Material: *Ecoguss resistant*

Substance designation	Resistance
Acetaldehyde 40 %	✓
Acetaldehyde undiluted	◐
Acetoacetic ester (acid-free) - technically pure	✓
Acetone 10 %	✓
Acetone 5 %	✓
Acetone 5 %, 100 °C	✓
Acetone 50 %	✓
Acetone 50 %, 50 °C	✓
Acetone -technically pure	◐
Acetone - technically pure, 60 °C	◐
Acetophenone - technically pure	◐
Acetyl chloride - technically pure	✓
Acrylonitrile - technically pure	◐
Acrylic acid ethyl ester - technically pure	✓
Adipic acid - aqueous	✓
Alum (potassium aluminium sulphate) - aqueous	✓
Albumin - technically pure	✓
Allyl alcohol - technically pure	✓
Aluminium acetate - aqueous	✓
Aluminium chloride - dissolved form	✓
Aluminium chloride 5 %	✓
Aluminium fluoride - aqueous	✓
Aluminium suflate - dissolved form	✓
Aluminium sulphate 5 %	✓
Formic acid 10 %, 50 °C	✓
Formic acid 2 %, 100 °C	✓
Formic acid 5 %, 80 %	✓
Formic acid 90 %, 60 °C	✓
Formic acid up to 100 %	✓
Aminoacetic acid (glycine, glycocoll) - aqueous	✓
Ammonium acetate - aqueous	✓
Ammonium carbonate - aqueous	✓
Ammonium chloride 10 %	✓
Ammonium chloride 35 %	✓
Ammonium chloride - dissolved form	✓
Ammonium citrate - aqueous	✓
Ammonium fluoride - aqueous	✓
Ammonium fluorosilicate - aqueous	✓
Ammonium formate - aqueous	✓
Ammonium hydroxide 1 %	✓
Ammonium hydroxide 10 %	✓
Ammonium hydroxide 30 %	◐
Ammonium hydroxide undiluted	◐
Ammonium hydroxide undiluted, 80 °C	◐
Ammonium nitrate - aqueous	✓
Ammonium nitrate - aqueous	✓
Ammonium persulphate - aqueous	✓
Ammonium phosphate - aqueous	✓
Ammonium sulphate - aqueous	✓
Ammonium sulphide - aqueous	✓
Ammonium sulphite - aqueous	✓
Ammonium thiocyanate - aqueous	✓
Amyl acetate - technically pure	◐
Amyl alcohol - technically pure	✓
Aniline - technically pure	◐

Substance designation	Resistance
Anisole (methylphenyl ether) - technically pure	◐
Anthraquinone sulfonic acid - aqueous	✓
Antimony chloride - aqueous	✓
Malic acid - aqueous	✓
Cider	✓
arabic acid - aqueous	✓
Argon - technically pure	✓
Arsenic acid - aqueous	✓
Arsenic acid - aqueous	✓
Arsenic trichloride - aqueous	✓
Ascorbic acid - aqueous	✓
Aspartic acid - aqueous	✓
Essential oils	◐
Barium chlorate - aqueous	✓
Barium chloride - aqueous	✓
Barium hydroxide - aqueous	✓
Barium salts	✓
Barium sulphide and polysulphide - aqueous	✓
Benzaldehyde - aqueous	◐
Benzidinesulfonic acids - aqueous	✓
Petrol, normal	✓
Petrol, super	✓
Benzoic acid - aqueous	✓
Benzene - technically pure	◐
Benzenesulfonic acid - aqueous	✓
Benzyl butyl phthalate - aqueous	◐
Benzyl chlorides	✓
Bergamot oil	◐
Succinic acid - aqueous	✓
Beer	✓
Bisulphite (sodium bisulphite, sodium hydrogen sulphite) - aqueous	✓
Hydrogen cyanide - aqueous	✓
Lead acetate - aqueous	✓
Lead nitrate - aqueous	✓
Borax 10 %	✓
Borax 50 %	✓
Borax - dissolved form	✓
Boron hydrofluoric acid (fluoroboric acid) - technically pure	✓
Boric acid - aqueous	✓
Brake fluids - high-purity	✓
Brake fluids - high-purity, 125 °C	✓
Brake fluids - high-purity, 150 °C	✓
Brake fluids - high-purity, 60 °C	✓
Bromine (liquid) - technically pure	–
Hydrobromic acid - aqueous	–
Butadiene - technically pure	✓
Butane (gaseous and liquid) - technically pure	✓
Butanediol - aqueous (10 %)	✓
Butanol (butyl alcohol) 100 °C	✓
Butanol (butyl alcohol) 60 °C	✓
Buten technically pure	◐
Butoxyl (methoxybutyl acetate) - technically pure	◐
Butter	✓
Buttermilk	✓
Butyric acid - aqueous	✓

