SAFE TRANSPORT OF DRY ICE

SAFETY HAZARDS

Carbon dioxide gas can build up in vehicles

- Transporting Dry Ice in passenger cars is not recommended.
- Dry Ice will generate carbon dioxide gas and in an enclosed vehicle can lead to a dangerous atmosphere causing intoxication and death by asphyxiation.
- Higher temperatures in the vehicle and poor ventilation will increase the speed of carbon dioxide gas build up.

Dry Ice can move in vehicles

- Containers or packages of dry ice can cause injury and damage if they can move when the vehicle is cornering or braking.
- Any unrestrained dry ice container or package is a hazard.

Dry Ice can be heavy and difficult to handle

- Containers and packages of Dry Ice can weigh over 25kg and can weigh up to 200kg.
- During loading or unloading, injuries can occur from falling containers and packages, and from incorrect manual handling.
- Additional hazards from overloading the vehicle or unbalanced loading are poor vehicle braking and handling.

Dry Ice cold & pressure hazards

- Dry ice is very cold -78 °C, if it touches bare skin or eyes it will cause cold burns.
- Exposure of plastics and other hard materials to Dry Ice may lead to them becoming brittle and shattering.
- If Dry Ice is put in a sealed container, pressure will build up to dangerous levels.

Product Hazards

- Labels show the hazards and weight from packages containing Dry Ice, and are the only way to positively identify the contents of a container.

TRANSPORT REGULATIONS

- Dry Ice is exempt from the ADR transport regulations except where dry ice is used for cooling or conditioning purposes. In this case, the requirements of paragraph 5.5.3 of ADR shall apply.
- Particular attention should be made to the type of transport vehicle used, and the requirements for segregation of the load space from the driver, plus any warning signage which may be required.
- If carrying Dry Ice on passenger transport check how the relevant Transport Regulations apply to you.

For Product Specific information on transporting gases, see EIGA publications:

- SI 24 - Carbon Dioxide
- SL 01 - Dangers of Asphyxiation
- SL 08 - Safe Transport of Gases

SAFE TRANSPORT OF DRY ICE

HOW TO STAY SAFE

Prevent gas build-up

- Minimise the time Dry Ice is in the vehicle. A dangerous level of carbon dioxide can build up in less than 20 minutes.
- Minimise the quantity of Dry Ice carried in non dedicated vehicles.
- Carrying Dry Ice in passenger cars is not recommended.
- Unload the vehicle as soon as possible – never store Dry Ice in an unventilated vehicle.
- Ensure sufficient ventilation of the vehicle over the whole time the Dry Ice load is inside

Ensure all containers are well secured

- Ensure containers and packages are evenly loaded and secured to prevent movement during cornering, acceleration and emergency braking.
- Ensure vehicle is not overloaded.

Loading and unloading

- For heavy containers use mechanical aids or get help to load and unload the vehicle.
- Wear safety shoes.
- Read the product Safety Data Sheet and labels to understand the hazards of the substance you are handling.

Avoid other Dry Ice hazards

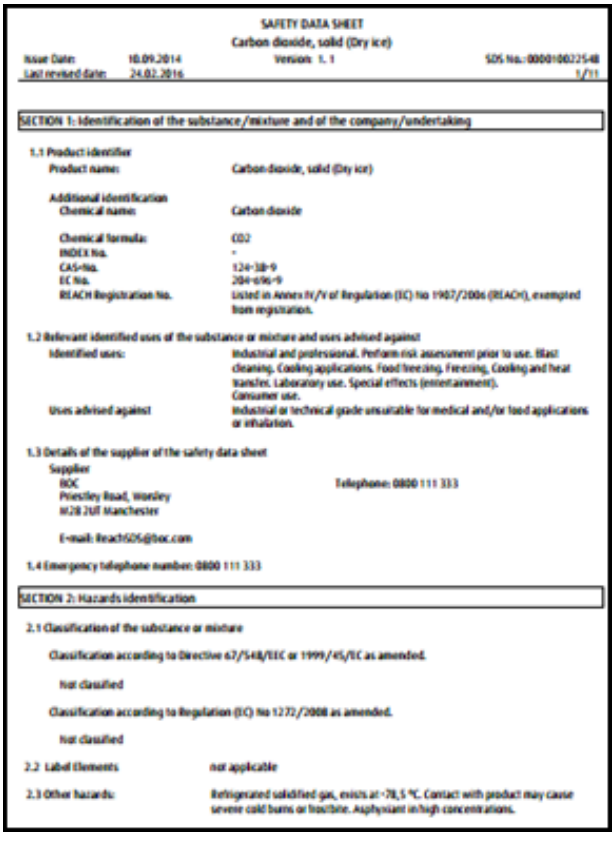
- Always wear gloves that provide thermal protection when handling Dry Ice.
- Handle Dry Ice for the minimum amount of time possible.
- Individuals with poor blood circulation should not handle Dry Ice.
- Never put Dry Ice in a sealed container, to avoid pressure build up.

EMERGENCY ACTIONS

If you feel unwell or suspect a build up of carbon dioxide:

- Stop the vehicle as soon as possible and get out.
- Ventilate the vehicle – open all the doors.
- If you suspect a gas build up in a parked vehicle, do not get in it.

Call your Dry Ice supplier for further advice and a copy of their Safety Data Sheet



SAFETY DATA SHEET

Carbon dioxide, solid (Dry ice)

Issue Date: 10.09.2014 Version: 1.1 SDS No.: 000010022548

Last revised date: 24.02.2016 1/11

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name: Carbon dioxide, solid (Dry ice)

Additional identification

Chemical name: Carbon dioxide

Chemical formula: CO_2

INDEX No. -

CAS-No. 124-38-9

EC No. 204-696-9

REACH Registration No. Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted from registration.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Industrial and professional. Perform risk assessment prior to use. Blast cleaning. Cooling applications. Food freezing. Freezing. Cooling and heat transfer. Laboratory use. Special effects (entertainment). Consumer use.

Uses advised against Industrial or technical grade unsuitable for medical and/or food applications or inhalation.

1.3 Details of the supplier of the safety data sheet

Supplier

BOC Telephone: 0800 111 333

Priestley Road, Worsley

M28 2UT Manchester

E-mail: ReachSDS@boc.com

1.4 Emergency telephone number: 0800 111 333

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC as amended.

Not classified

Classification according to Regulation (EC) No 1272/2008 as amended.

Not classified

2.2 Label Elements not applicable

2.3 Other hazards: Refrigerated solidified gas, exists at -78,5 °C. Contact with product may cause severe cold burns or frostbite. Asphyxiant in high concentrations.