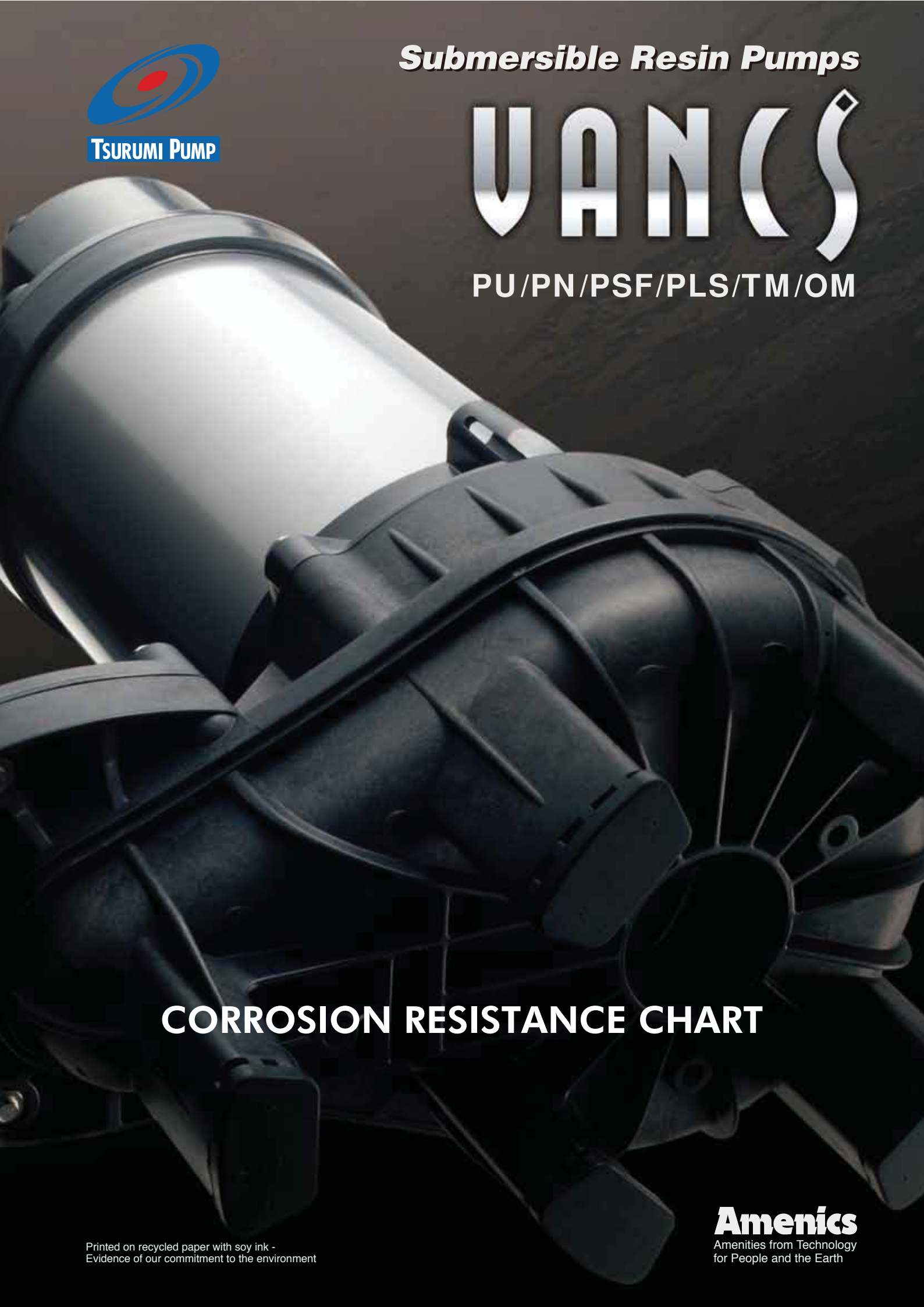
TSURUMI PUMP

Submersible Resin Pumps

VANCS

PU/PN/PSF/PLS/TM/OM



CORROSION RESISTANCE CHART

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Evidence of our commitment to the environment

Amenics
Amenities from Technology
for People and the Earth

CORROSION RESISTANCE CHART

The data shown in this chart were obtained by experimenting with test pieces of the same materials that are utilized in the "VANCS" series submersible pumps.

It shall be understood that the corrosion is affected by many factors at condition in use. Therefore, this chart should be used as reference data only.

Designations in the chart

1. Designations in plastic or rubber parts and mechanical seals items

A = Suitable
B = Suitable, but affcted
C = Not Suitable
- - - = No data

2. Designations in metallic parts items

A = Suitable (<0.05mm/year)
B = Suitable, but affcted (0.05 - 0.5mm/year)
C = Not Suitable (>0.5mm/year)
- - - = No data
pit. = Pitting (not suitable for motor shaft and frame)
i.g.c. = Intergranular Corrosion (not suitable for motor frame)
S. C. = Stress Corrosion Cracking (not suitable for motor frame and bolts)

3. Material Name

Plastic Parts

PPO = Polyphenyleneoxide

PPS = Polyphenylenesulfide

ABS = Acrylonitrile Butadiene Stylene

Rubber Parts

PVC = Poly Vinyl Chloride

CR = Chloroprene (Neoprene)

NBR = Nitrile Butadiene Rubber (Buna N)

