



Australian Government

CPCCSV5009 Assess the impact of fire on building materials

Release: 2

CPCCSV5009 Assess the impact of fire on building materials

Modification History

- Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.
Changes to the Application.
- Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.
Supersedes and is equivalent to CPCCSV5009A Assess the impact of fire on building materials.

Application

This unit of competency specifies the outcomes required to assess the impact of fire on building materials.

It includes the research, analysis and reporting of testing conducted on a range of building materials and structures in differing circumstances to determine combustion, flammability, heat transfer, burning conditions, building material behaviour, fire loads of buildings and fire resistance.

The unit of competency supports the attainment of the understanding and skills to assess the impact of fire on building materials within the context of relevant legislation, the National Construction Code of Australia (NCC) and Australian standards.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry.

Unit Sector

Plumbing

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe what needs to be done to demonstrate achievement of the element.
---	--

- | | | |
|--|-----|--|
| 1 Research combustion process as it relates to different materials. | 1.1 | Identify and record processes and flame characteristics of combustion of solids, liquids and gases from a research and analysis process. |
| | 1.2 | Identify and record factors contributing to combustion. |
| | 1.3 | Research and record endothermic and exothermic processes. |
| | 1.4 | Calculate heat of combustion fuels without error. |
| | 1.5 | Analyse and record factors contributing to propagating flame front. |
| 2 Analyse flammability of matter in different states. | 2.1 | Analyse and record flammability in terms of fire triangle and fire tetrahedron theories. |
| | 2.2 | Examine and record flammability of matter in physical states. |
| | 2.3 | Identify and record flammability in terms of upper and lower flammability limits. |
| | 2.4 | Identify and record factors contributing to the explosiveness of dusts. |
| 3 Identify conditions of burning at the fire point. | 3.1 | Interpret limiting adiabatic flame temperature (LAFT) values accurately. |
| | 3.2 | Analyse and record process of extinguishment related to the combustion process. |
| 4 Record mechanisms of heat transfer during fire growth, development and spread. | 4.1 | Identify and record heat transfer factors in fire situations. |
| | 4.2 | Analyse and record processes of self-induced heating. |
| | 4.3 | Observe and record behaviour of fires in partially and fully enclosed compartments. |
| | 4.4 | Calculate amount of smoke produced from a fire. |
| 5 Record the behaviour | 5.1 | Evaluate building materials for fire safety and fire |

of building materials subjected to extreme levels of heat.		resistance levels and record findings.
	5.2	Identify and record effect of fire on structural and non-structural elements.
	5.3	Identify and record effect of fire on plastic and textile materials.
6 Devise the fire load of a building and describe the effect on the BCA classification and compartmentation.	6.1	Calculate effect of building occupancy on potential fire load.
	6.2	Research and record factors that may increase the severity of a fire.
	6.3	Research and record fire load, fire severity and general burning behaviour of materials.
7 Report the requirements of fire resistance of building elements and forms of construction.	7.1	Research and record fire resistance levels of building elements and forms of construction.
	7.2	Apply early fire hazard indices to the BCA requirements.
	7.3	Research and record Australian standards relating to fire testing of building materials and forms of construction.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCCSV5009A Assess the impact of fire on building materials.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>