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Chiefs Should Review Requirements for Handling E85 Fuel

March 22, 2006

The IAFC would like to alert its members to the requirements for handling E85 fuel, an alternative fuel composed of 85 percent ethanol and 15 percent gasoline. Recently, E85 has begun to appear in the Midwest, primarily the states of Illinois and Minnesota.

According to the U.S. Department of Transportation (DOT), fires involving E85 should be treated differently than traditional gasoline fires, because E85 is a polar/water-miscible flammable liquid. **E85 is highly flammable, and will be easily ignited by heat, sparks or flames.** The DOT recommends following Guide 127 in the 2004 Emergency Response Guidebook.

According to the ERG2004, public safety should:

- **Call emergency response telephone number on shipping paper first.**
- As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate closed spaces before entering.
- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

For fires, public safety should:

- **Be cautioned that these products have a very low flash point; use of water spray when fighting fire may be inefficient.**
- For small fires, use dry chemical, CO₂, water spray or alcohol-resistant foam.
- For large fires:
 - Use water spray, fog or alcohol-resistant foam.
 - Use water spray or fog; do not use straight streams.
 - Move containers from fire area if you can do it without risk.
- For fire involving tanks or car/trailer loads:
 - Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
 - Cool containers with flooding quantities of water until well after fire is out.

- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

For spills or leaks, public safety should:

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements, or confined areas.
- A vapor suppressing foam may be used to reduce vapors.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- Use clean non-sparking tools to collect absorbed material.

For large spills, public safety should:

- Dike far ahead of liquid spill for later disposal.
- Water spray may reduce vapor; but may not prevent ignition in closed spaces.

For evacuation, public safety should:

- For a large spill, consider downwind evacuation for at least 300 meters (1,000 feet).
- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider the evacuation for 800 meters (1/2 mile) in all directions.

For first aid, public safety should:

- Move victim to fresh air.
- Give artificial respiration if victim not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes; wash skin with soap and water.
- In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if adhering to skin.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

The full Guide 127 can be found at: <http://hazmat.dot.gov/pubs/erg/g127.pdf>.

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