NR = Natural Rubber

VANCS — CORROSION RESISTANCE CHART

Fluid Specifications				Plastic Parts			Rubber Parts			Metallic Parts		The Others
				PU, PN, TM			PU, PN, TM			PU, PN	TM	PU, PN, TM
Name of Chemicals	Specific Gravity	Density %	Temp ℃	Impeller	HeadCover, Oil Casing	Pump Casings, Strainer	Power Cable	Oil Casing Packing, Pump Casing O-Ring	Head Cover Packings, Flange Packing	Motor Frame, Shaft, Cable G;and, Bolts	Motor Frame, Shaft, Cable G;and, Bolts	Mechanical Seal
				PPO	PPS	ABS	PVC/CR	NBR	NR	SUS304	TITANIUM	W-14H
Acetaldehyde	0.79	20	40	A	A	C	C／C	C	C	B	A	C
Acetic Acid	1.05	10	40	A	B	B	C／C	C	C	A	A	C
Acetic Acid		50	40	A	B	B	C／C	C	C	B	A	C
Acetone	0.79	20	40	A	B	C	C／B	C	C	B	A	C
Acrylonitrile	0.8	20	40	A	A	C	C／B	C	A	A	A	C
Adipic Acid	1.36	10	25	A	A	—	A／C	C	—	B	A	C
Allyl Alcohol	0.85	20	40	A	A	—	C／—	B	A	A	A	B
Allyl Amine	0.76	10	40	A	A	C	B／C	C	—	B	A	C
Alum		20	40	A	A	A	A／A	A	A	B	A	A
Aluminum Chloride	2.44	20	40	A	A	B	B／A	A	A	Cpit.	A	A
Aluminum Hydroxide	2.42	10	20	A	A	A	A／A	A	A	Bpit.	A	A
Aluminum Nitrate		20	40	A	A	A	B／A	B	B	B	A	B
Aluminum Sulfate	2.71	20	40	A	A	A	A／A	A	A	B	B	A
Amine			40	A	A	B	C／—	—	—	A	A	C
Ammonia Solution	0.9		25	A	A	A	B／B	B	B	B	A	B
ammonium Alum	1.64	10	20	A	A	A	A／A	A	A	B	A	B
Ammonium Bicarbonate	1.57	10	40	A	A	A	A／A	A	—	Bpit.	A	A
Ammonium Carbonate		20	40	A	A	A	B／A	A	A	A	A	A
Ammonium Chloride	1.53	20	40	A	A	A	A／A	B	A	Cpit.	A	A
Ammonium Fluoride	1.31	20	20	A	A	—	A／B	B	—	C	C	B
Ammonium Nitrate	1.75	20	40	A	A	A	A／B	B	B	Bs.c.	A	B
Ammonium Nitrite	1.69	50	40	A	A	A	B／A	A	—	B	A	A
ammonium Phosphate	1.62～1.79	20	40	A	A	A	B／A	A	A	C	A	C
Ammonium Phosphate Dibasic	1.62	20	40	A	A	A	A／A	A	—	C	A	A
Ammonium Phosphate Monobasic	1.8	20	40	A	A	A	A／A	A	—	C	A	A
Ammonium Sulfate	1.76	20	40	A	A	A	A／A	A	A	C	B	A
Ammonium Sulfide		10	40	A	A	A	A／A	A	—	B	A	A
Ammonium Thiocyanate	1.31	20	40	A	A	A	A／A	A	—	A	A	A
Ammonium Thiosulfate	1.64	20	40	A	A	A	A／A	A	—	A	A	B
Amyl Acetate	0.88	100	40	A	A	C	C／C	C	C	A	A	C
Amyl Alcohol	0.82	10	40	A	A	B	C／A	B	A	A	A	B
Amyl Chloride	0.88	100	40	A	A	B	C／—	C	—	Bpit.	A	C
Arsenic Acid	2.0～2.5	20	40	A	A	B	C／A	B	A	B	A	A
Barium Chloride	3.86	20	40	A	A	A	A／A	B	A	B	A	A
Barium Hydroxide	4.5	20	40	A	A	A	A／A	A	A	B	A	A
Barium Monosulfide	4.25	10	20	A	A	A	B／A	A	A	C	A	A
Barium Nitrate	3.24	20	40	A	A	A	A／B	B	A	B	A	B