✓ Resistant ◐ Parially resistant – Not resistant

Material: *Ecoguss resistant*

Substance designation	Resistance
Butyl acetate	✓
Butyl acetate 60 °C	◐
Butyl acetate 80 °C	◐
Butyl alcohol (butanol) - technically pure	◐
Butylamine 20 °C	✓
Butylamine 80 °C	-
Butyl phthalate - technically pure	✓
Calcium bisulphite - aqueous	✓
Calcium chloride 10 %	✓
Calcium chloride 10 %, 100 °C	✓
Calcium chloride 10 %, 60 °C	✓
Calcium chloride - dissolved form	✓
Calcium chloride - dissolved form, 80 °C	✓
Calcium hydroxide (milk of lime) - aqueous	✓
Calcium hypochlorite (chlorinated lime) - aqueous	✓
Calcium nitrate - aqueous	✓
Calcium nitrate - aqueous	✓
Calcium salts	✓
Carbitol (2-(2-ethoxyethoxy)ethanol) - technically pure	◐
Caro's acid - aqueous	-
Champher oil - technically pure	✓
Chlorine (liquid) - technically pure	◐
Chlorine (gaseous and moist)	-
Chlorine (gaseous and dry)	-
Chloral hydrate (Chloral) - aqueous	◐
Chlorobenzene - technically pure	◐
Chloroacetic acid - aqueous	◐
Chloroethanol (ethylene chlorohydrin) - technically pure	✓
Chloromethane (methyl chloride) - technically pure	◐
Chloronaphthalene - technically pure	✓
Chloroform technically pure	✓
Chloroform undiluted, 50 °C	✓
Chlorophenols - technically pure	◐
Chlorosulfonic acid technically pure	-
Chlorosulfonic acid - technically pure, 50 °C	-
Chlorinated water (moist)	-
Hydrogen chloride gas 10 %, 80 °C	-
Hydrogen chloride gas 20 %	✓
Hydrogen chloride gas 40 %, 20 °C	✓
Chromic acid 30 %	✓
Chromic acid 50 %	-
Cyclohexane	✓
Cyclohexanol	✓
Cyclohexanone	◐
Dichloroethylene	◐
Dichlorofluoromethane	◐
Dichloride fluoromethane 100 %	-
Dichloride fluoromethane 50 %	-
Dicyclohexylammonium nitrite - technically pure	✓
Diesel fuel - high purity, 20 °C	✓
Diesel fuel - high purity, 85 °C	✓
Diethyl ether - technically pure	✓
Dimethylamine - technically pure	◐
Dimethylformamide (DMF) - technically pure	◐
Dimethyl sulphoxide (DMSO) - technically pure	✓

