SAFE TRANSPORT OF GASES

SAFETY HAZARDS

Gas can leak in the vehicle

- Leaks of gas in an enclosed vehicle are dangerous and can cause fire, explosion, poisoning or asphyxiation.
- Leaks can occur from cylinder valves leaking, or being knocked open, or from pressure relief devices.

Cryogenic liquids have extra hazards

- Cryogenic liquids (e.g. liquid oxygen or liquid nitrogen) leaking from relief valves or toppled containers quickly evaporate creating a lot of gas.
- Spills of cryogenic liquids onto metal, such as other cylinders, can make it brittle and shatter.

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Cylinders can be heavy and difficult to handle

- Most full cylinders of gas weigh over 25kg and can weigh over 100kg.
- During loading or unloading, injuries can occur from falling cylinders and from incorrect manual handling.
- Additional hazards from overloading the vehicle or unbalanced loading are poor handling and reduced vehicle braking.

Cylinders can move in the vehicle

- Cylinders can cause injury and damage if they can move while the vehicle is cornering or braking.
- Any unrestrained cylinder is a hazard.

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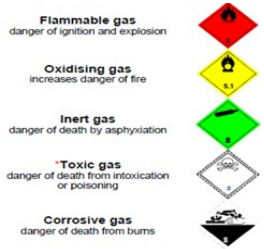
Gas Hazards

- Labels show the hazards from the gas and are the only way to positively identify the contents of a cylinder or container.



TRANSPORT REGULATIONS

- If you are transporting cylinders "at work" check how the Dangerous Goods Transport Regulations (ADR) apply to you.
- If you are transporting cylinders only for domestic use by a private individual the regulations do not apply, but you have a "duty of care" to transport gases safely.

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

- SL 1 - Dangers of Asphyxiation
- SL 4 - Safe Transport of Acetylene
- SL 9 - Safe Transport of Dry Ice
- Doc 89 - Use of Medical Oxygen in Vehicles

Documents
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HOW TO STAY SAFE

Prevent Gas Leaks

- When loading the vehicle ensure the valve is closed and there is no leak of gas.
- Do not rely on regulators or other equipment to shut off the gas – always use the cylinder valve.
- Ensure the valve protection cap or guard is in place, if the cylinder is designed to have one.
- Never carry toxic nor flammable gases in unventilated vehicles.

Provide good ventilation

- Use a well ventilated vehicle – ideally an open or flatbed truck, or a vehicle with a gas area sealed from the driver's compartment and vented to the outside.
- It is recommended not to use passenger cars and vans, but if used turn on the fan and keep windows partly open to provide good ventilation.
- Never leave cylinders in an unventilated vehicle.

Ensure all cylinders are well secured

- Ensure cylinders are evenly loaded and secured enough to prevent movement during cornering, acceleration and emergency braking.
- Ensure vehicle is not overloaded
- Cryogenic liquid containers and acetylene cylinders must be secured in an upright vertical position.

Loading and unloading

- For heavy cylinders, use mechanical aids or get help to load and unload the vehicle.
- Use safety shoes, gloves and eye protection to help prevent injury.
- Unload the vehicle as soon as possible. Never store gases in an unventilated vehicle - especially flammable gases, because even small leaks can build up to make an explosive atmosphere.
- Read the label to understand the hazards of the gases you are handling.

EMERGENCY ACTIONS FOR LEAKING GAS

For all gases:

- Stop the vehicle as soon as possible, turn off the engine and get out.
- As you leave the vehicle leave your door open, to let the gas escape.
- Keep away from the vehicle and try to keep members of the public away.
- Leave gas to safely vent to atmosphere.
- If you suspect a leak in a parked vehicle, do not get in it.

In addition, for:

Flammable gases:

- Minimise potential ignition sources and do not smoke.
- Call the emergency services – tell them your location and the number and type of cylinders involved.
- If you suspect a leak in a parked vehicle, do not try to enter the vehicle or activate remote locking.

Call your gas supplier for advice

Simple Safety Rules

- Cylinder valve closed, regulator and hoses removed
- Cylinder properly secured, prevented from moving
- Ventilate vehicle, no smoking
- Go direct to destination without stopping and unload immediately

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