VANCS — CORROSION RESISTANCE CHART

Fluid Specifications				Plastic Parts PU, PN, TM			Rubber Parts PU, PN, TM			Metallic Parts PU, PN	Metallic Parts TM	The Others PU, PN, TM
Name of Chemicals	Specific Gravity	Density %	Temp ℃	Impeller	HeadCover, Oil Casing	Pump Casings, Strainer	Power Cable	Oil Casing Packing, Pump Casing O-Ring	Head Cover Packings, Flange Packing	Motor Frame, Shaft, Cable G;and, Bolts	Motor Frame, Shaft, Cable G;and, Bolts	Mechanical Seal
				PPO	PPS	ABS	PVC/CR	NBR	NR	SUS304	TITANIUM	W-14H
Barium Sulfite		10	40	A	A	A	A／A	A	A	B	A	B
Beer	1.1	100	20	A	A	A	B／B	B	A	A	A	B
Beet Sugar				A	A	A	A／A	A	A	A	A	A
Benzaldehyde	1.05	100	40	A	A	C	C／C	C	C	B	A	C
Benzene	0.88	100	40	A	B	C	C／C	C	C	A	A	C
Benzoic Acid	1.27	20	40	A	A	B	B／A	C	C	B	A	C
Black Liquor		20	40	A	—	—	A／A	B	—	C	A	B
Bleaching Liquor		10	20	A	A	A	A／C	A	—	C	A	B
Boiler Feed Water		100	40	A	A	A	B／B	A	—	B	A	A
Borax	1.72	20	40	A	A	A	B／A	A	A	A	A	A
Boric Acid	1.49	20	40	A	A	B	B／B	A	A	Apit.	A	A
Bunker Fuel		100	20	A	A	B	A／A	A	C	A	A	A
Butyl Acetate	0.88	2	40	A	A	C	C／C	C	C	B	A	C
Butyric Acid	0.96	20	40	A	B	—	C／—	C	—	B	B	C
Calcium Carbonate	2.70～2.95	10	40	A	A	A	—／—	—	A	A	A	A
Calcium Bisulfite	1.06	10	40	A	A	A	A／A	A	—	C	A	B
Calcium Chloride	2.15	30	40	A	A	A	A／A	A	A	Bpit.	A	A
Calcium Hydroxide	2.24	10	40	A	A	A	A／A	A	A	A	A	A
Calcium Nitrate	1.82	20	40	A	A	A	A／A	B	A	Bs.c.	A	B
Calcium Phosphate	2.20～3.18	20	20	A	A	A	A／A	A	—	B	A	C
Calcium Phosphate Dibasic	2.31	10	40	A	A	A	A／A	A	—	C	A	A
Calcium Phosphate Monobasic	2.22	10	40	A	A	A	A／A	A	—	C	A	A
Calcium Sulfite		10	40	A	A	A	A／A	A	—	B	A	C
Cane Sugar Liquors		100	40	A	A	A	A／A	A	A	A	A	A
Carbolic Acid(Phenol)		100	40	A	A	C	C／C	C	C	Bpit.	A	C
Carbon Disulfide	1.26	100	25	A	A	C	C／C	C	C	A	A	C
Carbonic Acid Aqueous			40	A	A	B	B／A	A	A	A	A	A
Casein	1.25			A	A	A	A／A	A	A	A	A	—
Castor Oil	0.96～0.97	100		A	A	B	B／A	A	B	A	A	A
Cellosolve	0.93	20	20	A	A	C	C／A	A	B	B	A	B
Chlorine Water			40	A	A	A	C／C	C	C	C	A	C
Chlorobenzene	1.17	100	40	B	B	C	C／—	C	—	B	A	C
Chlorosulphonic Acid	1.8	100	40	A	B	C	C／C	C	C	Cpit.	A	C
Chromium Potassium Alum	1.83	10	20	A	A	A	A／B	A	B	B	A	A
Citric Acid	1.54	20	40	A	A	B	B／B	B	A	Bpit.	A	B
Coal Dust And Water			40	A	A	—	A／A	A	A	B	A	B
Coconut Acid		100	20	A	A	B	A／B	B	A	A	A	B

VANCS — CORROSION RESISTANCE CHART

Fluid Specifications				Plastic Parts PU, PN, TM			Rubber Parts PU, PN, TM			Metallic Parts PU, PN	Metallic Parts TM	The Others PU, PN, TM
Name of Chemicals	Specific Gravity	Density %	Temp ℃	Impeller	HeadCover, Oil Casing	Pump Casings, Strainer	Power Cable	Oil Casing Packing, Pump Casing O-Ring	Head Cover Packings, Flange Packing	Motor Frame, Shaft, Cable G;and, Bolts	Motor Frame, Shaft, Cable G;and, Bolts	Mechanical Seal
				PPO	PPS	ABS	PVC/CR	NBR	NR	SUS304	TITANIUM	W-14H
Coconut Oil	0.92	100	20	A	A	B	B／B	B	B	A	A	B
Copper Cyanide		10	40	A	A	A	B／—	A	A	B	A	A
Copper Nitrate	2	20	40	A	A	A	A／A	B	A	A	A	A
Copper Sulfate	2.29	20	40	A	A	A	A／A	A	A	Ci.g.c.	B	B
Corn Oil	0.91	100	20	A	B	B	B／B	A	C	A	A	A
Cotton Seed Oil	0.92		40	A	A	B	B／B	B	B	A	A	B
Creosote Oil	1.03	100	40	A	A	B	C／B	C	C	B	A	C
Cresol	1.34	100	40	A	B	C	B／C	C	C	A	A	C
Cyclohexane	0.78	100	40	A	A	B	C／B	B	C	B	A	B
Daitomaceous Earth Water			40	A	A	A	A／A	A	A	A	A	A
Developing Agent			20	A	A	A	B／A	C	A	B	A	C
Diacetone Alcohol	0.94	10	40	A	A	C	C／B	C	B	A	A	C
Dibutyl Phthalate	1.05	100	40	A	A	C	C／—	C	C	B	A	C
Dichlorobenzene	1.46	100	40	B	A	C	C／C	C	C	B	A	C
Diethylene Glycol	1.12	20	40	A	A	B	B／A	A	A	A	A	A
Dioctyl Phthalate	0.99	100	20	A	A	C	C／A	A	C	A	A	B
Diphenyl	1.18	100	20	A	A	B	C／C	C	C	C	A	C
Diphenyl Ether	1.08	100	20	A	A	B	C／B	B	—	C	A	B
Ethyl Acetate	0.9	10	40	A	A	C	C／C	C	C	B	A	C
Ethyl Acrylate	0.91	100	40	A	A	C	C／—	C	C	A	A	C
Ethyl Alcohol	0.79	20	40	A	A	A	C／A	A	A	B	A	A
Ethyl Cellulose	1.14	100	20	A	A	C	C／B	B	B	C	A	B
Ethyl Chloride	0.9	100	40	A	A	C	C／B	B	A	C	A	C
Ethyl Diglycol	0.99	100	40	A	B	C	C／B	A	—	B	A	A
Ethyl Formate	0.92	10	40	A	A	C	A／B	C	—	B	A	C
Ethylene Chloride		100	40	A	A	C	C／—	—	C	C	A	C
Ethylene Glycol	1.11	20	40	A	A	A	B／A	A	A	B	A	A
Ethylenediamine	0.9	20	40	A	A	C	C／A	A	A	B	A	A
Fatty Acid		100	40	A	A	B	A／B	A	C	Bs.c.	A	B
Ferric Chloride	2.8	20	40	A	A	A	A／A	C	A	Cpit.	A	C
Ferric Hydroxide	3.4～3.9	10	20	A	A	A	A／A	A	A	B	A	A
Ferric Nitrate	1.69	20	40	A	A	A	A／A	B	A	B	A	B
Ferric Sulfate	3.1	5	40	A	A	A	B／A	A	A	Bs.c.	A	A
Ferrous Sulfate	1.89	20	40	A	A	A	A／A	A	A	Cpit.	A	A
Fish Oil		100	40	A	A	B	A／B	A	C	A	A	A
Fish-liver Oil		100	40	A	A	B	A／A	A	C	A	A	A
Formalin	1.08	20	20	A	A	A	B／A	A	B	A	A	B

