

Types of Safety Incidents on Construction Sites



1. Suffocation

- Occurs during concrete pouring, leading to carbon monoxide poisoning.
- ※ Prevention: Prohibit work in confined spaces.



2. Falls

- Accidents involving slips and falls from guardrails, etc.
- ※ Prevention: Attach safety guardrails and anti-slip mats, and wear safety harnesses.



3. Falling of Construction Machinery and Equipment

- Machinery, such as tower cranes, falling.
- ※ Prevention: Prior equipment inspection during operation and careful handling during lifting.



4. Compression of Heavy Load Material

- During the movement of heavy loads, the rigging may snap and cause compression.
- ※ Prevention: Regular inspection of the rigging for signs of wear and tear.



5. Collapse and Crumbling

- On steep slopes, the collapse of earth retaining structures may occur.
- ※ Prevention: Reinforcement of earth retaining structures on steep slopes, installation of drainage systems, and plastic sheeting.

Safety Tips!

Characteristics of Spark and Flame from Welding and Cutting Operations

Molten metal can scatter horizontally up to about 11 meters depending on the height of the work area.



Safety Rules for Welding and Cutting Operations

Check List



☑ Spark and Flame Prevention

- Prepare safety equipment such as fire extinguishers and welding fire blankets to prevent fires.



☑ Removal of Flammable Materials and Ventilation

- Remove flammable materials before work and ensure proper ventilation to prevent the buildup of flammable gases.



☑ Deployment of Fire Watchers

- Place fire watchers to check safety and guide safe evacuation in case of a fire.



☑ Checking for Lingering Embers

- After completing the work, check for lingering embers for at least 30 minutes to prevent fires.



☑ Safety Education for Workers Before Work

- Provide safety education for workers on construction sites and prevent accidents.

Please note that these action guidelines are based on general situations for each disaster type and may vary in specific circumstances.

Safety is enhanced when following these guidelines together with others.


Guidelines for Citizen Actions by Disaster Type

House Fires




Accident Cases

• Pyeongtaek Refrigerated Warehouse Construction Site

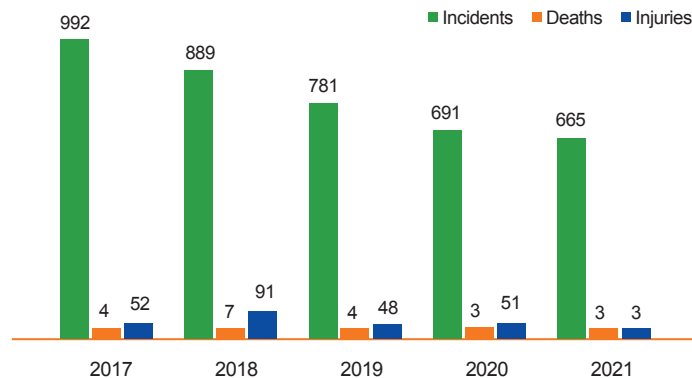
Date	January 5, '22, around 11 am	
Casualties	3 deaths	
Incident Overview	Ignition of flammable materials due to sparks during welding work.	

• Icheon Mogamyeon Logistics Warehouse Construction Site

Date	April 29, '20, around 1 pm	
Casualties	38 deaths and 10 injuries	
Incident Overview	Fire caused by sparks during pipe oxygen welding work.	

Current Status and Major Causes

Construction Site Fire Incidents (Recent 5 years, '17-'21)



Major Causes

- Welding and cutting operations near flammable materials
- Unauthorized use of generators, wiring, and electrical equipment
- Vapor explosion due to simultaneous work in hazardous processes

Types of Temporary Firefighting Facilities

※ Expanded from 4 types to 7 types ('22.12.1, Fire Facility Act revision)



1. Fire Extinguisher

- Manual firefighting by nearby workers in case of a fire.



2. Portable Firefighting Device

- Connected to the water supply system on the construction site or using a portable pressure device for firefighting.



3. Emergency Alert Device

- Used to inform the surroundings of a fire and guide evacuation.



4. Temporary Evacuation Guidance Line

- Installed along escape routes using a light source in underground and open-work areas.



5. Gas Leak Alarm (Expanded)

- Detects flammable gases such as liquefied petroleum gas (LPG) and liquefied natural gas (LNG).



6. Fire Blanket (Expanded)

- Used to prevent sparks from spreading into a large fire.



7. Emergency Lighting (Expanded)

- Illuminates the evacuation route outside in emergency situations.

Guidelines for Citizen Actions



Determine the Route and Evacuate Immediately

- After confirming the possibility of initial firefighting, identify evacuation routes and evacuate.
- Follow temporary evacuation guidance lines and emergency lighting for a swift evacuation.



Fire Spread

- Site workers should use emergency alert devices to inform others about the fire situation.



Fire Suppression

- Attempt initial firefighting using temporary firefighting facilities such as portable firefighting devices.
- ※ Evacuate immediately in dangerous situations.



Call 119 (Emergency Services)

- Report to 119 after completing ground evacuation.

Citizens' Action Guidelines



Prevention of Welding Sparks



Deployment of Fire Watchers



Removal of Flammable Materials During Welding



Designated Smoking Areas