Ethanol, Rail Transportation, and Safety

Over a million shipments of hazardous materials are transported each and every year by the railroads. These hazardous materials are essential to our everyday life, especially domestically produced, renewable fuels like ethanol. The U.S. Department of Transportation’s Federal Railroad Administration announced that 2012 was the safest year in rail history.¹

Statistics
About 1.7 million loads of Hazmat are shipped via rail and 99.99% of those shipments are delivered without incident. Ethanol constitutes 26% of the total number of Hazmat shipments and is 1.1% of all railroad shipments. A variety of different materials and commodities classified as Hazmat, including ethanol, are transported daily on rail lines that pass through major cities or more rural communities.

![Ethanol Tankcar Loads](chart.png)

Rail Fleet Facts
Ethanol is transported using a standard DOT 111A railcar. The 111A railcar is subject to rigorous building specifications and routine safety and integrity inspections. On average, 85% of the current ethanol rail fleet is less than 7 years old. The entire 111A tank car is inspected for proper operating order before, during and after each and every load. The expected length of service for a tank car is nearly 30 years. The Ethanol Industry is continuously looking for improvements to the tank car design, loading and unloading actions as well as employee education and knowledge about tank cars.

Safety
Safety is a priority of the ethanol industry, especially when it comes to ethanol transportation on the rail ways. There are a variety of resources the RFA has put together to serve as guidance documents to ensure proper precautions are taken to avoid an incident involving ethanol and the rail ways. RFA’s Plant and Employee Safety Committee is extremely active developing resources and best practices to keep the industry on the path to continuous improvement.

- **RFA Best Practices for Rail Transport of Ethanol** — Guidelines for the ethanol industry in an effort to promote improved regulatory compliance and to communicate many of the industry best practices for the continued safe transport of ethanol via rail.
- **RFA Guidelines for Hinged and Bolted Manway Assembly** — Provides industry personnel with procedures and standards for the inspection, maintenance, and securement of a hinged and bolted manway to ensure leak-free performance.
- **RFA Safety Bulletin for Placarding** — Guidance for proper shipping names and placarding for various ethanol blended fuels.

Emergency Response
RFA is the guiding force behind the Ethanol Emergency Response Coalition. A voluntary industry/government group developing safety and emergency response information for the first response community specifically focused on ethanol incident training since 2006. RFA supports the [www.ethanolresponse.com](http://www.ethanolresponse.com) website as a one-stop-shop of ethanol safety and emergency information.

Through the Ethanol Emergency Response Coalition, the RFA has put together *The Complete Training Guide to Ethanol Emergency Response*. This training package is geared towards emergency responders and focuses on the characteristics of ethanol-related incidents and provides them with the information, tools, and training that is needed to respond efficiently and effectively in the event of an ethanol incident. Partnering with the U.S. Department of Energy and industry partners such as the Norfolk Southern, BNSF and Canadian Pacific, RFA has held more than 90 safety seminars across the U.S. The RFA has also been recognized by TRANSCAER® for its extensive efforts in producing and promoting safety efforts and education when it comes to ethanol emergencies. RFA is a national sponsor of TRANSCAER®, which is a voluntary national outreach effort that focuses on assisting communities to prepare for and to respond to possible hazardous materials transportation incidents.

In the event ethanol is released into the environment, there is a guidance document readily available. The **RFA Fuel Ethanol Guideline for Release Prevention & Mitigation** is a discussion of the best practices for preventing releases of fuel ethanol to the environment, the likely impacts if a release does occur, and the mitigation techniques to address a release.