

Contents of CAMPUS^â

4 Properties not Covered by ISO 10350 and ISO 11403




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4.1 Chemical Resistance

The chemical resistance data are not presented in the single-point datasheets, because the International Standard for the Acquisition and Presentation of comparable multipoint data, ISO 11403-3, has not been widely used up to now and no truly comparable data are available. Thus information about the chemical resistance, based on existing data, is displayed in the text window of CAMPUS.

The list of chemicals (see table 15) for which the chemical resistance can be described is following ISO 175.

Because the description of the chemical resistance of a polymer is generally more complicated than is possible in a simple ranking of yes or no CAMPUS gives the possibility to add more information in internal or external links. The ranking follows the following system:

	Symbol	Description	Comments
a)		possible	Defined as: Supplier has sufficient indication that contact with chemical can be potentially accepted under the intended use conditions and expected service life. Criteria for assessment have to be indicated (e.g. surface aspect, volume change, property change).
b)		not recommended	Defined as: Not recommended for use under any condition.
c)		not recommended – see explanation	Defined as: Not recommended for general use. But short-term exposure under certain restricted conditions could be acceptable – examples to be provided (e.g. fast cleaning with thorough rinsing, spills, wiping, vapor exposure).

Searchable classifications are a) and c) only

Further information can be given for a) and c) in internal or external links.

Media Name	short name
Acids	
Acetic Acid (5% by mass) at 23°C	5%C ₂ H ₄ O ₂
Citric Acid solution (10% by mass) at 23°C	10%cit
Lactic Acid (10% by mass) at 23°C	10%lact
Hydrochloric Acid (36% by mass) at 23°C	36%HCl
Nitric Acid (40% by mass) at 23°C	40%HNO ₃
Sulfuric Acid (38% by mass) at 23°C	38%H ₂ SO ₄
Sulfuric Acid (5% by mass) at 23°C	5%H ₂ SO ₄
Chromic Acid solution (40% by mass) at 23°C	40%CrO ₃
Bases	
Sodium Hydroxide solution (35% by mass) at 23°C	35%NaOH
Sodium Hydroxide solution (1% by mass) at 23°C	1%NaOH
Ammonium Hydroxide solution (10% by mass) at 23°C	10%NH ₄ OH
Alcohols	
Isopropyl alcohol at 23°C	C ₃ H ₇ OH
Methanol at 23°C	CH ₃ OH
Ethanol at 23°C	C ₂ H ₅ OH
Hydrocarbons	
n-Hexane at 23°C	C ₆ H ₁₄
Toluene at 23°C	C ₆ H ₅ CH ₃
iso-Octane at 23°C	iC ₈ H ₁₈
Ketones	
Acetone at 23°C	CH ₃ COCH ₃
Ethers	
Diethyl ether at 23°C	(C ₂ H ₅) ₂ O
Mineral oils	
SAE 10W40 multigrade motor oil at 23°C	m.oil
SAE 10W40 multigrade motor oil at 130°C	130°moil
SAE 80/90 hypoid-gear oil at 130°C	130°gear
Insulating Oil at 23°C	ins.oil
Standard Fuels ¹⁾	
ISO 1817 Liquid 1 at 60°C	60°fuel1
ISO 1817 Liquid 2 at 60°C	60°fuel2
ISO 1817 Liquid 3 at 60°C	60°fuel3
ISO 1817 Liquid 4 at 60°C	60°fuel4
Standard fuel without alcohol (preferably ISO 1817 Liquid C) at 23°C	fuelC
Standard fuel with alcohol (preferably ISO 1817 Liquid 4) at 23°C	fuel+alc
Diesel fuel (preferably ISO 1817 Liquid F) at 23°C	Disl
Diesel fuel (preferably ISO 1817 Liquid F) at 90°C	90°Disl
Diesel fuel (preferably ISO 1817 Liquid F) above 90°C	90+°Disl
Salt solutions	
Sodium Chloride solution (10% by mass) at 23°C	10%NaCl
Sodium Hypochlorite solution (10% by mass) at 23°C	10%NaClO

Media Name	short name
Sodium Carbonate solution (20% by mass) at 23°C	20%NaCO ₃
Sodium Carbonate solution (2% by mass) at 23°C	2%NaCO ₃
Zinc Chloride solution (50% by mass) at 23°C	50%ZnCl ₂
Other	
Ethyl Acetate at 23°C	C ₄ H ₈ O ₂
Hydrogen peroxide at 23°C	H ₂ O ₂
DOT No. 4 Brake fluid at 130°C	130°br.f
Ethylene Glycol (50% by mass) in water at 108°C	108°Cool
1% solution of nonylphenoxy-polyethyleneoxy ethanol in distilled water at 23°C	1%deterg
50% Oleic acid + 50% Olive Oil at 23°C	Oil
Water at 23°C	H ₂ O
Deionized water at 90°C	90°H ₂ O
Phenol solution (5% by mass) at 23°C	5%C ₆ H ₅ OH

Table 15: List of chemicals

¹⁾: See table 16

Liquid	Constituents	Content / % (V/V)
1	2,2,4-trimethylpentane toluene di-isobutylene ethanol	30 50 15 5
2	2,2,4-trimethylpentane toluene di-isobutylene ethanol methanol water	25.35 42.25 12.68 4.22 15.00 0.50
		} equivalent to 84.5% (V/V) of liquid 1
3	2,2,4-trimethylpentane toluene ethanol methanol	45 45 7 3
4	2,2,4-trimethylpentane toluene methanol	42.5 42.5 15

Table 16: Standard fuels according ISO 1817

4.2 Properties for Rheological Calculations

The properties for rheological calculation are not defined in ISO 10350. The conditions for testing are not standardized thus the data are not comparable and displayed in the text window of CAMPUS.

Property	Unit
Density of melt	kg/m ³
Thermal conductivity of melt	W/(m K)
Specific heat capacity of melt	J/(kg K)
Effective thermal diffusivity	m ² /s
Ejection temperature	°C