DRYICE CORPORATION OF AMERICA

Description of Product:
DryIce is frozen carbon dioxide-the gas that is in all carbonated beverages. It is similar to a white water ice in physical characteristics, only very much colder.
Its temperature is about 114 degrees below zero, Fahrenheit (-80 C.) but because it evaporates to a gas it can be readily insulated with various thicknesses of insulation to cool its surroundings to any desired temperature above this point.
DryIce melts to a dry gas, heavier than air, and is mildly sterilizing in effect. The rate of melting is remarkably slow.
It Is Dry:
There is no drip; the evaporation is a dry, harmless gas. This permits shipment of perishables by mail of express in non-returnable paper boxes. There is no water or moisture to damage the article being shipped.
Its dryness eliminates the expensive pick-up of "empties" and permits a much greater proportion of the load capacity to consist of the material to be refrigerated.
If you have a refrigeration problem look into DryIce. It may save you a capitol investment.

1. What is it?— Solid carbon dioxide CO_2 - the same harmless gas used to charge all carbonated beverages.
2. Why is it called DryIce?— Because it evaporates to dry harmless gas. There is no moisture or water.
3. How cold is it?— 114° below zero or 146° colder than water ice.
4. What does it look like?— A block of white marble.
5. How long does it last?— In an approved storage box, it will lose about 10% of its weight each 24 hours. A forty-pound piece placed uncovered in a store window in midsummer will last about 28 hours; in an approved storage box, from one to two weeks.
6. How is DryIce kept? — In a balsa-wood storage box. A balsa box having a DryIce capacity of 200 pounds costs approximately $25.00.
7. Why is a Balsa-wood box used?— Because balsa wood insulates as well as cork board, is considerably lighter, and requires no metal lining.
8. How is it shipped?— In solid blocks 10" x 10" x 10", weighing approximately 40 pounds each. These blocks are shipped in a balsa-wood box, containing 200 pounds. The weight of the box is about 100 pounds. The cost is $30.00 to $45.00. The ice is removed from the shipping box, placed in a storage box, and the shipping box returned by express. Shipments for points outside New York are made by express; deliveries in New York City by trucks.

9. What does DryIce save?

(a) Weight — An equal amount of ice cream packed by the DryIce method weighs only 1/4 as much as if packed the old fashioned way. This cuts shipping and delivery costs to a minimum.

(b) Corrosion — When DryIce is used corrosion is eliminated. This of course is due to the lack of moisture. Because of this important feature, the repair bills on truck bodies or refrigerator cars are greatly reduced.

(c) Dampness and Damage — A wet and sloppy condition necessarily exists whenever ice and salt are used. Brine leakage causes untold damage particularly in connection with express shipments. Caterer's customers and apartment dwellers object to sloppy ice pails and welcome DryIce packing.

(d) Delivery Expense — Light dry "one-time" or "throw-away" packages eliminate loss, upkeep, and the expense of picking up empty containers.

(e) Cabinets — There are no power bills — no water bills, no service charges nor breakdowns — no fire nor explosion hazard, as in mechanical refrigeration.

(f) Investment — Initial cost reduced to a minimum. The DryIce box is inexpensive. Depreciation no greater than any other store fixture. Installation as simple as placing a desk. Can be set anywhere.

10. How is it being used at the present?— For the refrigeration of perishables in transit. For instance, ice cream is being successfully packed with DryIce to keep firm for any period from 2 hours to 6 days, depending on the type of container and the amount of ice used.

11. What kind of container is used for delivering ice cream packed with DryIce?

(a) Corrugated cartons of approved types are recommended. The use of the carton eliminates the necessity of ice, salt and tub.

(b) Other containers; shipping jackets, bags, and insulated shipping boxes.

12. How is DryIce applied to these packages?

Pints — Your regular carton is placed inside an approved corrugated container. One-half pound of DryIce in a paper bag is placed on top inside box and the package sealed securely with gummed tape. This will hold the cream firm for 6 to 8 hours.

Quarts — Follow the same procedure except 3/4 of a pound of DryIce is required to keep cream firm for 6 to 8 hours.

4 Quarts — Follow the same procedure except 2 pounds of DryIce is required to keep cream firm for 6 to 8 hours. If cream is to be kept for 12 hours place 1 pound of DryIce on bottom of carton in addition to the 2 pounds on top.

