required to be worn in:

- Offices, meeting rooms, and/or similar administrative buildings.
- Control or lunch rooms.
- Locker or change rooms.
- Enclosed equipment cabs or vehicles.

5.2.4 Hard hats are required during and near all construction-related activities, unless outlined in site-specific safety applications.



The INGAA Foundation, Inc.

## Construction Safety & Quality Consensus Guidelines

## Basic Personal Protective Equipment (PPE)

Document	Revision	Date
CS-G-01	2	10/22/18

5.2.5 The following are unacceptable:

- The use of “Cowboy” style hard hats.
- Class C metallic or non-metallic hard hats.
- Altering or defacing hard hats such that the dielectric or impact properties are reduced.
- Covering hard hats with any material that prevents it from being inspected.
- Mixing suspension and helmet sizes (use only the approved suspension for your helmet).
- Wearing hard hats reversed (unless is manufacturer approved to be worn in that manner and the suspension is adjusted accordingly).
- Storing in direct sunlight.
- Wearing other headwear that impairs the effectiveness of the hard hat (e.g., no ball caps), unless manufacturer approved.

5.2.6 Inspect hard hat before each use for signs of dents, cracks, discoloration, penetration, exposure to weakening chemicals, brittleness, or other damage. Do not use if any of these signs are found on the shell, suspension, headband, or sweatband.

5.2.7 Hard hat and suspension to be replaced as recommended by manufacturer.

### 5.3 Eye and Face Protection

5.3.1 Eye protection should comply with ANSI Z87.1 or CSA Z94.3-M92 standards.

5.3.2 Inspect, clean, and maintain all eye protection before each use. If scratches, stains, or smears cannot be effectively removed, discard the eye protective device and replace it.

5.3.3 Eye protection is not required to be worn in:

- Offices, meeting rooms, and/or similar administrative buildings.
- Control or lunch rooms.
- Locker or change rooms.
- Enclosed passenger vehicles.

5.3.4 Eye protection is required to be worn everywhere during all construction-related activities on the right-of-way, in warehouse yards, pipe and lay down yards, and during loading and unloading of trucks and trailers anywhere, unless outlined otherwise in site-specific safety documents.

5.3.5 Welders should wear ANSI-compliant safety eyewear beneath ANSI-compliant welding hoods/pancakes.

5.3.6 Use appropriate eye protection equipment with filter lenses (with appropriate shade number) when exposed to an eye hazard from potentially injurious light radiation.

5.3.7 Individuals whose vision requires corrective lenses should be protected either with ANSI or CSA -compliant goggles over corrective spectacles (assuming the goggles do not disturb



The INGAA Foundation, Inc.

## Construction Safety & Quality Consensus Guidelines

## Basic Personal Protective Equipment (PPE)

Document	Revision	Date
CS-G-01	2	10/22/18

the spectacles) or with prescription safety glasses that should:

- Have frames, side shields, and lenses that comply with the latest standards.
- Have scratch resistant lenses made of hard-coated polycarbonate or safety plastic.
- Have clear or shaded lenses, as desired and as appropriate for ambient light levels.

### 5.3.8 Guidelines for contact lenses:

- Contact lenses should not be worn during work around any mists, vapors, aerosols, powders, nuisance dust, or any other materials that could irritate or injure eyes.
- Contacts are allowed to be worn beneath plain safety glasses.
- Contacts are allowed to be worn beneath eye goggles when working with chemicals or in high dust areas.
- Contact lenses should not be worn during welding operations.

5.3.9 Wear full-face shields, mono-goggles, or another type of eye and/or face protection when safety glasses with side shields are not adequate to protect against potential impact hazards.

5.3.10 Goggles should be worn, as indicated by the hazard assessment, in situations involving molten metal, fumes, chemical liquids, gases, vapors, dusts, acids, caustics, and other potentially injurious chemical or physical hazards, operating a pneumatic hammer, brushing operations, tapping, and wrapping.

## 5.4 Foot Protection

5.4.1 Safety footwear should have complete uppers, include steel or composite toe protection, and comply with the applicable standards.

- ASTM F2412-05.
- ASTM F2413-05 (compression and impact ratings I/C 75).
- CSA Z195-09.