VANCS — CORROSION RESISTANCE CHART

Fluid Specifications				Plastic Parts			Rubber Parts			Metallic Parts		The Others
				PU, PN, TM			PU, PN, TM			PU, PN	TM	PU, PN, TM
Name of Chemicals	Specific Gravity	Density %	Temp ℃	Impeller	HeadCover, Oil Casing	Pump Casings, Strainer	Power Cable	Oil Casing Packing, Pump Casing O-Ring	Head Cover Packings, Flange Packing	Motor Frame, Shaft, Cable G;and, Bolts	Motor Frame, Shaft, Cable G;and, Bolts	Mechanical Seal
				PPO	PPS	ABS	PVC/CR	NBR	NR	SUS304	TITANIUM	W-14H
Formalin		100	20	A	A	B	B／A	B	B	A	A	B
Formic Acid	1.22	30	40	A	A	C	B／A	C	C	C	B	C
Fruit Juice And Pulp		100	40	A	B	A	A／C	C	—	Bpit.	A	C
Fuel oil		100	40	A	A	B	C／B	A	C	A	A	A
Gallic Acid	1.69	20	40	A	A	—	C／B	B	—	B	A	B
Gas Oil		100	40	A	A	B	C／—	A	C	A	A	A
Gasoline	2.7	100	20	A	A	C	C／B	B	C	A	A	B
Glucose	1.54	20	40	A	A	A	A／A	A	A	A	A	A
Glycerol	1.26	20	40	A	A	A	B／A	A	A	A	A	A
Gypsum	2.32	10	40	A	A	A	A／A	A	A	B	A	A
Heavy Oil		100	40	A	A	C	A／C	B	C	A	A	A
Heptane	0.68	100	40	A	A	A	—／A	A	C	A	A	A
Hexane	0.68	100	40	A	A	C	C／B	B	C	A	A	C
Hexy Alcohol	0.82	100	40	A	A	B	C／B	A	A	A	A	A
Hydro Sulfite		10	40	A	A	A	A／B	B	C	A	A	B
Hydrobromic Acid	1.49	20	40	A	A	C	C／B	B	C	C	B	C
Hydrochloric Acid	1.19	10	40	A	B	A	C／A	A	A	C	B	B
Hydrochloric Acid		38	40	B	B	A	C／C	C	C	C	C	B
Hydrogen Peroxide	1.46	5	20	A	A	C	B／C	C	C	B	A	C
Hydrogen Sulfide(Liquid)	0.96	10	40	A	A	B	A／A	A	A	Cs.c.	A	B
Hydroquinone	1.33	10	20	A	A	C	B／A	A	A	A	A	A
Ink			40	A	A	A	C／—	B	—	B	A	B
Iodoform	4.08	100	20	A	B	A	A／C	C	—	C	B	C
Isooctane	0.69	100	40	A	A	A	C／B	A	C	A	A	B
Isopropyl Alcohol	0.79	20	40	A	A	B	C／B	B	A	B	A	A
Kaoline	2.4	10	40	A	A	A	A／B	B	B	A	A	A
Kerosene		100	20	A	A	B	B／B	A	B	A	A	A
Ketchup		100	20	A	A	A	A／A	A	A	B	A	A
Lactic Acid	1.25	20	40	A	A	A	B／B	B	A	Bi.g.c.	A	C
Latex		100	20	A	A	A	A／B	B	C	A	A	B
Lead Acetate	2.55	20	40	A	A	A	B／B	C	A	B	A	C
Lead Nitrate	4.53	20	40	A	A	B	B／B	C	A	B	A	A
Lemon Oil	0.86			A	A	A	A／C	C	—	A	A	—
Lime Water			40	A	A	A	A／A	A	A	A	A	A
Linseed Oil	0.93	100	40	A	A	B	C／A	A	B	A	A	A
Lithium Bromide	3.46	20	40	A	A	A	A／A	A	A	B	A	A
Lithium Chloride	2.07	30	40	A	A	A	A／A	A	—	Bs.c.	A	A

