

Deep fryer cooking

'Helping our customers stay in business by reducing risk'



About NZI Risk Solutions

NZI has extensive experience in providing expert risk management advice to help our commercial customers remain in business. We have used this industry knowledge and developed a suite of fact sheets covering risk management issues to help you to take control of your business risks.

Deep fryer cooking

Deep fryer appliances are typically found in restaurants, fast food outlets, staff canteens and other commercial cooking facilities. When deep fryers are used incorrectly and poorly maintained, they pose a substantial fire risk, so we've outlined a few key steps you can take to prevent this type of fire on your premises.

Automatic cut-out switches

The fitting of automatic temperature cut-out switches is essential to prevent deep fryer appliances from overheating. Here are a few tips when using your appliances:

- ▶ Deep fryers must be fitted with separate external cut-out switches that are non-adjustable as well as mechanisms that can be manually reset, to prevent overheating.
- ▶ To be effective, the cut-out switch needs to disconnect the deep fryer from the energy supply when the cooking oil or fat reaches the maximum temperature set.
- ▶ All deep fryer units, cut-outs, thermostats, heating elements and controls should comply with the relevant NZ Standard and Code of Practice.
- ▶ Fryers need to be maintained to a safe working condition and checked at least annually – this work needs to be carried out by an authorised service technician.



Isolating the energy source

Electrical elements or gas components provide the energy source to a deep fryer – it's important that either energy source is turned off after business hours. This is best achieved using a separate isolator switch that is located by the electricity or gas supply and the deep fryer is also switched off at the appliance.

Extraction hoods and filters

A metal extraction hood should be installed directly above the fryer, with an externally venting metal flue fitted with grease filters. Here are some factors you should consider when installing this equipment:

- ▶ The kitchen fume extraction ducting should be inspected on the inside to check the level of grease deposits – this should be carried out at least annually and cleaned as necessary.
- ▶ These cleaning intervals are advised:
 - Heavy use (over 12 hours per day) = 4 monthly
 - Moderate use (6 to 12 hours per day) = 6 monthly
 - Light use (up to 6 hours per day) = annually
- ▶ Metal grease filters need to be easily accessible for cleaning.
- ▶ Consider using disposable pre-filters over the metal filters. These largely stop grease entering the metal filters and extraction flue which means they require less cleaning.

Fire extinguisher protection

To protect your premises, you should provide a minimum of one fire extinguisher, which is Class F-rated in accordance with this Standard – AS/NZS 1850: (Portable Fire Extinguishers – Classification, rating and performance testing). An F-rated fire extinguisher is specifically designed to extinguish fires caused by overheating cooking oil or fat. We recommend you take the following steps when installing a Class F-rated extinguisher to ensure that it is:

- ▶ Labeled correctly and features a sign above the extinguisher to show its classification and type.
- ▶ Located approximately 2 metres from the deep fryer.
- ▶ Regularly inspected and maintained in accordance with the NZS 4503:2005 (Hand Operated Fire Fighting Equipment) Standard.
- ▶ Operated by adequately trained staff.

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Fire blankets

If a fire blanket is available, it should only be used to supplement the F-rated fire extinguisher. A fire blanket must be located, inspected and maintained in accordance with the NZS 4503:2005 Standards and all staff should be trained to use it correctly.

Good housekeeping

You can create a schedule of housekeeping rules to ensure that you keep on top of maintenance and cleaning, including regularly skimming all scraps from the deep fryer in-between cooking sessions. These scraps should be kept in a closed metal container at all times as they can be prone to spontaneous combustion for several days. You should remove these from the building each day after normal business hours.

Metal lid protection

To prevent fire spreading, it is recommended that you provide metal lids for all deep fryers. These lids need to be kept in place after business hours and when the deep fryers are not in operation.



Cooking oils or fat

It is recommended that you use only high quality cooking oil or fat in your deep fryer appliances and that you take the following steps:

- ▶ Keep clean and replace the oil or fat regularly, in accordance with the manufacturer's recommendation.
- ▶ Use only within the manufacturers recommended temperature range.
- ▶ Maintain the level of oil or fat to ensure that the temperature probes remain covered.

Wet chemical suppression system

For many commercial cooking outlets, the risk of fire from deep fryers is a real threat and an important issue to be addressed by businesses. NZI recommends installing an automatic 'wet chemical fire suppression system' to help mitigate this fire risk. These fire suppression systems are designed to automatically extinguish hot oil or fat fires and protect extraction hoods, ducts and filters.

Take control

We hope you find this information useful and we encourage you to manage your business risks by implementing these risk control measures.

To find out more about how you can protect your business, WorkSafe NZ offer free information, tools and resources. Alternatively, your business could subscribe to Standards NZ for more detailed information.

www.nzi.co.nz

These guidelines are of a general nature only. They are not intended to be a comprehensive list of all the steps you should consider taking to reduce the risk of damage and financial loss resulting from deep fryer fires, nor is it intended to be legal advice.

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