SSHE Newsletter 2/2013

1 Keeping escape routes clear

By law, all buildings must have escape routes – emergency exits, corridors, stairwells etc. Their correct use places high demands on the users of a building: "People must be able to leave work stations, rooms, buildings and premises quickly in the event of danger. Circulation routes that serve as escape routes in such incidents must be signposted and always kept clear." (Verordnung über die Unfallverhütung – Accident Prevention Ordinance –, Art. 20[1]). The due diligence that every user must perform is defined in the Brandschutznorm (Fire Safety Standards) of the Vereinigung der kantonalen Feuerversicherungen VKF (Association of cantonal fire insurances), art. 17[2], 50:

- "Owners and users of buildings and facilities shall ensure that the safety of people, animals and property is guaranteed."
- "Stairwells, corridors, exits and circulation routes must not be used for any other purpose."

Obstructed escape corridor

Unfortunately, escape routes (marked by green pictograms) are often obstructed – sometimes with flammable material – or misused for temporary storage. This increases the risk in an area that is crucial to personal safety. For the responsible user, this begs two questions: 1) Which areas in my building are escape routes and indicated as such, and 2) What am I allowed to place in escape routes? – 1) From the autumn 2013, "escape route plans" will be provided on the intranet. 2) All objects are banned in stairwells. In escape corridors, placing and storing goods, furniture, electrical appliances or liquids is prohibited, yet, non-flammable and lockable cupboards may be placed there. In any case, a minimum escape route width of 1.2 metres is always to be observed.

Please keep escape routes clear. Thus, you help keep ETH Zurich safe for all its members. You can also contribute to greater safety at ETH by visiting a fire prevention course (25.9.–23.10.2013, registration starting on 16.9.).

2 Correct disposal of hazardous waste

Every year, ETH produces approximately 100 tons of hazardous waste (liquid or solid chemicals and other hazardous materials), which have to be disposed of separately from other refuse. The users can do their bit here: Hazardous waste is already to be collected, stored and labelled correctly in the lab or workshop and should be handed in as regularly as possible, sealed tightly

IMPRINT
Publisher ETH Zurich, Safety, Security, Health and the Environment (SSHE)
Tel.: +41 (0)44 632 30 30, Katherine Timmel / Reto Suter

ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

and labelled (preferably in plastic containers) – don't accumulate large amounts at the workplace! Free collection containers are available from the SSHE disposal points, where SSHE staff members will also accept hazardous waste free of charge in order to take care of its environmentally friendly disposal. For some hazardous waste, specific regulations apply:

- Solvent waste is always to be separated in the lab (chlorinated and unchlorinated) as this is no longer possible at a later stage
- Oils and emulsions are to be brought to the disposal points separately
- Sharp objects (sharps) are to be collected and disposed of in special yellow boxes. Sharps must not be infectious and are to be inactivated if need be
- Photochemicals are to be handed in separated into fixers and developers
- Upwards of five litres, it is imperative that acidic waste be collected in containers with pressure relief valves – never use glass bottles!

All hazardous waste belongs in the SSHE disposal points! **Opening times** and **contacts**:
(All disposal points also open by appointment.)

HCI D276	Mon to Fri, 2–4 p.m. (semester)	
	Tue *and* Thu, 2–4 p.m. (semester breaks)	(contact: Guido Krucker, tel.: 3 49 83)
HPL D15.2	First Tue of the month, 9–11 a.m.	(ditto)
CNB E146	Wednesdays, 9–11 a.m.	(contact: Martin Frei, tel.: 3 76 89)

3 Working safely with hydrofluoric acid

Hydrofluoric acid emergency kit

In many labs and cleanrooms at ETH Zurich, hydrofluoric acid is used to treat glass or semi-conductors, for instance. With regard to its properties, hydrofluoric acid differs greatly from other mineral acids and the same goes for its hazard potential. Hydrofluoric acid is caustic, corrosive and highly toxic. As the skin resorbs it extremely well, damage does not only occur superficially. Contact can lead to irreversible damage. Moreover, the calcium and magnesium metabolism is impaired, which can even have fatal consequences depending on the amount and concentration. Often chemical burn and poisoning symptoms only appear later, which makes this chemical particularly malicious.

Thus, when handling hydrofluoric acid, special safety measures are necessary, including the use of suitable personal protective equipment (PPE), prior training for staff members and an emergency action plan. Furthermore, an emergency kit must be on hand in the lab (available from SSHE). Our factsheets also contain key information on how to handle hydrofluoric acid and on PPE.

4 Aiming high? – A safe bet! Working on straight ladders

Every year, the SUVA records thousands of accidents with ladders. Yet, accidents could be prevented easily: The inspection tag (DIN EN131) identifies a ladder as safe for use. A ladder already in use, however, can be flawed despite such a tag and thus, any ladder has to be checked before usage. Straight ladders must have neither fissures nor cracks, nor must they be provisionally extended. Rungs must neither be nailed on nor broken nor completely missing. Weaknesses can be difficult to spot. In case of doubt, the load carrying capacity has to be

tested (cf. the SUVA-brochure: «Willst Du auf die Leiter, denke weiter!», p. 8). A damaged ladder has to be marked as such and put aside, until it has been repaired by a specialist.

A ladder is tall enough, if its top-end exceeds in height the part to be worked on by 1 m and if the three topmost rungs don't have to be used in order to get there. The angle of installation guaranteeing maximum stability is 70°, it can be checked by applying the elbow test: The distance between ladder-bottom and wall should amount to one quarter of the ladder's length. When stepping on the ladder, sturdy footwear and the use of both hands are a must – work material or tools should be carried in belts or satchels. Depending on the working area, single ladders with fixtures or hooks are to be used. For a secure positioning a firm, dry surface is important as well as anti-slip attachments at the bottom ends. On natural surfaces, metal spikes can serve the same purpose. In order to prevent the ladder from sliding to the side, it can be tethered at the top. Take care that the point where the top of the ladder is placed cannot break, and that it is also neither round (e.g. pillars) nor narrow (corners of buildings, thin branches etc.). In December, SSHE will organise a course on how to "work at height". Further information will follow.

Elbow Test, SUVA: "Gefahr im Griff"

5 Damage management at ETH Zurich

ETH Zurich has property insurance that covers damage to movables (movable objects that are not regarded as part of the building or a structural installation). As the excess of CHF 500,000 suggests, the policy is a safeguard against massive damage or damage to an expensive piece of equipment.

For more minor damage, there is an internal solution at ETH: Submit a damage report to the SSHE unit. SSHE will then initiate an inquiry to assess the damage together with the Financial Services unit. The decision as to whether the expenses will be reimbursed remains with Financial Services (the excess is CHF 1,500). The precondition for this, however, is that the aggrieved party has complied with the necessary safety requirements. In the event of negligence, if potentially dangerous lab tests are conducted without prior risk analyses, for instance, or the valid regulations – ETH-Zurich legal bases, safety manual, SSHE leaflets etc. – have been disregarded, a pay-out can be refused. Recently, a new email address has been created for handing in damage reports: sgu-schaden@ethz.ch.

SSHE is also organising a **flu jab programme** in 2013. The vaccination is voluntary and free for members of ETH Zurich. Registration will be possible from the end of September 2013; you will be informed via email. The provisional dates are 7.11. and 12.11.2013 (Zentrum) and 12. and 19.11.2013 (Hönggerberg).

For organisational reasons, this year's **blood drive** at ETH has been postponed until 2014. The website "Blutspende Zürich" contains information on alternatives for you to give blood, e.g. at the University of Zurich (9.10. and 10.10.2013).