

Personal Protective Equipment

## Detailing Dry Ice Gloves and Essential PPE

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2020 has been tough, and it has been even harder on those who have become sick or lost their job due to COVID-19. The good news is that a vaccine is on the way in 2021.

When the virus began significantly infecting people in March and April, there was an immediate run on all personal protective equipment (PPE). Those who were not aware of PPE's importance quickly realized that protection is an integral part of most all U.S industries, especially health care.

In early December, the PPE industry is still doing all it can to meet PPE's new demand requirements, with there being still some gaps of matching supply with demand. It is important to note that there are sweeping improvements from where the industry was in early 2020. One improvement MCR Safety implemented early on was carrying a wide range of **face protection**, as it wasn't a core product category for them before the pandemic began. However, MCR's motto is **We Protect People**, and that's not possible without stocking the protective gear people are needing. Simply put, everyone involved in the PPE industry has come a long way.

Unfortunately, though, when it comes to PPE, we're not out of the woods yet. The COVID vaccine must be stored at **minus 112** degrees, which can only occur with the assistance of dry ice. That temperature is so cold; metal becomes stiff. Imagine what happens to someone's hands in that environment?

For those handling dry ice, proper PPE, in the form of insulated work gloves is a must, along with **safety glasses, face shields, and safety goggles**. This article will highlight dry ice and the protection users require when handling this hazardous substance.

### What is dry ice?



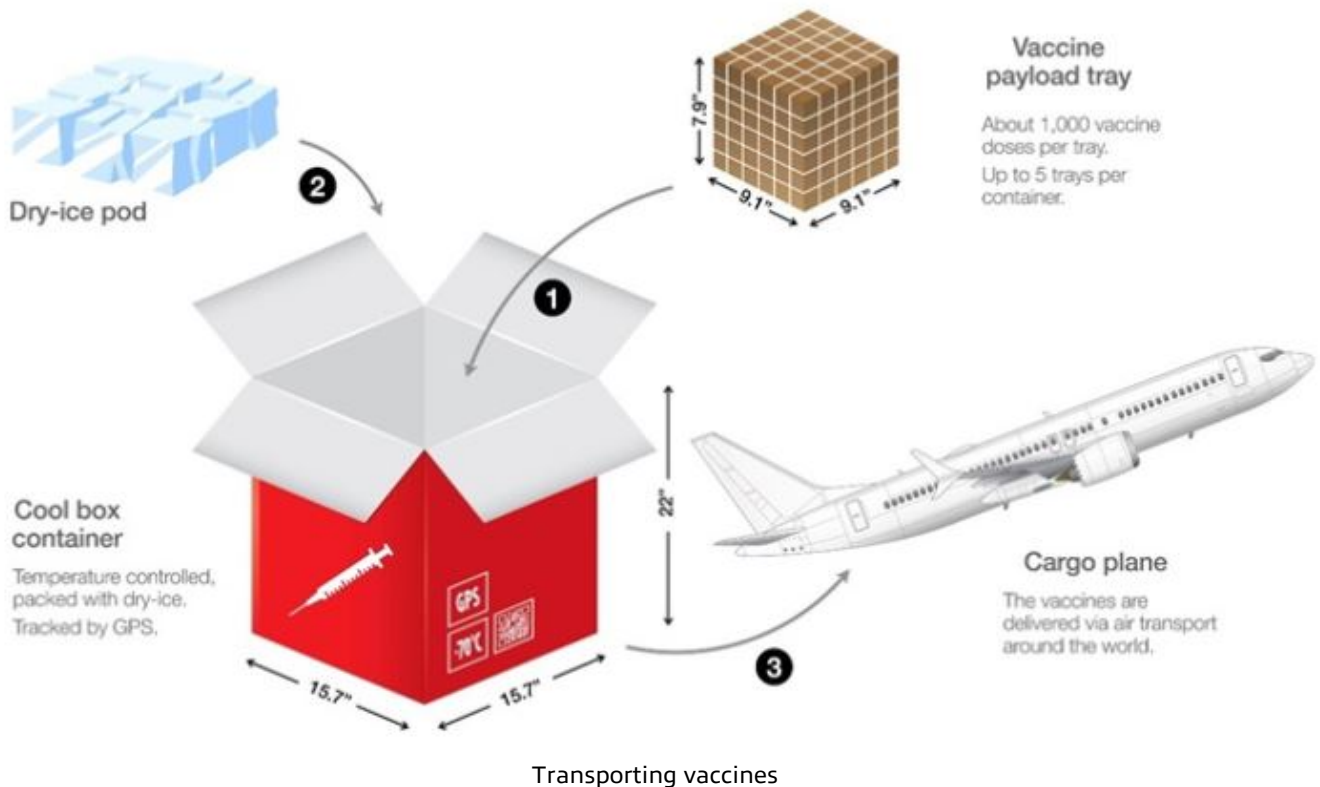
Dry ice is a solid ***form of carbon dioxide***, which sublimates at  $-78.5\text{ }^{\circ}\text{C}$  ( $-109.3\text{ }^{\circ}\text{F}$ ). Its ***advantage*** is that it has three times the cooling energy of water, making it the ideal candidate for shipping goods across long distances. It is used in a ***wide range*** of industries:

