



Risk Insight: Fuel Shortage

Introduction

In South Africa, fuels are categorised by how quickly they catch fire. Petrol is a Class I liquid (highly flammable), while diesel can be Class II or Class III (combustible).

We require flammable liquids exceeding 45 litres to be stored in a flammable liquid store or cupboard.

- Generally, 200 litres of petrol or 400 litres of diesel can be stored without a permit.
- Once these quantities are exceeded, a certificate must be obtained from the local fire department.
- If the total storage (all tanks combined) exceeds 30,000 litres, environmental authorisation must be obtained before the tanks are installed.

Requirements if limits are exceeded

Once the minimum amounts are exceeded, the following is mandatory under SANS 10131 (above ground) and SANS 10089 (underground).

- You must obtain a certificate to hold flammable liquids from the local fire brigade. The certificate must be signed and specify the type of product being stored and the permitted volume.
- Above-ground tanks must be placed in a bunded area that is able to hold 110% of the tank's capacity. This accounts for fuel plus firewater/foam.
- Safety distances from boundaries, buildings and ignition sources must be followed (per SANS 10131), depending on the flashpoint of the flammable/combustible liquid. For example, a 2,200-litre diesel tank would require a 3-6 metre clearance, depending on the specific site layout.
- Dry powder fire extinguishers must be installed in the vicinity. In some cases, mobile foam trolleys are required (depending on product flammability and volume), and no-smoking/naked-flame signage must be posted in the area.

- If the total combined storage exceeds 30,000 litres, under the National Environmental Act, you require a basic assessment or an environmental impact assessment.
- Any area where fuel is decanted or pumped must lead to an oil/water separator to prevent environmental contamination. These points must also be correctly earthed, bonded and grounded to prevent static electricity, which can cause a spark that ignites the fuel vapours.

When the risk materially changes

There are three points of fuel storage where the risk materially changes. The first occurs when the volume exceeds 1,000 litres. Once the move is made from small drums to fixed tanks, fixed piping and pumps are introduced, and the risk of a pool fire becomes a primary concern for the premises' fire rating. The second is when the volume exceeds 30,000 litres: a leak at this scale is no longer just a fire hazard; it is an environmental liability (groundwater contamination). The third is when a quantitative risk assessment shows that a catastrophic failure could impact people outside the property boundary, the site is classified as a major hazard installation. This requires special emergency planning and a public notification process.

Note: quantities exceeding 5,000 litres of fuel require more advanced firefighting installations (e.g., foam pourers, drench systems).

Conclusion

Storing fuel correctly keeps the workplace safe. Ensuring that the insured has a valid flammable liquid storage certificate for volumes exceeding the permitted limits, and that the mandatory requirements are in place, can help minimise the risk of rapid-fire spread.

Should you have any questions or need more information, please contact your usual Bryte representative.