## **Roofing Requirements from NFPA 241**

# Purpose

This document functions as a checklist to monitor roofing activities, per the requirements of the National Fire Protection Association (NFPA) 241 Standard. It is not intended to determine full compliance with NFPA Standards. Professionals should be consulted to ensure complete compliance.

This document does not include design requirements and therefore should not be used for constructing a new building or structure.

General Requirements

* Roofing operations involving heat sources and hot processes shall only be conducted by qualified contractors

Asphalt and Tar Kettles

* Kettles are located outside of the building and away from combustible materials.
* Kettles are not located on roofs.
* A lid that can be closed by gravity is on all kettles.
* The tops and covers of kettles are close fitting and minimum 0.075” thick steel.
* Used mops and rags are cleaned and stored away from the building and combustible materials.
* Discarded mops and rags are not in contact with combustible materials.
* Kettles are:
	+ - * Constantly attended when in operation
			* Attended by an employee with knowledge of operations and hazards
			* Attended by an employee within 25-feet and within sight
* Kettles do not block exits, entries, gates, or roadways.
* Kettles are no closer that 10-feet from exits or means of egress.

Single-Ply and Torch-Applied Roofing Systems

* Installed using extreme caution
* Torches and hot-air guns used per manufacturer’s recommendations
* Roofing membranes are not over-heated

Openings, Penetrations, and Flashings

* Caution is used when working around these items
* Torch flame does not contact wood nailers, cant strips, or metal flashing
* Small torches are used at a safe distance from these items
* Hot trowels are used to feather seams at laps and flashings
* Torches are not used when the flame impingement cannot be seen
* Open flames are never left unattended

Flame Contact Protection

* Torch flame is not applied to a combustible substrate for the membrane
* Base ply is used to cover any combustible surface
* Base ply is glass fiber felts or minimum 40-lb organic felts
* Torch flames do not come in contact with exposed plastic roofing cement

Installation

Notes:

* Installation using torches and some single-ply systems is considered hot work
* Installation using torches is exempt from the hot work requirement of no combustible materials within 35-feet of the work.

PPE

* Protective clothing and PPE are being worn by installers

Equipment

* Only proper equipment used for heating roofing membranes
* All torches are equipped with pilot adjustment, flame height adjustment, minimum 25-50-foot listed hose, pressure gage, and regulator.
* Spark ignitors are used
* Torch trolley and multiple head machines have listed safety valves

Inspections

* Equipment is inspected and replaced/repaired as needed

Gas Cylinders

* Are not hoisted by their valves
* Are secured by straps
* Are transported in carts
* Have safety caps in place when not in use
* Are correctly sized for the torch used
* Are not placed on side or heated when/if there is frost buildup
* Are removed from service if there is frost buildup

Fire Watch

* Maintained for at least 2-hours after torches are extinguished

Fire Extinguishers

* Kettle operations have a minimum 20-B extinguisher 5-25-feet from every kettle in operation
* On the roof there is a minimum 2-A:20-B:C extinguisher
* Torch-applied operations have a minimum 2-A:20-B:C extinguisher within 20-feet horizontal distance
* Extinguishers located in an accessible, visible, or identified location
* Kettle operators and roof installers trained on use of extinguishers

Fuel for Roofing Operations

* Equipment meets NFPA 58 requirements
* LP cylinders secured from tip over
* All fuel containers protected from damage
* Containers of 1-lb or larger are at least 10-ft rom flame or 2-ft when insulated
* Solid fuel or Class I liquids not used as fuel for kettles

Reference: NFPA 241, Chapter 9