- **Commercial Shippers** – transporting food
- **Medical Industry** – shipping biological samples and vaccines
- **Restaurants** – storing food
- **Cleaning Solution** – dry blasting

It has been an essential material across many industries. However, it now becomes one of humanity's most crucial ingredients in safely getting vaccines out to the public.

Next time you exhale, remember that it is carbon dioxide gas you're flushing out. And, dry ice is the frozen solid state of carbon dioxide.

## **Covid-19 Vaccine Distribution**



As mentioned earlier, utilizing **dry ice** is how COVID-19 vaccines are being distributed across the world. Governments are rushing to get initial vaccine deliveries out as soon as possible. In fact, UPS is investing in mobile freezer units that will produce dry ice for transport. The above image gives you an idea of how the vaccine will be sent out.

It's crucial for those handling dry ice to pay close attention to the dry ice manufacturer's SDS sheets. The excellent news is MCR Safety stocks much of the safety gear workers need.

## What happens if you touch dry ice without gloves?

Touching dry ice without gloves is dangerous, as it is an extremely cold material. A person can quickly be burned, like frostbite, when feeling it without proper protection. The next logical question resides around what gloves are safe to wear.

The best place to find the answer is by visiting a dry ice manufacturer's MSDS sheet. In the next section, MCR provides some examples of leading manufacturer MSDS sheets.

Before choosing a glove with a polymer, one should always carefully evaluate the work application's chemical hazard. Since dry ice is technically carbon dioxide, it makes sense to review the **Material Safety Data Sheets** (MSDS) and look for recommended guidance.

You can **perform a free search** on any chemical, product name, manufacturer, CAS#, or product code in the previous link shown. So, in this case, you can type in dry ice, and you'll see numerous MSDS sheets pulled up. Be sure you evaluate the MSDS sheet for the dry manufacturer used.

Here are three of the top dry ice manufacturer MSDS PDFs:

- **Continental Carbonic** – dry ice **SDS sheet**
- **Penguin Dry Ice** – carbon dioxide **SDS sheet**
- **Cee Kay** – solid dry ice **SDS sheet**

Florida International University also has an ***excellent article*** on safety around dry ice. As they highlight, the main two hazards from dry ice are burns and asphyxiation.

Whenever hazards can't be removed with engineering and administrative controls, personal protective equipment (PPE) becomes the focal point of deterring injuries.

*Continue reading this **blog** to see the PPE recommended in the above SDS sheets to combat safety hazards.*

*Previously Featured on MCR Safety's blog.*

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