VANCS — CORROSION RESISTANCE CHART

Fluid Specifications				Plastic Parts			Rubber Parts			Metallic Parts		The Others
				PU, PN, TM			PU, PN, TM			PU, PN	TM	PU, PN, TM
Name of Chemicals	Specific Gravity	Density %	Temp ℃	Impeller	HeadCover, Oil Casing	Pump Casings, Strainer	Power Cable	Oil Casing Packing, Pump Casing O-Ring	Head Cover Packings, Flange Packing	Motor Frame, Shaft, Cable G;and, Bolts	Motor Frame, Shaft, Cable G;and, Bolts	Mechanical Seal
				PPO	PPS	ABS	PVC/CR	NBR	NR	SUS304	TITANIUM	W-14H
Lubricating Oil		100	40	A	A	B	B／A	A	C	A	A	A
Magnesium Carbonate	2.17～2.30	10	40	A	A	A	－／－	－	－	B	A	C
Magnesium Chloride	2.32	30	40	A	A	A	A／A	A	A	Cs.c.	A	A
Magnesium Hydroxide		10	20	A	A	A	A／A	A	A	B	A	A
Magnesium Nitrate	1.64	20	40	A	A	A	A／A	B	A	B	A	B
Magnesium Sulfate	1.68	20	40	A	A	A	A／A	A	A	B	B	B
Magnesium Sulfite		10	40	A	A	A	A／A	A	A	B	A	B
Maleic Acid	1.59	20	40	A	A	A	B／C	B	B	Bi.g.c.	A	C
Malic Acid	1.6	20	20	A	A	A	C／B	B	A	B		B
Manganese Chloride	2.98	30	40	A	A	A	A／A	A	－	B	A	A
Manganese Sulfate	2.1～2.9	20	40	A	A	A	A／A	A	A	B	B	A
Mercuric Chloride		20	40	A	A	A	B／A	A	A	Cs.c.	A	C
Methane	0.42	100	40	A	A	A	A／A	A	－	A	A	A
Methyl Acrylate	0.95	100	40	A	A	C	C／－	C	－	A	A	C
Methyl Alcohol	0.79	20	40	A	A	B	C／B	A	A	B	A	A
Methyl Chloride	0.92	20	40	A	A	C	C／C	C	C	B	A	C
Methyl Chloroform	1.35	100	40	A	A	C	－／－	C	－	A	A	C
Methyl Ethyl Ketone	0.81	20	40	A	A	C	C／C	C	C	A	A	C
Methyl Formate	0.98	20	40	A	A	C	A／B	C	B	B	A	C
Methyl Isobutyl Ketone	0.8	100	40	A	A	C	C／C	C	C	A	A	C
Milk		100	20	A	A	A	A／B	B	A	A	A	B
Milk Of Lime			40	A	A	A	A／A	A	－	A	A	A
Mine Water		100	40	A	A	A	A／B	C	－	B	A	C
Mineral Oil		100	40	A	A	B	B／B	A	C	A	A	A
Mixed Acid			40	C	B	C	C／－	C	－	C	A	C
Molasses				A	A	A	A／B	A	A	A	A	A
Naphtha	0.7	100	20	A	A	B	B／B	B	C	A	A	C
Nickel Acetate	1.74	10	40	A	A	A	A／A	C	B	B	A	C
Nickel Chloride	3.52	20	40	A	A	A	A／A	B	A	Cpit.	A	B
Nickel Sulfate	2.03～3.68	20	40	A	A	A	A／A	A	A	B	B	A
Nitric Acid	1.5	20	20	A	A	B	B／C	C	C	A	A	C
Nitric Acid		40	40	B	A	C	C／C	C	C	B	A	C
Nitrous Acid		20	25	A	B	A	A／C	C	－	A	A	C
Octanal	0.83	100	20	A	A	A	A／A	A	B	A	A	A
Oleic Acid	0.9	100	40	A	A	B	C／B	B	C	B	A	C
Oxalic Acid	1.65	10	40	A	A	A	B／B	B	B	Ci.g.c.	B	B
Palm Kernel Oil	0.95	100	40	A	A	B	A／A	A	C	A	A	A

