



TOWNSHIP OF MAHWAH FIRE PREVENTION BUREAU

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FIRE HAZARD

Fire hazard related to food preparation technique

Fire Investigation

Fire investigators have determined these fires to be a result of preparation technique used to create a food product commonly referred to as “crunch” or “crunchy.” It’s a commonly-prepared garnish, similar to tempura made by restaurants that serve sushi. The “crunch” is produced from water and flour batter that is deep fried in cooking oil then placed in a container to drain and cool.

The following is what fire investigators have identified as an environment for the “crunch” product to self-heat:

- The use of vegetable oil (soybean oil) or other cooking oil
- Deep frying the batter in batches and piling it in a bowl or colander to drain/cool
- Leaving the product unattended while it cools

Cooking oils, especially soybean oil and canola oil, are known to have a propensity to self-heat under certain circumstances. For example, rags saturated with cooking oil residue can self-heat and undergo spontaneous combustion after being laundered.

Because the “crunch” product is heated during the cooking process, then placed in a bowl or colander to cool and drain, the ability for the heat to dissipate is compromised. These conditions can create an environment for a fire to occur.

Recommended Prevention & Safety Measures

The Mahwah Fire Prevention Bureau recommends that any restaurant or home cook that prepares “crunch” follow the safety guidelines below to reduce the fire hazard during preparation:

- When making “crunch”, DO NOT pile the product in a container where the heat can build, such as a metal colander or mesh strainer. Instead, spread out the product on a baking sheet so the heat can readily dissipate.
- Do not leave the product to cool unattended
- Place the product under a wet-chemical fire suppression hood as it cools (Restaurants)

Links:

- <https://www.nfpa.org/News-and-Research/Publications-and-media/NFPA-Journal/2019/September-October-2019/News-and-Analysis/Dispatches/Sushi-fires>
- <https://www.nytimes.com/2019/07/15/us/sushi-restaurant-fires.html>

Credit: Fire Investigator Kara Nelson from the Madison, WI Fire Department