

Purging and Blanketing with Dry Ice

Dry Ice Pellets/Rice Pellets

Keeping the wine must at acceptable temperatures during crush is not an easy task if you do not have the proper supplies. We recommend food grade Dry Ice Pellets that are easy to add to the crusher to maintain the low temperatures in either pellet or rice form.

Why should I use Dry Ice Pellets?

- Achieve peak refrigeration, dry ice pellets are - 109°F.
- No capital expense, purchase only as much as you need
- Easy to measure, distribute with an aluminum scoop
- Easy to use, pellets do not stick together like wet ice
- No residue, dry ice pellets sublime to the pure gaseous state of carbon dioxide

How do I calculate the amount of dry ice pellets needed to cool the must?

- Determine the necessary temperature of the must
- Use 7.3 lbs. of dry ice pellets to lower one ton of grapes 1°F

Are there other uses for Dry Ice Pellets?

- Cooling the grapes at the vineyard by layering it in the gondolas
- Purging the storage tanks or tankers
- Dry ice blasting for cleaning your barrels, caves etc.

Dry Ice Pellets are nothing more than pure carbon dioxide (CO₂) gas in a solid form. By using pellets you can easily and accurately measure the amount of CO₂ you are adding. Determining the amount of dry ice you will need to purge your tank is simple when you know the gallons per inch capacity of the wine tank.

Using a seven (7) ft. diameter wine tank, let's determine how much dry ice we will need:

- a 7 ft. diameter tank has a capacity of 23.99 gallons per inch
- 1 c.f. gaseous equivalent volume of CO₂ = 7.5 gallons displacement
- 8.7 c.f. of CO₂ = 1 lb.
- 1 lb. of CO₂ pellets will purge 65.25 gals.

If you want to purge 50 inches of the tank:

- (gals. per inch) x 50 = 1199.5 gals. to purge
- 1199.5 divided by 65.25 (no. of gals., 1 lb. Dry Ice will purge) = 18.38 lbs. of dry ice needed to purge this tank

You can use a five (5) gallon bucket to dispense the ice into the tank. The bucket filled halfway with Dry Ice Pellets equals 20 lbs.

To formulate the amount of dry ice your tank will need, multiply the number of inches you want to purge by the gallons per inch and divide the result by 65.5. This will give you the number of pounds of dry ice pellets needed to purge the tank.