VANCS — CORROSION RESISTANCE CHART

Fluid Specifications				Plastic Parts			Rubber Parts			Metallic Parts		The Others
				PU, PN, TM			PU, PN, TM			PU, PN	TM	PU, PN, TM
Name of Chemicals	Specific Gravity	Density %	Temp ℃	Impeller	HeadCover, Oil Casing	Pump Casings, Strainer	Power Cable	Oil Casing Packing, Pump Casing O-Ring	Head Cover Packings, Flange Packing	Motor Frame, Shaft, Cable G;and, Bolts	Motor Frame, Shaft, Cable G;and, Bolts	Mechanical Seal
				PPO	PPS	ABS	PVC/CR	NBR	NR	SUS304	TITANIUM	W-14H
Palm Oil	0.92～0.99	100	40	A	A	B	A／A	A	C	A	A	A
Peanut Oil	0.92	100	20	A	A	B	A／A	A	C	A	A	A
Pectin		100	40	A	A	A	－／A	A	－	A	A	A
Penicillin		100	40	A	A	A	B／B	B	－	A	A	－
Perchloric Acid	1.76	10	40	B	A	－	C／A	C	A	C	A	C
Perchloroethylene	1.63	100	20	A	A	C	C／B	C	C	A	A	C
Petroleum	0.78～0.97	100	20	A	A	B	B／A	A	C	A	A	A
Phenyl Acetic Acid	1.23	5	40	A	A	B	B／C	C	－	C	A	C
Phosphate	1.88	10	40	A	A	B	B／A	A	B	A		C
Phosphate		85	40	A	A	C	C／B	B	B	A		C
Phosphoric Acid	1.88	20	40	A	A	A	A／B	B	B	A	A	B
Phosphoric Acid		70	20	A	A	A	A／B	B	－	C	A	C
Phosphorus Trichloride	1.58	10	20	A	A	A	B／C	B	－	B	B	B
Picric Acid	1.77	20	20	A	A	－	C／B	B	B	C	A	A
Pinene	0.87	100	20	A	A	－	C／C	B	C	A	A	B
Piperazine		20	40	A	A	－	－／C	B	C	A	A	B
Potassium Aluminum Sulfate	1.75	10	20	A	A	A	A／A	A	A	B	A	A
Potassium Bromide	2.76	20	40	A	A	A	A／A	A	－	Cpit.	A	A
Potassium Carbonate	2.43	20	40	A	A	A	－／A	A	－	A	A	A
Potassium Chlorate	2.32	20	40	A	A	A	C／A	A	－	B	A	B
Potassium Chloride	1.98	20	40	A	A	A	A／A	A	A	Bpit.	A	A
Potassium Chromate	2.73	30	40	A	B	B	A／A	A	C	B	A	B
Potassium Cyanide	1.52	20	40	A	A	A	C／A	A	－	B	A	B
Potassium Dichromate	2.68	20	40	A	B	B	A／A	A	A	B	A	A
Potassium Hydrogen Carbonate	2.17	20	40	A	A	A	－／－	A	－	A	A	A
Potassium Iodide	3.13	20	20	A	A	A	A／A	A	－	Bpit.	B	A
Potassium Nitrite	1.92	50	40	A	A	A	A／A	A	A	B	A	A
Potassium Permanganate	2.7	30	40	A	A	B	B／B	C	C	B	A	C
Potassium Persulfate	2.4	10	40	A	A	A	A／A	A	－	B	A	A
Potassium Phosphate	2.33	20	20	A	A	A	A／A	A	A	B	A	B
Potassium Silicate	1.25	30	40	A	A	A	A／A	A	－	B	A	B
Potassium Sulfate	2.67	10	40	A	A	A	A／A	A	A	B	B	A
Potassium Sulfide		10	40	A	A	A	A／A	B	A	B	A	B
Potassium Sulfite	1.81	10	40	A	A	A	A／A	A	A	B	A	A
Potasssium Nitrate	2.1	20	40	A	A	A	A／A	B	A	B	A	A
Pottasium Hydroxide	2.04	20	40	A	A	A	A／A	A	A	B	A	A
Propylene Glycol	1.03～1.04	20	40	A	A	A	C／C	B	－	A	A	B

VANCS — CORROSION RESISTANCE CHART

Fluid Specifications				Plastic Parts			Rubber Parts			Metallic Parts		The Others
				PU, PN, TM			PU, PN, TM			PU, PN	TM	PU, PN, TM
Name of Chemicals	Specific Gravity	Density %	Temp ℃	Impeller	HeadCover, Oil Casing	Pump Casings, Strainer	Power Cable	Oil Casing Packing, Pump Casing O-Ring	Head Cover Packings, Flange Packing	Motor Frame, Shaft, Cable G;and, Bolts	Motor Frame, Shaft, Cable G;and, Bolts	Mechanical Seal
				PPO	PPS	ABS	PVC/CR	NBR	NR	SUS304	TITANIUM	W-14H
Propylene Glycol		100	80	A	A	A	C／C	—	C	A	A	—
Prussic Acid	0.69	10	20	A	A	—	A／B	C	—	B	A	C
Pyrogallol	1.46	20	40	A	A	—	—／A	A	—	B	A	A
Pyrophosphoric Acid		20	40	A	A	A	C／B	B	C	B	A	B
Rape Seed Oil	0.91	100	20	A	A	B	A／A	A	C	A	A	A
Refrigerating Oil				A	A	B	C／A	A	—	A	A	A
Residue		100	20	A	A	B	B／C	A	—	A	A	A
Sake		100	20	A	B	A	A／A	A	A	B	A	A
Salad Oil		100	40	A	A	B	C／—	A	—	A	A	A
Salt Water		25	40	A	A	A	A／A	A	A	B	A	A
Sea Water		100	20	A	A	A	A／A	B	B	Bpit.	A	A
Sesame Oil	0.92	100	40	A	A	B	A／A	A	C	A	A	A
Silicon Oil		100	40	A	A	B	B／B	B	A	A	A	B
Silver Nitrate	4.35	20	40	A	A	A	B／A	C	A	B	A	C
Slaked Lime	2.24	20	40	A	A	A	A／A	A	—	B	A	A
Soap Solution			40	A	A	A	A／A	A	A	A	A	A
Soda Ash	2.53	20	40	A	A	A	A／A	A	A	A	A	B
Soda Lime			40	A	A	A	A／A	A	—	A	A	B
Sodium Acetate	1.45	20	40	A	A	B	A／C	B	A	Bpit.	A	B
Sodium Aluminate	1.58	20	40	A	A	A	A／A	A	A	A	A	A
Sodium Bicarbonate	2.21	10	40	A	A	A	A／A	A	A	B	A	A
Sodium Bichromate	2.52	20	40	A	B	B	A／A	A	B	B	A	B
Sodium Bisulfate	2.74	20	40	A	A	A	A／A	A		B	B	A
Sodium Bromide	3.21	20	40	A	A	A	A／A	A	—	C	A	B
Sodium Chlorate	2.5	20	40	A	A	A	C／—	—	—	B	A	C
Sodium Chloride	2.16	20	40	A	A	A	A／A	A	A	Bpit.	A	A
Sodium Chromate	1.48	30	40	A	B	B	A／A	A	C	B	A	B
Sodium Cyanide		20	40	A	B	A	B／A	A	A	A	A	A
Sodium Hydroxide	2.13	20	40	A	B	A	B／A	A	A	A	A	A
Sodium Hydroxide		20	40	A	A	A	A／A	A	A	A	A	B
Sodium Hypochlorite	1.1	10	25	A	A	B	B／C	B	C	Cpit.	A	B
Sodium Metaphosphate	2.48	10	40	A	A	A	A／A	A	A	B	A	B
Sodium Metasilicate		20	40	A	A	A	A／A	A	—	A	A	—
Sodium Nitrate	2.27	20	40	A	A	A	A／A	B	B	A	A	B
Sodium Nitrite	2.17	50	40	A	A	A	A／A	A	A	B	A	B
Sodium Peroxide	2.81	100	20	A	A	C	B／A	B	B	B	A	B
Sodium Phosphate	1.52～2.04	20	40	A	A	A	A／B	B	A	C	A	B

