

Dry Ice Applications



Available sizes of Dry Ice



- 3 mm pellets: cleaning, cooling short term (standard)
- 10 mm sticks: cooling mid term
- 16 mm sticks: cooling long term

Advantages of Dry Ice (1/2)

* **Environmentally friendly:**

- vanishes without any trace
- no production of CO₂ for making dry ice



* **Reliable:**

- maintains cooling capacity
- uses no electricity
- can be used everywhere

* **Process security:**

- constant temperature of -79°C

Advantages of Dry Ice (2/2)

* Flexible:

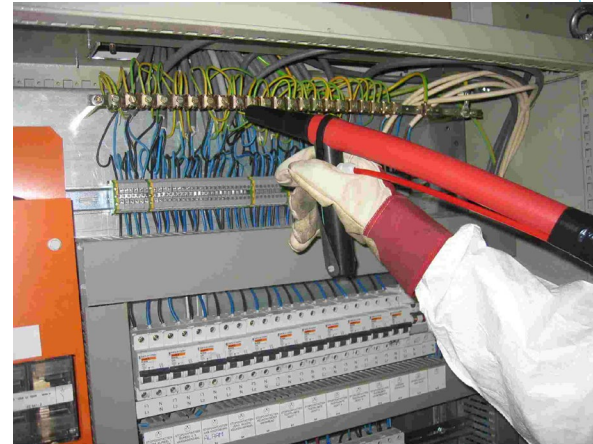
- useable whenever you need it

* Cost effective:

- no maintenance costs
- no investment costs
- no fuel nor power consumption in use

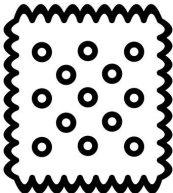
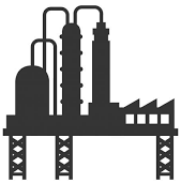
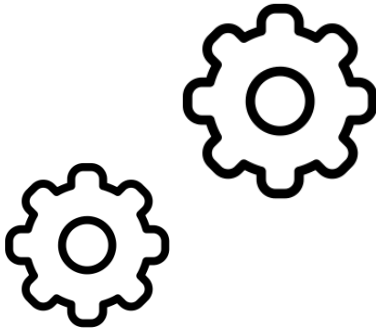
Applications of Dry Ice

1. Dry ice Cleaning



3 mm pellets
+/- 60 kg/h

Applicable in all
kind of industries



2. Dry ice deflashing/deburring

Dry ice blasting allows you to remove flashes without generating additional waste. We have the best experience with deflashing thermoplastic parts, but it works also for silicone parts and metal parts.



Before



After

3. Cooling for catering, transport

- 3, 10 & 16 mm pellets/sticks: easy to fill boxes
- CO₂ environment eliminates bacteria & increases shelf life
- transport of:
 - frozen vegetables, ice cream, ...
 - fresh fish, fresh meat, ...
 - chocolate, ...
- dry ice discs widely used in aircraft catering



4. Medical transport

- transport of organs & blood
- transport of serum & vaccines (COVID-19 vaccine)
- transport of biomedical samples
- ...

5. Fire extinguisher

- easy dosing on top of fire
- extinguishes fire in storage tanks where water cannot be used
- extinguishes fire of electronic products
- ...



6. Separation & clamping parts

- example of separation plastic and glass: recovery of flat screens
- to fit together bearings, collars, shafts and other components that require an interference fit. The component to be “fitted in” is packed in dry ice causing it to contract. While still cold, it is assembled with its mating part and allowed to return to ambient temperature. The ‘fitted’ component returns to its original size creating the tight interference fit required.

7. Process cooling

- mixing dry ice pellets with meat to reduce energy in mixing
- cooling cadavers (bird flue)
- emergency cooling when cooling cells brake down





8. Addition of CO₂

- production of special gingerbread (“peperkoek”)
pellets easy in use and easy in dosing

9. Extraction of flammable gases

- in petrochemical tanks before inspection
- in fuel tanks for maintenance works

10. Killing rats and other animal pests

Since CO₂ gas is heavier than air, small animals do not survive the gas from sublimated pellets.

11. Carbonic maceration

Technique employed in the making of Beaujolais wines whereby CO₂ generated during fermentation is used to break down the grape-bunches and release their juice.



12. Freeze branding



Place the branding iron into this super-cooled alcohol mixture. Once sufficiently cooled, press it against the animal's hide. This applies the permanent brand mark without damaging the hide.

13. Cold Grinding

Cold grinding can produce uniform size particles of any material whether rubber, plastic, pharmaceuticals, chemicals, or herbs and spices. Grinding processes can produce extremely high temperatures but the dry ice helps regulate heat and allows higher material output.

14. Freeze Drying

Common practice used in the agrochemical, food and pharmaceutical sectors for preserving and extending shelf life of organic products, food and high-value pharmaceuticals. It happens at extremely low temperatures during sublimation. Freeze dried products can be stored for months or years at room temperature without any deterioration or spoilage.

15. Piping repairs

Dry ice can be used to freeze pipes, when there is no means of accessing the main shut-off valve to stop the flow of water. Water inside the pipe can be frozen so the pipe can be cut or repaired without the continual flow of water to hamper the work.

16. Asphalt Cooling

Using dry ice allows for the delicate asphalt to stay at required temperatures during transport from the manufacturing plant to job site. Even more beneficial, using dry ice allows contractors to speed up the cooling process and core the paving sooner.



17. Lures Mosquitos

When CO₂ is detected by a mosquito, it registers the location of its next meal of blood. As dry ice sublimates to CO₂ gas, it is equivalent to over 1.000 people breathing at the same time in a close proximity.

18. Creating smoke effects

Dry ice is also used to create a smoke effect. When dry ice (dosed) is immersed in warm water, the dry ice (= frozen CO₂) will quickly be converted into gas. The result is a beautiful spectacle! Ideal for Halloween to scare, for theatre companies, for weddings or other festivities!



And more applications!

- Removal of dents of cars
- Cloud seeding (cloud making)
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Packaging of Dry Ice (1/2)

Small quantities of dry ice of 3, 10 or 16 mm:

- 5 kg
- 10 kg
- 12,5 kg
- 24 kg
- 24 kg x 2, x 3, ...



Packed in polystyrene box

Delivered in whole Belgium < 24h

Packaging of Dry Ice (2/2)

Large quantities of 3, 10 or 16 mm:

- 55 kg
- 125 kg
- 300 kg
- 440 kg



Packed in well insulated dry ice containers

Express Transport (e.g. COVID-19 vaccine transport)