



Proper Classification of Firework Articles

Research and Development Forum
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PHMSA's R&D

Classification of Chained Shells

- **Goals:**
 - Research to understand the risk of chained shells vs. un-chained shells;
 - It is a common practice to combine shells into chains





Examples



Un-chained



GO WHOLESALE
CHINA TRADE ONLINE

Chained





Common Practice

- **What shells are chained**
- **2.5" shells up to 5" shells are shipped in the chained and unchained configuration.**

of shells per chain

2.5" and 3" shells – 10 per chain

4" shells – 5 per chain

5" shells – 4 per chain





Expected program outcomes

- To know if chained and un-chained shells represent the same risk in transportation.
- The research will determine the best tests to conduct to know if the risk of chained vs. unchained shells are the same.





PHMSA's R&D

Classification of Novelties

- **Background:** Novelties have been classed under the APA as not regulates as class 1 explosives for over 20 years. But under the UN system no exemptions are extended to novelties. Can rules be developed to define and class the hazards of novelties?





PHMSA's R&D Classification of Novelties

- **Goals:** Define rules for the classification of Novelties. The original testing done to obtain this classification was conducted many years ago in the mid 80's.
 - Existing Novelty fireworks

Party “Poppers”, “Snappers”, Snakes (Glow Worms), Wire Sparklers (Dipped Sticks), and Toy Smoke Devices





Current Novelty fireworks





Define the properties of Novelties

- The research should define the unique properties of novelties fireworks; and
- Establish criteria for other potential novelties fireworks.
 - What are the best test methods for assessing the hazards of novelties fireworks?
 - Do the items shipped today conform to the current requirements to be classed as a novelty firework?
 - Are there unexpected risk with novelties fireworks that would change their classification as unregulated?





Expected program outcomes

- To know if the long running classification of novelties fireworks is correct for all items currently in the group; and
- To establish criteria for new items that want to be added to the group of novelty fireworks.

