

Teacher's guide: Hazardous Substances

Theme

- Hazardous Substances
- Recycling

Recommended Duration in Hours

- 1 hour



Introduction

The material presents specific risks associated with hazardous substances in demolition work. The apprentice is informed about general principles that should be followed for safety before commencing demolition work. The underlying reasons for the placement and function of hazardous substances in construction are described with the aim of providing the apprentice with a better ability to recognize work scenarios containing these substances in the future. The consequences of working unprotected with hazardous substances are presented in the material.

Linked to the information in the material is a case task where the apprentice must investigate whether there have been risks of hazardous substances in the recent renovation or demolition task they have observed others perform or have done themselves.

The material aims to provide the apprentice with a basic understanding of the specific constructions that may contain hazardous substances and the impact these substances have on the working environment.

By examining some of the demolition tasks the apprentice may have already performed, this can give them an understanding of the risks associated with this type of work. In some cases, the apprentice may find that there is a lack of safety measures in the company, providing an opportunity to share their knowledge with the master and thus improve the procedures in the company and contribute to a cultural change.

A good understanding of what hazardous substances are, where they are located, and how they are handled is a core element in recycling, which cannot be achieved if the working environment is not in order.

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Specific Focus Areas:

- Brick chimneys
- Surface treatments on brick constructions
- Glazed brick
- Asbestos in tile adhesive

Preparation

- The teacher should prepare a case for the apprentice who does not have any experience
- The teacher should be familiar with national guidelines for handling hazardous waste

Learning Objectives

- The apprentice can be aware of whether the task may involve hazardous substances.
- The apprentice can explain basic risks related to the presence of hazardous substances in specific constructions.
- The apprentice can contribute to identifying if the task involves the risk of handling hazardous substances.
- The apprentice can determine whether experts should be called in to take environmental samples before the demolition of specific constructions is carried out.

Content and Purpose

The written material provides the apprentice with knowledge of hazardous substances in brick constructions, as well as the consequences of working with these substances without proper planning and protection.

Suggested Lesson Plan

Teacher's Presentation (10 min.)

- Specific introduction to hazardous substances.
- Presentation of the written material on hazardous substances in brick constructions.
- Presentation of the case task about the apprentices' own experiences with demolitions - the teacher asks the apprentices to provide examples in the plenum.
- Group formation, where the teacher ensures that all groups have at least two cases to work with.
- Group Work (30 min.)
- Groups go through the written material.
- Groups decide which cases they want to work on. 2-3 cases.
- Groups go through each case and make a list of potential risks and secure ways to handle these risks.



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Plenum Summary (20 min.)

- Each group presents the most relevant case with risks and handling - the teacher writes them on the board.
- Based on the groups' experiences, the teacher summarizes hazardous substances by filling any gaps in the apprentices' knowledge. The teacher emphasizes the importance of proper handling and the apprentices' rights regarding safety in the workplace.

Differentiation

Differentiation can be done based on group size and the number of cases groups need to work on. This should largely depend on the number of relevant experienced cases in the class. Additionally, the groups' presentation of cases can also be turned into an oral presentation if further emphasis on the topic is desired.

Feedback and Evaluation

The teacher provides feedback both during and after the apprentice works with the teaching material.

