



Mr Iceman's Dry Ice & Fog Effects Information

DRY ICE FOG - When combined with hot tap water can produce vigorous bubbling water and voluminous flowing fog.

For example, with 2.5Kg of Dry Ice in 15 to 20Ltrs of hot water, the greatest amount of fog will be produced the first 5 to 10 minutes. There will be far less fog for the next 5 to 10 minutes as the water cools down and the volume of Dry Ice diminishes. As the water cools, the fog becomes wispy. Dry Ice makes fog because of its cold temperature, - 78.5°C, immersed in hot water, creates a cloud of true water vapour fog. When the water gets colder than 18°C, the Dry Ice stops making fog, but continues to sublimate and bubble. The fog will last longer on a damp day than on a dry day.

HOW TO MAKE FOG

For each 15-minute period put 2 to 5Kg of Dry Ice into 15 to 30Ltrs of hot water. This will make lots of fog depending upon the temperature of the water and the size of the pieces of Dry Ice.

Hotter water will make more fog. Very hot water will add its own rising steam to the vapour cloud. If there is no steam the fog will flow downhill and in the direction of any air movement. A small fan can help control the direction. Smaller pieces of Dry Ice with more surface area produce a greater volume of fog and cool the water down much faster. In both cases the result is more fog for a shorter amount of time.

Keep the water hot with a hot plate, electric skillet, or some other heat source to produce fog for a longer time. Otherwise when the water gets too cold it must be replaced to continue the fog effects. If the container is completely filled with water the fog will flow over the sides the best. But the Dry Ice sublimation will vigorously bubble the water and splash it out. Even a ¾ filled container will splash some so place the container where spilled water will not ruin anything. The water vapour fog will also dampen the area it flows across. Be careful because after some time floors do get slippery.

Application	Amount	Duration
Witches Punch (10Ltr Bowl)	1.5 to 2.5 Kg	Up to ½ an hour
Pumpkins (500ml Bowl)	1.5 to 2.5 Kg	Up to ½ an hour
Witches Pot (75ltr Garbage Bin)	2.5 to 7 Kg	Up to an ¾ hour
Small Room (2x 10-20ltr Buckets)	7 to 15 Kg	Up to an hour
Large Room (3-4x Buckets)	25Kg package	Up to an hour
Swimming Pool (unheated)	25Kg package	1 to 2 hours
Patio (No Wind)	25 to 50 Kg	1 to 2 hours
Pea Souper	Max of 9Kg Per 5min.	Varies
Wedding Waltz (Pea Souper)	10Kg	5 Minutes

FOG MACHINES

A theatre fog machine is generally a metal or plastic water barrel with a 240-volt hot water heater to keep the water hot. Dry Ice is placed in a bucket with holes to allow hot water to enter. When the bucket is lowered into the hot water fog is instantly produced. The resulting water vapour fog is gently blown by a fan and directed to the desired area by an air duct tube. Fog stops whenever the bucket of Dry Ice is pulled out of the water. More modern fog machines pump heated water over a tray holding the Dry Ice.

STAGE PRODUCTIONS

Using a fog machine or buckets of hot water and a fan, many shows are enhanced by adding flowing fog.

POOL & SPA'S

25 to 50 Kg of Dry Ice dropped directly into a heated swimming pool will make fog for an hour or longer depending on the water temperature and the size of the Dry Ice pieces.

Because of the Spa's hot water, it makes the most fog the quickest. As long as the water is kept hot, it can take 25 to 50 Kg per hour.

The Dry Ice will carbonate the water for several days. If possible drain the Spa. The swimming pool will read more alkaline during this time so wait to add acid until the carbonation has dissipated. If the temperature of the water in a swimming pool, fountain, waterfall, or birdbath is too cold (less than 18°C) the Dry Ice will bubble but produce much less fog.

ADD DRY ICE TO BEVERAGES

It is OK to put Dry Ice into beverages for drinking as long as the dry ice is food grade. Use 1 to 2 Kg's of Dry Ice for each 4 Litre's of room temperature punch. Use large pieces of Dry Ice not small pieces. The Dry Ice is heavier than ice and will sink to the bottom. Do not use any regular ice! The Dry Ice will do the cooling and must not be eaten or swallowed. Too much Dry Ice will freeze the beverage so have extra standing by. It will bubble and give off the most fog when the beverage is room temperature. When most of the Dry Ice has sublimated, it will surround itself with ice and float to the top. There is still a small piece of Dry Ice in the centre of these ice pieces so do not serve or eat them. Carefully ladle the beverage into drinking glasses without any Dry Ice. Add regular ice to glasses for cooler drinks.

USE "MISTY STIX" AS A SAFE ALTERNATIVE

To enquiry about "Misty Stix" contact Mr Iceman

Floating Bubble

You'll notice that when you add dry ice to water, the cloud of carbon dioxide and water does not go up into the air, but instead falls towards the ground. Why? This cloud-like mixture of carbon dioxide and water is heavier than the surrounding air. You'll use this little piece of science trivia to perform the amazing Floating Bubble trick.

A small fish aquarium works well for this activity. Fill the bottom of the aquarium about an inch deep with warm water (take the fish out first!). Use gloves or the tongs to add a few pieces of dry ice. Of course, the dry ice will begin to smoke turning into carbon dioxide and water vapour.

Using a bubble wand and a bottle of bubble fluid, blow a few bubbles into the aquarium (it's a little difficult so be patient). To everyone's amazement, a few bubbles will appear to float in mid-air in the aquarium. The bubble is really just floating on a cushion of invisible carbon dioxide gas. Of course, the spooky Halloween story is up to you... but I think I heard that the aquarium is the home of a ghost who has been known to play with soap bubbles!