How safe is oxygen?

Overview

Oxygen is classified as a Class 2.2 Oxidizing Gas by the Australian Dangerous Goods Code. While, oxygen isn't considered a health or an environmental hazard, it supports combustion.

By adhering to safety guidelines, oxygen can be effectively used to enrich air in the aeration process of wastewater treatment. This practice enhances the treatment capacity, saves energy, and reduces emissions. Currently, we utilise aeration blowers to introduce oxygen from the air into the wastewater reactors.

Oxygen supports combustion, therefore when using oxygen-enriched air, we take great care to keep system temperatures safe. This ensures any contaminants like oils and greases from equipment do not ignite.

In the water sector, oxygen is commonly used for disinfection and odour control. Our operations and maintenance staff are trained to safely handle all chemicals and gases used in water and wastewater treatment.

Safety measures

Internationally, over one hundred million tonnes of oxygen is extracted from air for industrial uses annually. As a result, there are decades of research into the safe handling of oxygen, including:

Safety, codes and standards
We'll adhere to the relevant international standards set by European Industrial Gases Association (EIGA).

These standards cover various aspects of oxygen safety including production, transport, compression, storage, usage and cleaning for oxygen service which ensure our operations meet high safety and efficiency standards and will not have any negative impacts on the local community and environment.

Exclusion zones
An exclusion zone for all open flames and combustible chemicals will be implemented around the oxygen storage and transfer system to prevent fires. Fire safety is managed by using fire walls surrounding high risk oxygen equipment such as compressors or liquid oxygen pumps.

Fire safety equipment will also be installed at the site in the unlikely event of a fire.