5.4.2 Safety footwear is not required:

- In front or administrative offices.
- In lunch rooms or control rooms.

## 5.5 Work Clothing

5.5.1 Wear clothing appropriate to the job, including:

- Long pants and shirts with sleeves extending over the shoulder.
- Clothing that protects skin but will not snag around machinery.
- Tight weave cotton.
- Flame-Resistant Clothing (FRC) when applicable

5.5.2 ANSI-compliant reflective vests or shirts should be worn, per applicable regulatory



The INGAA Foundation, Inc.

## Construction Safety & Quality Consensus Guidelines

## Basic Personal Protective Equipment (PPE)

Document	Revision	Date
CS-G-01	2	10/22/18

requirements, in high traffic areas and while working on roads, and on the Right-of-Way, as required by the job-specific plan.

- Welders and Welder's Helpers are not required to wear reflective vests/shirts in controlled areas during welding related activities. They should wear reflective vests/shirts at other times outside the hot work area.
- Reflective vests are not required around rotating equipment or when participating in activities with an ignition potential.

### 5.5.3 Do Not Wear:

- Sleeveless shirts, tank tops, muscle shirts, dangling sleeves, or mesh material shirts.
- Neckties, loose long hair, or jewelry around machinery.
- Jewelry, if there is a danger of anything catching on equipment or conducting electricity.
- Clothing made of highly flammable and static producing materials (e.g., polyester, nylon, or similar).
- Clothing that is saturated with oil or other flammable material.
- Clothing that is torn or frayed such that it presents a hazard to the employee.
- Drawstrings in clothing (e.g., hoodies) around rotating equipment.

### 5.5.4 Protective clothing is not required in:

- Enclosed vehicles.
- Administrative offices and parking areas.
- Control or lunch rooms.

## 6.0 TRAINING

6.1 All employees assigned to use PPE should receive training appropriate to the PPE required. Refresher training is provided on an as-needed basis or if changes are made to the basic PPE requirements.

6.2 Initial PPE training should address, in accordance with regulatory requirements and/or company procedures:

- When PPE is necessary.
- What PPE is necessary.
- How to properly don, doff, adjust, and wear or use PPE.
- Proper care, maintenance, storage, and the expected useful life of PPE.
- Inspection and disposal of PPE.

## 7.0 REFERENCES

Current versions of the references automatically supersede the references listed below.

7.1 Occupational Safety and Health Administration (OSHA)



The INGAA Foundation, Inc.

## Construction Safety & Quality Consensus Guidelines

## Basic Personal Protective Equipment (PPE)

Document	Revision	Date
CS-G-01	2	10/22/18

- 7.1.1 OSHA Act, Section 5, General Duty Clause
- 7.1.2 29 CFR 1910.132 – 1910.138, Personal Protective Equipment
- 7.2 American National Standards Institute (ANSI)
  - 7.2.1 ANSI Standard Z87.1, Standard for Occupational and Educational Personal Eye and Face Protection
  - 7.2.2 ANSI Standard Z89.1, Industrial Head Protection
- 7.3 American Standards for Testing and Materials (ASTM)
  - 7.3.1 ASTM F2412, Standard Test Method for Foot Protection
  - 7.3.2 ASTM F2413, Standard Specification for Performance Requirements for Foot Protection
- 7.4 Canadian Standards Association (CSA)
  - 7.4.1 CSA Standard Z94-1-052, Industrial Protective Headwear – Performance, Selection, Care and Use
  - 7.4.2 CSA Standard Z94.3-M92, Eye and Face Protectors
  - 7.4.3 CSA Standard Z195-M-M1992, Guideline on Selection, Care, and Use of Protective Footwear
  - 7.4.4 CSA Standard Z195-09, Protective Footwear

### 8.0 REVISION HISTORY

Number	Date	Description
2	October 2018	General Review and Update
1	April 2012	5.3.3: Added forth bullet to exclude head protection from being required when in enclosed equipment cabs or vehicles. 5.5.2: Changed “hot work” to “during welding related activities” and added a second bullet to clarify that reflective vests are not required around rotating equipment or when participating in activities with an ignition potential.
0	December 2011	Initial publication of this INGAA Construction Safety Consensus Guidelines document.