


<b>SAFETY REQUIREMENT 20</b>  <b>Risk of contact with acids/bases (lye)</b>	  Balen/Pelt
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## SAFETY REQUIREMENT 20

### Risk of contact with acids/bases (lye)

 nyrstar

Balen/Pelt

## 1 PURPOSE

If work is carried out in an environment where there may be contact with acid or base (lye), a number of precautions must be observed.

## 2 SCOPE

When working in an environment with possible contact with acid or base.

## 3 DEFINITIONS

Bumb: Buffersolution for Mobile treatment of chemical Burns

Strong acids: Ph < 1-2

Strong bases: Ph >12-13

## 4 PRESCRIPTION

If work is being done on pipes or recipients **containing concentrated acid (including sulphuric acid) or lye or contain or have contained**, control measures must be formulated based on of a task risk analysis.

Before the works start, the locking sheet must be checked for correctness on the spot by at least the production coordinator of the providing department.

Starting Position:

- If it can be demonstrated that the pipes or recipients are empty and no more liquids can be released, at least tychem-C disposable overalls with face shield should be used at first opening.  
Acid-resistant gloves should be worn where the connection between Tychem-C suit and gloves are made impermeable **and rubber boots**, in order to have sufficient protection against residual acid, -leach.
- If it cannot be demonstrated that the pipes or receptacles are empty and no more liquids can be released, a full acid suit with face protection (type 3-4 with full body protection in accordance with Ansell 4000) **with rubber boots** should be used at first opening.

If collective protection measures are possible in combination with the measures described above, this is preferable.

In the case of work carried out in an environment with dilute acids or bases, process fluids, slurries (sludges), stronger than cellular acid, the following requirements must be observed:

- Wearing acid-resistant clothing that complies with the EN 13034 type 6 standard (e.g. Tecasafe workwear)
- Suitable hand protection
- Additional eye protection: face shield and/or chemical glasses

It should also be taken into account that process fluids and sludges can be hot (up to 95°C).

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Wear the safety equipment, also when working on acid pumps or acid taps in the workshop.

In addition to using the prescribed PPE, one should always have access to BUMB solution in the immediate vicinity when working on acid or lye.

## 5 CORRECT PROCEDURE FOR OPENING A FLANGE

The procedure is described in work instruction: XW-531-TI-T-90001 Loosening of flange connections in the presence of (strong) acids and bases

## 6 BUMB



BUMB is an emergency shower that will very strongly neutralize acid burns, bases. It may also be used to cool ordinary burns. This product can be applied to both skin and eyes.

Where to obtain:  
Occupational Health Department (BGD).  
In the production departments

After use, these bottles must be refilled with BUMB. This can be done at the BGD

### 2 golden rules for chemical burns:

1. Burn = rinse thoroughly with BUMB.
2. **After** rinsing with BUMB, rinse with (running) water for 30 minutes

**BUT: Prevention is better than cure!**