Substance designation	Resistance
Dioctyl phthalate (DOP) - technically pure	✓
Dioxane - technically pure	✓
Diphenyl + diphenyl oxide - technically pure	✓
Diphenyl ether	✓
Noble gases - technically pure	✓
Iron (II) chloride 10 %	✓
Iron (II) chloride - dissolved form	✓
Iron (III) chloride 10 %	✓
Iron (III) chloride - dissolved form	✓
Ferrous sulphate - aqueous	✓
Protein solutions	✓
Acetic ester (ethyl acetate) - technically pure	✓
Acetic acid - technically pure	✓
Acetic acid 5 %	✓
Acetic acid 80 %	✓
Acetic acid 80 %, 60 °C	✓
Acetic anhydride - technically pure	✓
Ethanol - technically pure	✓
Ethanolamine - technically pure	◐
Ether (diethyl ether) - technically pure	✓
Ethyl acetate (acetic ester) - technically pure	◐
Ethyl alcohol (ethanol) - technically pure	✓
Ethylbenzene - technically pure	◐
Ethyl chloride - technically pure	✓
Ethylene - technically pure	✓
Ethylene bromide - technically pure	◐
Ethylene chlorohydrin (chloroethanol) - technically pure	◐
Ethylene chloride (dichloroethane) - technically pure	◐
Ethylenediamine - technically pure	✓
Ethylene glycol (glycol) technically pure	✓
Ethylene glycol (glycol) - technically pure, 100 °C	✓
Ethyl formate - technically pure	◐
Fatty alcohols	✓
Fluorine (moist) - technically pure	-
Fluorine (dry) - technically pure	-
Fluoroboric acid (borohydrofluoric acid)	✓
Chlorofluorocarbons (Frigene) - High purity	◐
Hydrofluoric acid (hydrofluoric acid) 20 %	◐
Hydrofluoric acid (hydrofluoric acid) 5 %	✓
Formaldehyde solution (formalin) - 40 %	✓
Formamide - technically pure	✓
Frigen 113 (R-113) - technically pure	◐
Frigen 12 (R-12) - technically pure	◐
Frigen 13 (R-13) - technically pure	◐
Frigen 22 (R-22) - technically pure	◐
Frigen substitute HCFC 134a (R-134a) - technically pure	◐
Furfural	◐
Gelatine - aqueous	✓
Tannic acid (tannin) - aqueous	✓
Glucose - aqueous	✓
Glycine (glycocoll, aminoacetic acid) - aqueous	✓
Glycol (ethylene glycol) - technically pure	✓
Glycol ethyl ether (Cellosolve) - technically pure	◐
Glycerine - technically pure	✓
Glycerine - aqueous	✓

✓ Resistant ◐ Parially resistant - Not resistant

Material: *Ecoguss resistant*

Substance designation	Resistance
Mine gas (methane, swamp gas) - technically pure	✓
Hair shampoo	✓
Urea - aqueous	✓
Yeast - watery	✓
Heating oils	✓
Helium - technically pure	✓
Heptane - technically pure	✓
Hexamethylenetetramine - aqueous	✓
Wood tar (wood oil, impregnating oils)	✓
Humic acids	✓
Hydraulic fluid (Skydrol 500)	✓
Hydraulic fluids - mineral oil-based (H, H-L, H-LP)	✓
Hydraulic fluids - Phosphoric acid esters	✓
Hydraulic fluids - water in oil	✓
Hydraulic fluids - water-oil emulsions	✓
Hydroquinone - aqueous	✓
Hydroxybenzene - aqueous	✓
Hydroxylamine sulphate - aqueous	✓
Impregnating oils (wood tar, wood oil)	✓
Isobutanol - technically pure	✓
Isooctane - technically pure	✓
Isopropanol (2-propanol) - technically pure	✓
Iodine + iodine potassium - aqueous	-
Potassium hydroxide solution 50 %	✓
Potassium hydroxide solution 50 %, 80 °C	✓
Potassium aluminium sulphate (alum) - aqueous	✓
Potassium bromate - aqueous	✓
Potassium bromide - aqueous	✓
Potassium carbonate (potash) - aqueous	✓
Potassium chlorate - aqueous	-
Potassium chloride 10 %	✓
Potassium chloride - dissolved form	✓
Potassium chromate - aqueous	✓
Potassium cyanide (cyanide potassium) - aqueous	✓
Potassium dichromate 10 %, 20 °C	✓
Potassium dichromate 30 %, 80 °C	✓
Potassium hexacyanoferrate (II) (yellow blood leach salt) - aqueous	✓
Potassium hexacyanoferrate (III) (red blood lye salt) - aqueous	✓
Potassium hydrogen fluoride - aqueous	✓
Potassium hydroxide (caustic potash solution) - 1 %, 20°C	✓
Potassium hydroxide (caustic potash solution) - 20 %, 20 °C	✓
Potassium hydroxide (caustic potash solution) - 20 %, 60 °C	◐
Potassium hypochlorite - aqueous	-
Potassium iodide - aqueous	✓
Potassium nitrate - aqueous	✓
Potassium nitrite - aqueous	✓
Potassium permanganate - dissolved form	◐
Potassium peroxide - aqueous	-
Potassium persulphate - aqueous	-
Potassium phosphate - aqueous	✓
Potassium sulphate - aqueous	✓
Potassium sulphide - aqueous	✓
Potassium sulphite - aqueous	✓
Milk of lime (calcium hydroxide) - aqueous	✓
Paraffin - high purity	✓