8 Quarts — Place 1 1/2pounds of DryIce in bottom of corrugated carton, the box of cream on top of this, and put 2 1/2 pounds of DryIce in a bag on top of cream. Carefully seal the carton. This will hold contents for 12 hours.

3 and 5 Gallon bulk shipments — We have developed a "one-time" or "throw-away" ice cream can for these shipments, which when used in conjunction with DryIce and corrugated cartons of approved type, eliminates the expense and annoyance of handling tubs and cans which must be collected.
In packing 3 gallon shipmen, place 2 3/4 pounds of DryIce on top and 1 3/4 pounds of DryIce on bottom.
In packing 5 gallon shipments, place 3 pounds of DryIce on bottom and 4 pounds of DryIce on top. Wrap ice in 3 thicknesses of ordinary wrapping paper, can and ice bag.

Jackets or Bags — 3 to 4 pounds of DryIce placed in paper bag and put on top of ice cream 5-gallon can, will insure firm ice cream for about 18 hours.
Shipping Boxes — Ice cream may be kept for days in insulated shipping boxes. New York ice cream manufacturers are shipping their products anywhere East of the Mississippi by rail and regularly to Cuba and similar points by steamer.
13. Can DryIce be used for ice cream dispensing cabinets? — Most certainly! DryIce ice cream cabinets eliminate all plumbing connections, drains, etc. There are no repair bills, no machinery, no moisture to cause corrosion. This is the cleanest, lightest, and smallest ice cream box ever designed. The operating expense on these cabinets compares favorably with that of methods now in use.
14. What is the DryIce counter box? — A clean, light, dry box that takes up a minimum of counter space and can be attractively decorated for advertising purposes. For the first time in history of the ice cream industry it is possible to display boxes of ice cream on the dealer's counter in full view of his customers.
15. What is the best way to cut DryIce to desired sizes? — The most convenient method of cutting is with a power band saw. (sic. still used today) However, in many cases where the amount of ice cream packing would not warrant the installation of the power saw, a rough toothed hand saw is used.
To make small blocks of DryIce place a sharp blow with hammer. (sic. using goggles) Since the weight of DryIce is uniform (.038 lbs. per cubic inch) the operator very soon learns to estimate the proper amount of ice for the desired result. The more it is broken up the greater the evaporation.
For your information:

7x7x 3/4	**weighs**	**1 1/2 pounds approximately**
7x7x 1	**weighs**	**2 pounds approximately**
7x7x 1 3/4	**weighs**	**2 1/2 pounds approximately**
7x7x 1 1/4	**weighs**	**3 pounds approximately**

16. Who is using DryIce now? — Space does not permit listing all of our customers. A few, however, are:
Abbotts Alderney Dairies, Inc.
Breyers Ice Cream Company
Burdan Bros.
Consolidated Dairy Products, Inc.
Crane Ice Cream Co.
Colonial Ice Cream Co.
Hydrox Corp.
Horton Ice Cream Co.
Huylers
New York Eskimo Pie Corp.
Maresi Mazzetti Corp.
Reid Ice Cream Co.
Louis Sherry, Inc.
John Wanamaker, etc.

17. How are caterers using DryIce? — For home delivery of ice cream and fancy forms. To deliver fancy forms, place the form in a carton, which with DryIce on top is placed in a corrugated shipping box.
The amount of DryIce used for this purpose varies from 2 to 5 pounds depending on the time which will elapse between putting up the package and unpacking.
18. What uses other than those described above?
Refrigerating Union News train baskets and boxes.
Serving ice cream in ball parks — outdoor gatherings —and factories.
Ice cream trucks.
Meat and fish shipments.
Meat and fish trucks.
Carload shipments of perishables.
Butter boxes.
Milk shipments.
Low temperature laboratory tests.
The potential uses of DryIce are too numerous to mention. Our laboratories are constantly working out new applications for this wonderful refrigerant.
19. Is DryIce practical for household refrigeration? — One of the outstanding possibilities is the domestic refrigerator, upon which we have done much work. We are not yet ready to put the DryIce household refrigerator on the market. The construction

of the present household refrigerator makes it impractical and uneconomical as a container for DryIce.

The DryIce Corporation controls basic patents covering methods of refrigeration with DryIce (solid carbon dioxide) as well as patents issued and applied for on commercial methods of manufacturing of DryIce. The methods and packages as described in this booklet are covered by specific patents issued and pending in addition to the major patents mentioned above.

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