Title:
How Is Dry Ice Made?

Word Count:
300

Summary:
Anyone old enough to remember "ice boxes", will remember the daily deliveries of huge blocks of ice that kept their meat and food cool inside the icebox, a forerunner of the refrigerator. But those blocks were hugely messy when they melted, and turned to liquid.

That's one problem you don't have with dry ice. Because it is just what its name says- dry ice. And when it "melts", it is actually changing its state from a solid to a gas. Dry ice is carbon dioxide gas that has b...

Keywords:

Article Body:
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That's one problem you don't have with dry ice. Because it is just what its name says- dry ice. And when it "melts", it is actually changing its state from a solid to a gas. Dry ice is carbon dioxide gas that has been subjected to high pressure.

Just as the nature of water changes according to the sea level, boiling at lower temperatures, at lower pressures, carbon dioxide also has a solid-liquid-gas transformation related to pressure. At normal pressure, CO2 is not quite liquid, and not quite a gas. But when confined within the high-pressure chamber of a fire extinguisher, it becomes a liquid.

To make dry ice, liquid carbon dioxide is released from a high pressure container, after which there is a rapid evaporation of some of the gas into the air, which results in almost instantaneous cooling of the rest of the escaping liquid, to freezing point. The ice/foam like product is then subjected to compression, to create blocks of ice whose surface temperature averages around

-109F.

The very density, and the slow process of evaporation after compression, makes dry ice the perfect way to ship perishables over very long distances. There are no messy puddles of water because any evaporation turns the dry ice to a gas released into the air. For this very important reason, dry ice should never be carried in a closed vehicle, and/or kept in a room without proper ventilation. When the CO2 content in normal air rises about its standard 5% level, it becomes toxic.