Substance designation	Resistance
Pine needle oil (spruce needle oil)	◐
Hydrogen fluoride (silicic acid) - aqueous	-
Bone oil	✓
Common salt (sodium chloride)	✓
Common salt (sodium chloride) - aqueous	✓
Carbon dioxide (moist)	✓
Carbon dioxide (dry)	✓
Carbon monoxide	✓
Carbonic acid - watery	✓
Coconut oil	✓
Aqua regia	-
Cresol - aqueous	✓
Kupersuflat - dissolved form	✓
Copper acetate - aqueous	✓
Copper chloride - aqueous	✓
Nitrous oxide	✓
Food fats and oils	✓
Cod liver oil	✓
Linseed oil	✓
Linoleic acid - technically pure	✓
Lithium chloride - aqueous	✓
Lysol	✓
Magnesium chloride - dissolved form	✓
Magnesium hydroxide	✓
Magnesium sulphate - aqueous	✓
Maize germ oil	✓
Maleic acid - aqueous	✓
Manganese chloride - aqueous	✓
Manganese sulphate - aqueous	✓
Machine oils (paraffin oils, mineral oils, engine oils)	✓
Molasses (molasses wort)	✓
Methane (mine gas, swamp gas)	✓
Methanol - technically pure, 20 °C	✓
Methanol - technically pure, 65 °C	◐
Methoxybutanol - technically pure	✓
Methyl acetate - technically pure	◐
Methyl alcohol (methanol) - technically pure	◐
Methylamine - aqueous	◐
Methyl chloride (dichloromethane) - technically pure	◐
Methyl ethyl ketone technically pure	-
Methylphenyl ether (anisole) - technically pure	◐
Milk	✓
Lactic acid 10 %	✓
Mineral oils (paraffin oils, engine oils, machine oils)	✓
Mineral water	✓
Morpholine - technically pure	◐
Engine oils (mineral oils, machine oils, paraffin oils)	✓
Sodium arsenate - aqueous	✓
Sodium arsenite - aqueous	✓
Sodium benzoate - aqueous	✓
Sodium bicarbonate (sodium hydrogen carbonate) - dissolved form	✓
Sodium bisulphate (sodium hydrogen sulphate) - aqueous	✓
Sodium bromate - aqueous	✓
Sodium bromide - aqueous	✓
Sodium carbonate - dissolved form	✓

