

Introduction

Hazardous substances must be stored in accordance with the PGS 15 when they exceed the exemption limits. Rules also apply to explosion safety (ATEX). This means special storage facilities with, for example, a particular level of fire resistance and/or Ex. safety. Hazardous substances are sometimes stored in normal refrigerators and freezers, however. These do not comply with the PGS 15 or ATEX.

This guideline indicates how we should deal with these in practice. An important starting point is to perform an RI&E (hazard identification and risk assessment) in advance with respect to the means of storage. The following procedure is part of the RI&E.

It is established that the provisions of the PGS guideline establish the limits. We therefore take the PGS guideline as the basis.

Procedure

If hazardous substances (substances with a WMS/GHS sticker) must be stored in one room, the PGS 15 applies within the UT.

Step 1:

It is necessary for the substance to be stored in a refrigerator/freezer?

If so, proceed to step 2.

If this is not necessary, then the substance should be stored in the designated PGS 15 chemicals cabinet.

Step 2:

Determine whether the substance that has to be stored in a refrigerator/freezer is a combustible material (class 3, see appendix 1). If so, locate the packaging group (in the safety data sheet/MSDS book).

The total of packaging group 1 outside a PGS storage facility should not be more than 1 kg/l (ether, for example).

The total of packaging group 2 outside a PGS storage facility should not be more than 25 kg/l (acetone, for example).

The normal refrigerator/freezer is not a PGS storage facility. A list of the content and quantity of the previously mentioned packaging group must be attached to the outside of the refrigerator/freezer.

Step 3:

Determine whether the substance that must be stored in a refrigerator/freezer can result in spontaneous chemical reactions in the case of a cooling failure. If so, then additional measures must be taken steps to critically register the failure of the cooling and take immediate action. Inclusion in the building management system is essential.

It must be established, in the context of the hazard identification and risk assessment, what measures have been taken and how they are controlled. Consult with the local VGMc in this respect.

Appendix 1 - Hazard classes

ADR class	Description	Examples
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1	Explosive substances and objects	Black gunpowder, explosives, detonators, fireworks
2	Gases	Propane, oxygen, nitrogen, argon, carbon dioxide, acetylene, aerosols (aerosols)
\$	Flammable liquids	Certain solvents, inks, resin solutions, petroleum products
4.1	Flammable solids, self-reactive solid substances and solid explosive substances in non-explosive situation	Friction matches, sulphur, metal powders
4.2	Substances liable to spontaneous combustion	Phosphorus (white or yellow), diethyl zinc
4.3	Substances which develop flammable gases when in contact with water	Magnesium powder, sodium, calcium carbide
5.1	Oxidising substances	Potassium permanganate, sodium chlorate
5.2	Organic peroxides	Dicumyl peroxide, di-propionyl peroxide
6.1	Toxic substances	Chloroform, arsenic, potassium cyanide
6.2	Infectious substances (infectious substances)	Bacteria, viruses, parasites, fungi, hospital waste
7	Radioactive	Uranium-238, cobalt-60
8	Corrosive substances	Sodium hydroxide, sulphuric acid, hydrochloric acid
9	Miscellaneous hazardous substances and objects	Polychlorinated phenols, lithium batteries, aquatic toxic substances, genetically modified organisms