VANCS — CORROSION RESISTANCE CHART

Fluid Specifications				Plastic Parts			Rubber Parts			Metallic Parts		The Others
				PU, PN, TM			PU, PN, TM			PU, PN	TM	PU, PN, TM
Name of Chemicals	Specific Gravity	Density %	Temp ℃	Impeller	HeadCover, Oil Casing	Pump Casings, Strainer	Power Cable	Oil Casing Packing, Pump Casing O-Ring	Head Cover Packings, Flange Packing	Motor Frame, Shaft, Cable G;and, Bolts	Motor Frame, Shaft, Cable G;and, Bolts	Mechanical Seal
				PPO	PPS	ABS	PVC/CR	NBR	NR	SUS304	TITANIUM	W-14H
Sodium Phosphate Monobasic	1.91	20	40	A	A	A	A／A	A	—	C	A	A
Sodium Phosphate Dibasic	1.53	20	40	A	A	A	A／A	A	—	C	A	A
Sodium Silicate		30	40	A	A	A	A／A	A	A	B	A	B
Sodium Sulfate	2.67	20	40	A	A	A	A／A	A	A	Bs.c.	A	A
Sodium Sulfide	1.86	20	40	A	A	A	A／A	A	A	Bpit.	A	A
Sodium Sulfite	1.56	10	40	A	A	A	B／A	B	B	B	A	C
Sodium Thiosulfate	1.69	20	40	A	A	A	A／A	A	A	B	A	B
Sorbitol	1.65	100	20	A	A	B	A／A	A	A	B	A	B
Soy Sause		100	40	A	A	A	A／A	A	B	A	A	A
Soybean Oil	0.92	100		A	A	B	B／A	A	C	A	A	A
Starch Slurry	1.5			A	A	A	A／A	A	A	A	A	A
Sulfuric Acid	1.84	10	40	A	B	A	B／A	A	A	Ci.g.c.	C	C
Sulfuric Acid		90	40	B	A	C	C／C	C	C	Bi.g.c.	C	C
Sulfurous Acid		10	40	A	B	B	B／B	B	B	Ci.g.c.	A	C
Syrup		100	40	A	A	A	A／A	A	A	A	A	A
Tall Oil	0.95	100		A	A	C	B／B	B	C	B	A	B
Tannic Acid		10	20	A	A	B	B／A	A	A	B	A	A
Tar		100	20	A	A	C	C／B	B	C	A	A	B
Tartaric Acid	1.76	20	40	A	A	A	B／A	B	B	B	A	B
Tetrachloroethane	1.6	100	20	A	A	B	A／C	C	—	B	A	C
Tetraethyl Lead	1.65	100	20	A	A	B	B／C	C	—	A	A	C
Thiourea	1.41	10	40	A	A	A	A／A	A	—	A	A	B
Toluene	0.87	100	40	A	B	C	C／C	C	C	A	A	C
Tricresyl Phosphate	1.15	100	20	A	A	C	A／C	C	A	B	A	C
Triethanolamine	1.12	20	40	A	A	C	C／B	A	A	A	A	B
Triethylene Glycol	1.13	20	40	A	A	A	C／B	A	—	A	A	A
Trimethylamine	0.64	20	20	A	A	B	—／B	A	—	A	A	A
Turkey Red Oil	0.95	100	40	A	A	—	A／C	C	—	B	B	—
Turpentine Oil	0.86	100	40	A	A	B	C／C	B	C	A	A	B
Urine	1.34	20	40	A	A	A	A／A	A	—	B	A	B
Vegetable Oil		100	40	A	A	B	B／B	A	C	A	A	A
Vetrocoke Solution				A	A	—	—／B	B	—	A	A	—
Vinegar		100	40	A	A	B	B／A	C	A	A	A	C
Viscose				A	A	—	C／A	A	—	A	A	B
Waste Water(Slightly acid)		100	40	A	A	A	A／A	A	A	B	A	A
Whiskey	0.93	100	20	A	A	A	A／A	A	A	B	A	A
White Water			40	A	A	—	A／B	A	C	B	A	B

