

# Finding your way around the Lutz chemical resistance table

## 1. General

This chemical resistance table contains reasonably concise information about the chemical resistance characteristics of the different types of pump tubes and flow meters to various media. The materials coming into contact with the liquids which are employed in the pump tubes have been tested with regard to their chemical resistances and assessed for use at room temperature.

The chemical resistance table is intended as a guide to the suitability of each pump tube; it also specifies any materials which are wholly unsuitable for certain concrete applications. Please do not hesitate to consult us directly if you are unable to find the most suitable material for your pump tube.

In cases where the resistance characteristics cannot be verified, or where any other reservations exist regarding the use of a particular combination of materials, we strongly recommend trying out the equipment under operating conditions. We can provide samples of various materials on request. It should be remembered that discolouring on the surface, minor increases in the weight and/or volume and changes to the mechanical properties (strain characteristics, strength properties, etc.) do not necessarily affect functioning to a sufficient extent to preclude the use of a material.

Since corrosion is influenced by a variety of factors, the information contained in the table cannot necessarily be applied to all operating conditions. Corrosion may be accelerated by temperature increases, by medium concentrations or by the entry of water into media which are otherwise pure. Discrepancies regarding the long-term resistance of plastics and elastomers are also possible, depending on the amount of impurities in the medium as well as on the compounding and degree of vulcanisation of the sealing materials.

The table specifications are based on the assumption that no other mechanical forces are effective.

## 2. How to use the table

The corrosive media are arranged in the table in alphabetical order. Formulas of chemical compounds are included for the purposes of simplification. Where known and meaningful, the table also lists the concentration, density, temperature classes, danger classes and explosion groups of the media.

**The table is an extremely reliable guide to the behaviour of corrosive media at room temperature, since a large part of the information it contains was only available for a temperature of 20 °C.** In view of the continuing advances in the field of plastics, extensive suitability tests may reveal that some of the materials employed in our pumps can be substituted or that others which are not mentioned can in fact be used. New materials are therefore likely to be added to the table at some stage in the future. At the same time we are constantly endeavouring to eliminate any gaps in our information.

All the information in the chemical resistance table is based on empirical values supplied by industry and on the results of tests performed in our own laboratories.

The resistance data specified for the individual products do not provide any entitlement to make warranty claims, since it is merely intended to serve as a recommendation for practical applications.

You can make your product choice more reliable by taking account of your own experience with regard to the resistance of particular materials to aggressive media.

Special attention should be paid to the guidelines concerning flammable liquids.

## Explanation column pump set:

In this column you find the appropriate recommendations regarding our **Lutz pump sets**. The numbering has thereby the following meaning:

„**Pump set no.**“ without addition means general suitability of the set for the selected medium.

„**Pump set no. 1**“ means concitional suitability of the set for the selected medium. With this set danger of discoloration and/or embrittlement in dependence of the short working period may occur on the PVC-hose.

### Meaning of symbols and notes:

- = Little or no corrosion, resistant
- ① = Conditional stable (danger of discoloration and for embrittlement in dependence of the short working period)
- ② = Special seal EPDM
- ③ = Special seal Viton-FEP
- ④ = Special friction bearing Rulon
- ⑤ = Measuring chamber for Nitric Acid
- ⑥ = On demand
- pure = technical pure
- sat. = saturated

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