RESISTANCE TABLE FOR VARIOUS FIBERS

NAME IT.
WE'LL DO IT.

	ACID RESISTANCE (PH < 7)	ALKALI OR BASE RESISTANCE (PH > 7)	HYDROCARBON RESISTANCE	SOLVENT RESISTANCE	UV RESISTANCE	MOLD RESISTANCE	HEAT RESISTANCE
POLYPROPYLENE	- **Excellent resistance** to most acids, except for significant deterioration when exposed to high temperatures in the presence of acids	- **Excellent resistance** to most alkalis - Considered **stable** when the pH is between 2 and 13	- **Excellent resistance** to hydrocarbons, except for significant deterioration when exposed to high temperatures in presence of hydrocarbons	- **Low resistance** to solvents, especially in temperatures > 60°C (140°F)	- **Loss of strength** when exposed to UV for extended periods	- **Good resistance** to mold	- **Softens** at 115-140°C (235-285°F) - Melts at **150°C** (300°F) - Non-flammable
POLYESTER	- **Good resistance** to mineral acids	- **Good resistance** to weak alkalis - **Disintegrates** in presence of strong alkalis and high temperatures - **Very sensitive** to sodium hydroxide, for example	- **Good resistance** to hydrocarbons	- **Insoluble in most** solvents except for certain phenols, which can cause swelling	- **Good UV resistance**	- **Excellent resistance** to mold	- Becomes sticky at 225-235°C (440-450°F) - Melts at **250-255°C** (480-495°F) - Non-flammable
VISCOSE / RAYON	- **Disintegrates** in hot or cold concentrated acids	- **Loses strength** and swells in presence of strong alkalis	–	- **Good resistance** to solvents	- **Yellows** when exposed to UV	- Easily damaged by mold, significant **loss of strength**	- Does not melt or soften - Decomposes at temperatures above **175°C** (350°F) - Easily flammable

Texel GEOSYNTHETICS

Acids / Alkalis (or bases)

EXAMPLES OF SOLUTIONS AND THEIR RESPECTIVE PH

THE PH OF TYPICAL AQUEOUS SOLUTIONS

Substance	Approximate pH
Acid mine drainage (AMD)	< 1,0
Battery acid	< 1,0
Gastric acid	2,0
Lemon juice	2,4 - 2,6
Cola	2,5
Vinegar	2,5 - 2,9
Orange or apple juice	3,5
Beer	4,5
Coffee	5,0
Tea	5,5
Acid rain	< 5,6
Milk	6,5
Pure water	7,0
Human saliva	6,5 - 7,4
Blood	7,38 - 7,42
Sea water	8,0
Soaps	9,0 à 10,0
Lime	12,5

IDENTIFIED BY THE PH LEVEL OF THE ENVIRONMENT

PH < 7	Acidic environment: the acidity of the environment increases as the pH falls below 7
PH = 7	Neutral environment
PH > 7	Alkaline environment (basic): the environment becomes increasingly alkaline as the pH increases beyond 7

EXAMPLES

Examples of mineral acids:

- Hydrochloric acid
- Phosphoric acid
- Nitric acid
- Sulphuric acid

Examples of organic acids:

- Acetic acid
- Benzoic acid
- Salicylic acid
- Lactic acid

Examples of alkalis (bases):

- Calcium carbonate
- Sodium carbonate
- Sodium hydroxide
- Potassium hydroxide
- Ammonium hydroxide

Examples of solvents:

- Acetone
- Ethyl alcohol
- Benzene
- Ethylene glycol
- Chloroform
- Toluene
- Xylene

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