✓ Resistant ◐ Parially resistant - Not resistant

Material: *Ecoguss resistant*

Substance designation	Resistance
Sodium chloroacetate - aqueous	✓
Sodium chlorate - aqueous	-
Sodium chloride - dissolved form	✓
Sodium chloride - dissolved form, 80 °C	✓
Sodium chromate - aqueous	✓
Sodium cyanide - aqueous	✓
Sodium dichromate	✓
Sodium dodecylbenzenesulfonate - aqueous	✓
Sodium fluoride - aqueous	✓
Sodium glutamate - aqueous	✓
Sodium hydrogen carbonate (sodium bicarbonate) - aqueous	✓
Sodium hydrogen sulphate (sodium bisulphate) - aqueous	✓
Sodium hypochlorite 10 %	◐
Sodium hypochlorite 5 %, 80 °C	◐
Sodium hypochlorite - dissolved form	-
Sodium iodide - aqueous	✓
Sodium nitrate - aqueous	✓
Sodium nitrite - aqueous	✓
Sodium pentachlorophenolate - aqueous	✓
Sodium perborate - aqueous	-
Sodium persulfate - aqueous	-
Sodium phosphate - aqueous	✓
Sodium propionate - aqueous	✓
Sodium silicates (water glass) - aqueous	✓
Sodium stannate - aqueous	✓
Sodium sulfide 90 %	✓
Sodium sulphate - dissolved form	✓
Sodium sulphite - aqueous	✓
Sodium tartrate - aqueous	✓
Sodium thiosulphate 50 %	✓
Bicarbonate of soda	✓
Caustic soda (sodium hydroxide) 30 %, 80 °C	◐
Caustic soda (sodium hydroxide) 50 %, 20 °C	✓
Caustic soda (sodium hydroxide) 10 %, 80 °C	✓
Nekal BX (colour setting agent) - aqueous	◐
Nickel sulphate - aqueous	✓
Nitrobenzoic acids - aqueous	✓
Nitrobenzene - technically pure	✓
Nitrobenzene - technically pure, 80 °C	◐
Nitromethane	✓
Nitrotoluenes (o-, m-, p)	◐
Fruit tree carbolineum	◐
Olive oil	✓
Oxalic acid - dissolved form	✓
Oxalic acid - dissolved form, 100 °C	✓
Oxalic acid - dissolved form, 60 °C	✓
Ozone (moist and dry)	-
Paraffin oils (machine oils, mineral oils, engine oils)	✓
Perchloroethylene (tetrachloroethylene) - technically pure	◐
Peracetic acid - aqueous (6 %)	-
Petroleum	✓
Petroleum - technically pure	✓
Petroleum spirit (petroleum ether)	✓
Phenol - technically pure, 20 °C	✓
Phosphoric acid 50 %, 20 °C	✓

Substance designation	Resistance
Phosphorus trichloride	✓
Pinene (turpentine oil) - technically pure	✓
Polyacrylic acid esters (acrylic dispersions)	✓
Potash (potassium carbonate) - aqueous	✓
Propane (liquid and gaseous) - technically pure	✓
Propanol - technically pure	✓
Propylene glycol - technically pure	✓
Pyridine - technically pure	◐
Mercury - technically pure	✓
Mercuric chloride - aqueous	✓
Mercury salts - aqueous	✓
Rapeseed oil	✓
Saccharin (sweetener)	◐
Nitric acid 10 %, 80 °C	-
Nitric acid 30 %, 20 °C	✓
Nitric acid 98 %, 20 °C	-
Hydrochloric acid - aqueous 10 %, 80 °C	-
Hydrochloric acid - aqueous 40 %	✓
Lubricating greases	✓
Lubricating oils	✓
Lubricating oils	✓
Sulphur dioxide (liquid) - technically pure	✓
Sulphur dioxide (gaseous and moist)	◐
Sulphur dioxide (gaseous and dry) - technically pure	✓
Sulphurous acid - aqueous (H_2SO_3)	◐
Carbon disulphide - technically pure (CS_2)	✓
Sulphuric acid 10 %, 60 °C	✓
Sulphuric acid 96 %, 20 °C	✓
Hydrogen sulphide - dissolved form	◐
Hydrogen sulphide gas dry	✓
Hydrogen sulphide gas dry 10 %	✓
Sebacic acid dibutyl ester (dibutyl sebacate) - technically pure ($(C_4H_9COO)(CH_2)_8(OOC_4H_9)$)	◐
Soap solution - aqueous	✓
Silver nitrate - aqueous ($AgNO_3$)	✓
Silicone oil	✓
Skydrol 7000 (hydraulic fluid)	✓
Soda (sodium carbonate)	✓
Soya oil	✓
Cooking oil	✓
Spindle oils	✓
Stearic acid ($C_{18}H_{37}COOH$)	✓
Starch solution - aqueous	✓
Stearic acid ($C_{18}H_{37}COOH$)	✓
Styrene - pure ($C_6H_5CH=CH_2$)	◐
Super fuel-ethanol mixture (petrol-benzene-spirit)	✓
Synth. Household detergent (washing powder)	✓
Tannin (tannic acid) - aqueous	✓
Turpentine substitute (white spirit, Shellsol D) - technically pure	✓
Turpentine oil (pineneel) - technically pure	✓
Tetrachloroethylene technically pure	✓
Tetrachloroethylene - technically pure, 60 °C	✓
Carbon tetrachloride - technically pure	✓
Carbon tetrachloride - technically pure, 80 °C	-
Tetrahydrofuran - technically pure	◐
Tetrahydrofuran - room temperature, 100 °C	-

