

Working safely with FCEOW substances

Introduction

This document contains additional work instructions for working safely with (highly) flammable, combustible, explosive, oxidising and water-reactive (FCEOW) substances within laboratories. If you have any questions or ambiguities regarding these work instructions or the substances you intend to use, you can always consult the Armico or contact HSB.

Flammable, combustible, explosive, are substances that can cause fire or explosion through energy transfer (temperature, mechanical impact, reaction with other substances, etc.). The main purpose of these instructions is to reduce this energy transfer as much as possible and to arrange working conditions so as to reduce the risk of a hazardous situation as much as possible.

Working with such substances requires wearing safety glasses. In addition, one should always take into account the additional risks of a substance (irritant, corrosive) and of course wear the appropriate protective equipment.

Besides working safely with these substances, storage is also important. The PGS15 guideline applies here (see Storage of chemicals according to PGS 15). Note that if substances are to be stored at 4°C/-20°C, the relevant storage location (refrigerator/freezer) must be explosion-proof.

Safe working method

- Work in a validated fume cupboard (see work instruction Working safely in a fume cupboard).
- Keep containers and bottles closed as much as possible to prevent evaporation.
- Do not use an open flame to heat but an explosion-proof electrical supply.
- Avoid discharge of static electricity as much as possible
- Ensure proper earthing of conductive objects and fixtures,
- Use anti-static clothing (lab coat) as much as possible
- Take care with plastic shoe soles,
- Take care when discharged by liquid or air flow.
- Store as few substances as possible as work supplies (lab table)

Afterwards

- Store chemicals according to the guideline (see Storage according to PGS15)
- Dispose of opened bottles of Ether after 6 months, unopened after 1 year (see waste regulation).

List of abbreviations

FCEOW	(highly) flammable, combustible, explosive, oxidising and water-reactive substances
FHML	Faculty of Health, Medicine and Life Sciences
HSB	Health Safety and Buildings
PGS15	Publicatie Gevaarlijke Stoffen 15
UM	Maastricht University