

# chillistick

## Press Release - Safety statement 8<sup>th</sup> October 2012

Chillistick Ltd products only use dry ice, for safety reasons the company does not advocate the use of liquid nitrogen, which is extremely dangerous as the tragic recent events highlight.

Liquid nitrogen has a temperature of typically -200 Deg C (the actual range is from -196 Deg C to -210 Deg C), dry ice has a temperature of -79 Deg C. To put this into perspective air temperatures at the South Pole can reach -89 Deg C and is breathed in through the mouth and into the lungs, and while not pleasant has not caused injuries.

Nevertheless Chillistick products are designed specifically to remove any risk of ingesting dry ice. The Chillistick design has been independently audited by a leading industry safety expert and confirmed to be the only device considered safe and suitable for commercial use, see below.

Chillistick Ltd provide comprehensive help regarding dry ice safety and instructions in its use and handling. To date Chillistick has over 200,000 products in use with consumers and has never had a single accident.

If any consumer requires further help or advice they are welcome to contact us directly.

The following information may help in understanding the differences between dry ice and liquid nitrogen more fully.

Liquid nitrogen is used to super-freeze garnishes that can be added to drinks. In this process the garnish should always be left to warm up from -196c to some intermediate temperature before being consumed. There is a danger that the garnish could be added immediately to a drink and then swallowed, leading to the very cold garnish causing local freeze-burning within the body. A more egregious use of liquid nitrogen is to pour it onto a drink to create a smoking effect and also cause the drink to partially freeze. This presents the risk that some liquid nitrogen could be swallowed, which would cause severe damage to the body.

Chillistick only uses dry ice. The means by which it is used by consumers is in safe devices such as the chillistick. It is always immersed in drinks and the only item swallowed by a consumer is liquid. This controls the temperature to a minimum of 0 C for water-based drinks, and around -15C for high alcohol drinks, such as vodka. These temperatures will not cause internal damage to consumers and are on a par with temperatures found in the environment, and are similar to drinks served directly from a freezer.

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Chillistick products have tamper-proof devices so that consumers cannot access the dry ice without destroying the product.

All chillistick products are portion-controlled so only a small amount is provided to the consumer (2 – 4 grams for chillisticks and shot glasses, and 20 grams for Ice Charge used in pitchers.)

Here follows a comment from Argusafe – independent dry ice safety experts:

## STATEMENT

I believe that the advice given by the British Compressed Gases Association in Technical Information Sheet number TIS No7: Revision 1:2010 under the heading “How to use dry ice” not to put dry ice in drinks was included because, in the loose pellet form, dry ice dropped into drinks could have been inadvertently swallowed, which is undesirable - although the actual effect on the body has not been researched.

Using dry ice in a drink to create a localized special effect would be safe provided the amount used is small, for example one 9mm diameter pellet approximately 25mm long, and provided that there was no possibility of accidentally ingesting the dry ice.

The Chillistick device is designed to be tamperproof to ensure that one dry ice pellet, properly loaded, is secure and cannot exit into the drink. As the dry ice sublimates the pellet effectively shrinks and the proportion of water ice adhering to the dry ice increases, making it more buoyant and causing the pellet residue to be trapped in the top of the Chillistick, until all the dry ice has sublimed.

Loose dry ice pellets dropped into drinks are potentially injurious but the correct use of the Chillistick device whilst permitting dry ice contact with the drink, is designed to hold the pellet until it is completely sublimed.

Roger Palmer  
Director  
Argusafe Consulting and Training Limited

9<sup>th</sup> November 2011