✓ Resistant ◐ Parially resistant - Not resistant

Material: *Ecoguss resistant*

Substance designation	Resistance
Tetrahydronaphthalene (tetralin) - technically pure	◐
Toluene	●
Toluene - technically pure, 80 °C	◐
Transformer oil	●
Dextrose (glucose) - aqueous ($C_6H_{12}O_6$)	●
Tributyl phosphate - technically pure ($(C_4H_9O)_3PO$)	●
Trichloroacetic acid 50 %	●
Trichloroacetic acid - technically pure	◐
Trichloroethane, 50 °C	●
Trichloroethylene - technically pure (C_2HCl_3)	◐
Trichloromethane (chloroform) - technically pure ($CHCl_3$)	◐
Trichlorotrifluoroethane	●
Trichlorotrifluoroethane 75 °C	●
Tricresyl phosphate - technically pure ($C_{21}H_{21}O_4P$)	◐
Uranium hexafluoride - technically pure (UF_6)	●
Urotropin (hexamethylenetetramine) - aqueous ($C_6H_{12}N_4$)	●
Vaseline oil	●
Vinyl acetate - technically pure ($CH_2COOCH_2CH_3$)	●
Vinyl chloride - technically pure (CH_2CHCl)	◐
Wash liquors (0–80 °C)	●
Detergent (synthetic household detergent)	●
Water (seawater) (H_2O)	●
Water (Swimming pools)	●
Water - technically pure	●
Water - technically pure, 100 °C	◐
Water - technically pure, 60 °C	●
Water - technically pure, 80 °C	●
Water vapour (130 °C) (H_2O)	◐
Water glass (sodium silicates)	●
Hydrogen peroxide 50 %	-
Hydrogen peroxide 0.5–1 %	●
Hydrogen peroxide 30 % (60–70 °C)	◐
Wines	●
Wine vinegar (acetic acid 5 %)	●
Tartaric acid - aqueous ($C_4H_6O_6$)	●
Xenon - technically pure (Xe)	●
Xylene - technically pure	●
Xylene -technically pure, 60 °C	●
Zinc chloride 50 %	●
Zinc chloride 50 %, 10 °C	●
Zinc chloride - dissolved form	●
Zinc chloride - dissolved form, 80 °C	●
Zinc sulphate - aqueous ($ZnSO_4$)	●
Tin chlorides - aqueous ($SnCl_2$, $SnCl_4$)	●
Citric acid - aqueous ($C_6H_8O_7$)	●
Sugar solutions	●

● Resistant ◐ Parially resistant - Not resistant

Material: *Ecoguss resistant*

Ecoguss resistant is characterised by its high chemical resistance. At room temperature, the material is resistant to acids and alkalis up to a concentration of 10% – such as silage effluent.

However, there are also media for which *Ecoguss resistant* has limited resistance, i.e. it is sufficiently resistant in the event of an accident, but unsuitable for the permanent discharge of the medium.

We will be happy to clarify the resistance for your specific application in detail. To carry out this clarification, we require a safety data sheet or a defined information on the chemical with details of the temperature of the medium if it is not at room temperature. An additional description of the area of application and the installation situation would be beneficial.

When using the *Ecoguss resistant* outlet fitting outside, UV radiation can cause colour changes, but this has no negative influence on the technical properties or the media resistance.

The odour trap made of PP (polypropylene) and the retaining ring used in *Ecoguss resistant* may not be as resistant to chemicals as the rest of the system components (base body, extension piece, seal and attachment piece).

The use of an odour trap when using chemicals should always be checked, as mixing different chemicals in the odour trap can cause chemical reactions that can also pose a risk to life and limb.

The *Fire-Kit* fire protection insert is not chemical-resistant and should therefore not be used with aggressive media as they can impair the fire protection properties.

The *Ecoguss resistant* extension piece (item no. 48195) is not compatible with the KESSEL clip flange, glued and pressure sealing flange.