



07 January 2014

TO WHOMSOEVER IT MAY CONCERN

To ensure Safety for Life at the Terminal for our employees, customers and other stakeholders we ensure to maintain the highest standard of Health and Safety measures at the facility.

The Refrigerated Container industry has recently experienced several instances whereby refrigerated containers have violently and unexpectedly exploded, resulting in multiple deaths of service technicians around the world. To date, investigations indicate that the explosions were caused by the introduction of counterfeit R134a refrigerant containing, among other gases, significant amounts of R40 (methyl chloride).

It is a poisonous and reactive chemical and it is understood that methyl chloride combines with aluminum components in the compressor to form a volatile chemical, Tri Methyl Aluminum (TMA), which burns spontaneously in air and water. It remains important that the industry acts together to ensure that the use of counterfeit gas is eliminated.




While servicing or refilling refrigerant in refrigerated containers, the Halide Testing is performed to determine the purity of R-134A .

To ensure Safety of the reefer container units and people's lives, Halide Flame Testing will be introduced as mandatory safety norm to rule out contamination prior to refilling of the container with refrigerant. It is requested your vendor carries a Halide Torch during refilling of reefer containers with refrigerant so they effectively carry out the flame test in presence of our reefer technical team.

The new process will be implemented effective 01st March, 2014.

Please do reach out to us for any clarifications, assistance required on the subject matter. Appended below photograph of Halide Testing.

REFRIGERANT HALIDE FLAME TESTING FOR CONTAMINATION

| Lite Blue Flame - R-134a (no CFC) | Green Flame - Contaminated CFC | Vivid Blue Flame - Contaminated R-40 |
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| <p>Flame is almost invisible but has a lite blue central core where the gas flame reacts with the copper reaction plate. As R-134a passes through the testing hose there will be a slight waving of the flame as it burns the refrigerant excess flow will cause roange flame (lack of oxygen) and eventually flame extenguished.</p> | <p>Flame can easily be seen to change to a green tinge as the Chlorine in the refrigerant (CFC) reacts with the copper reaction plate. Most likely cause is a mixture of R-22 and/or R-142b which is cheaper than R-134a.</p> | <p>Flame may start as green colour, but as more flow of refrigerant passes through, then it dramatically turns to an electric blue colour and onwards to vivid blue/purple. This is most likely R-40 mixed with other CFC refrigerants and R-134a. This is what caused the explosions when unit was powered up and reacted with moisture at 473°C.</p> |
| SAFE TO BE USED | DO NOT USE | DO NOT USE - STORE SAFELY FOR DESTRUCTION |

Regards
 Ramit Dutt
 Deputy Chief Commercial Officer
 APM Terminals Mumbai
 Mumbai, India
 Office +91-22-6681-1014
 Mobile +91-9773287263
 Email address ramit.dutt@apmterminals.com

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www.apmtmumbai.com
www.apmterminals.com

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