Summation

It is our opinion that insulating foams have the ability to seriously degrade type NM cables. The extent of degradation will depend upon the level of loading and the duration of that loading. What we can state with certainty is that the foam can trap heat sufficiently such that the cables will exceed their maximum operating temperature and the overcurrent protection will not respond. In this regard, the presence of foam makes it necessary for the electrician to substantially derate any cables that it encases.

Footnotes:

1. *Values vary among manufacturers, trade associations and also, with fiberglass and cellulose, depend on settling.*
2. *While some 20 ampere breakers may trip at the 24 ampere level, one cannot count on this when designing an electrical system. The only known qualities are those supplied by the time-current curves from the manufacturer.*
3. *The term "dangerously" is meant to mean that the wire temperature exceeds its insulation rating.*
4. *For the purist, the NEC ampacity tables are even higher for 90°C insulation (per Table 310-16), but Article 336 states that type NM shall be considered as 60°C wiring, and 310-16 also mandates the lower breaker sizes.*

References:

[1] NFPA, National Electric Code, Article 336, 1996
[2] ibid, table 310-16
[3] Siemens, ITE Molded Case Circuit Breakers, TD 4944, 1992
[4] UL, Standards for Safety UL 489 Molded Case Circuit Breakers, 1996
[5] NEMA, Molded Case Circuit Breakers AB-1, 1992
[6] McGraw Hill, *NEC Handbook 19th Edition*, Article 240-1, 1987
[7] UL Canada, Report 4180, 1998
[8] NFPA, ibid, Article 210
[9] NFPA, ibid, Article 250
[10] IAAI, *Fire and Arson Investigator*, "GFIs and Fire Investigations," Jan., 1999

KNOW YOUR CERTIFICATION!

Did you know that there are different types of certifications for fire investigators?

MICHAEL A. SCHLATMAN, CFI–There are several different types of certification for the fire investigator. They include: local, state, provincial, national, and international certifications. There are also different requirements to obtain each certification. To confuse the issue further, each certification is accredited by different agencies.

In the spirit of informing our members of the newly discovered certifications available, however not the most rigorous to obtain, we are providing the following information.

The CFI Committee located a website, www.e-technologycenter.com, which is reportedly a career institute located in Tennessee. They offer courses in real estate, computer technology and law enforcement.

If you choose the **"LAW 303 Course Fire and Arson Investigation"** it will take you to a screen where, for $99.95 plus $19.95 for shipping and handling you can "Get Certified." But don't think that's all you have to do, there is the required reading of a provided e-book *Fire and Arson Scene Evidence: A Guide For Public Safety Personnel*. Reportedly in that book are forms from NFPA 906. There is no mention of NFPA 921, testing, or any other requirements. Nor does the site indicate where the "certification" is recognized.

In contrast, the IAAI Certified Fire Investigator (CFI) Certification is the only one that is internationally recognized. Countries such as Canada, Australia, New Zealand, Georgia and South Africa are participating in the IAAI CFI Program.

In addition, the IAAI CFI Certification is the only one accredited by the National Board on Fire Service Professional Qualifications. That accreditation is awarded due to the CFI program's administration, compliance with the duty areas in NFPA 1033, the requirements for education, experience, expert testimony (or stringent testimony classes) and training before the examination can even be taken.

So when you choose to become a certified fire investigator, please make sure you consider the requirements, the agency awarding the accreditation and where it will be recognized.

In our view, your choice is limited!

Amazing how stupid people can be!

When his .38-caliber revolver failed to fire at its intended victim during a holdup in Long Beach, California, robber James Elliot did something that can only inspire wonder: He peered down the barrel and tried the trigger again. Happily for most concerned, this time it worked. (Natural selection at its best!)

The chef at a hotel in Switzerland lost a finger in a meat cutting machine and, after a little hopping around, submitted a claim to his insurance company. The company, suspecting negligence, sent out one of its men to have a look for himself. He tried the machine out and lost a finger. The chef's claim was approved. (Too bad they didn't send a lawyer!)

Mourners at the funeral of Anna Bochinsky in Moinesti, Rumania, were naturally somewhat taken aback when she abruptly leapt from her coffin as it was being carried to the grave. Before they could react to this unexpected outburst, the woman bounded into the nearest road, where she was run over and killed by a passing car. (At least the coffin didn't go to waste)

A man who shoveled snow for an hour to clear a space for his car during a blizzard in Chicago returned with his vehicle to find a woman had taken the space. Understandably, he shot her dead. (Chivalry is dead!)

After stopping for drinks at an illegal bar, a Zimbabwean bus driver found that the 20 mental patients he was supposed to be transporting from Harare to Bulawayo had escaped. Not wanting to admit his incompetence, the driver went to a nearby bus-stop and offered everyone in the queue a free ride. He then delivered the passengers to the mental hospital, telling the staff that the patients were very excitable and prone to bizarre fantasies. The deception wasn't discovered for 3 days. (And the escapees became politicians?)

In Minneapolis, USA, 28 year-old Derrick L. Richardson has been charged with third-degree murder of his much loved cousin, Ken E. Richardson. According to local police, Derrick had suggested to Ken that they play a game of Russian Roulette, but, having no revolver, instead put a semiautomatic pistol to his cousin's head. Apparently, he did not realize that one bullet always loads into the firing chamber of a semiautomatic. (Guns don't kill people, stupidity kills people)

An American teenager was in the hospital recovering from serious head wounds received from an oncoming train. When asked about how he received the injuries, the lad told police that he was simply trying to see how close he could get his head to a moving train before he was hit. (DUH!)