VANCS — CORROSION RESISTANCE CHART

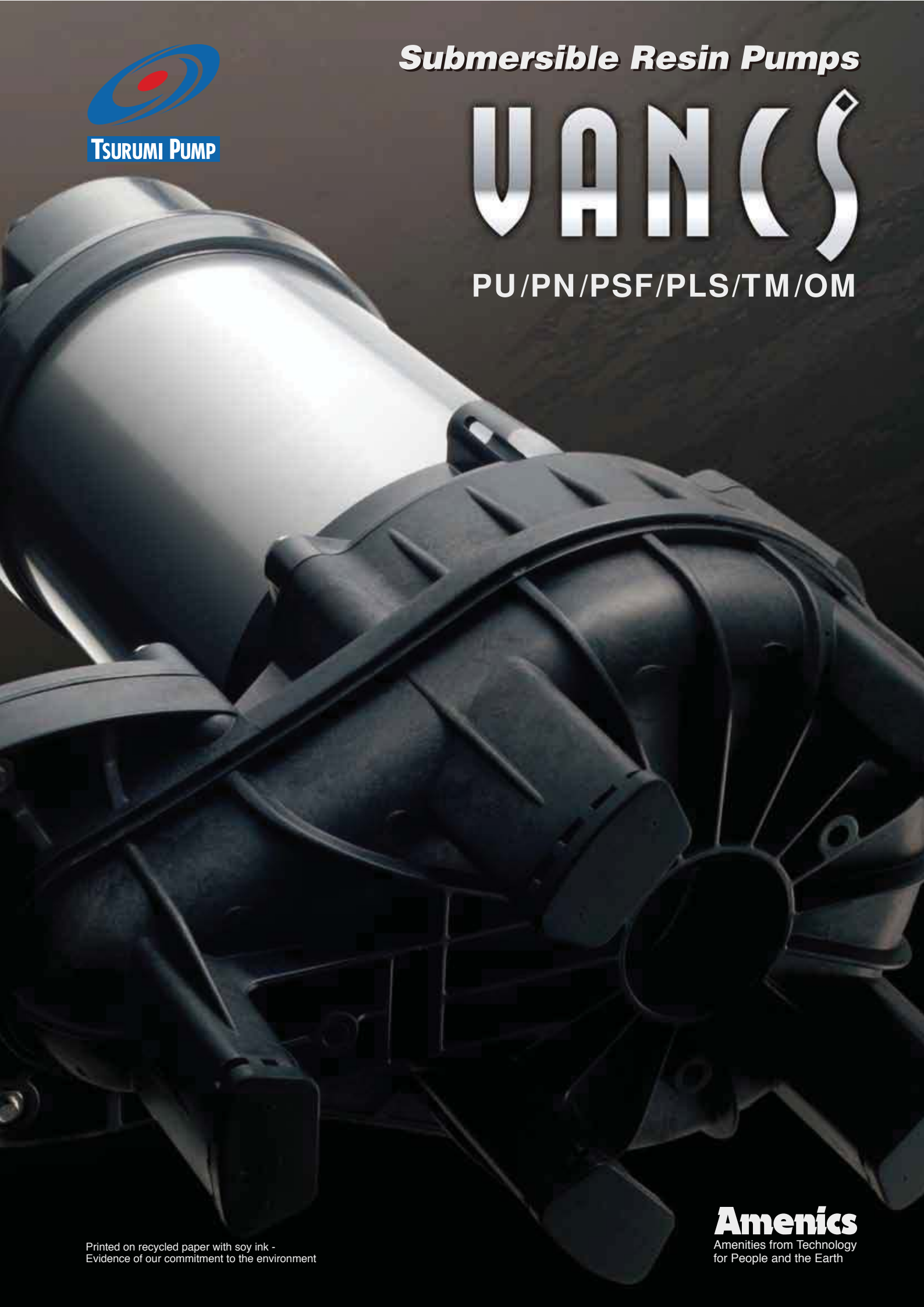
Fluid Specifications				Plastic Parts			Rubber Parts			Metallic Parts		The Others
				PU, PN, TM			PU, PN, TM			PU, PN	TM	PU, PN, TM
Name of Chemicals	Specific Gravity	Density %	Temp ℃	Impeller	HeadCover, Oil Casing	Pump Casings, Strainer	Power Cable	Oil Casing Packing, Pump Casing O-Ring	Head Cover Packings, Flange Packing	Motor Frame, Shaft, Cable G;and, Bolts	Motor Frame, Shaft, Cable G;and, Bolts	Mechanical Seal
				PPO	PPS	ABS	PVC/CR	NBR	NR	SUS304	TITANIUM	W-14H
Wine		100	20	A	A	A	A／A	A	A	A	A	A
Xylene	0.87	100	40	A	B	C	C／C	C	C	B	A	C
Zinc Acetate	1.73	20	40	A	A	A	A／C	C	A	B	A	C
Zinc Chloride	2.91	20	40	A	A	A	A／A	A	A	Cs.c.	A	A
Zinc Cyanide	1.85	10	20	A	A	A	A／A	A	A	B	A	B
Zinc Nitrate	2.07	20	40	A	A	A	A／A	C	—	B	A	C
Zinc Phosphate	3.11		20	A	A	A	A／B	B	—	C	A	—
Zinc Sulfate	1.97	20	40	A	A	A	A／A	A	A	B	B	B

TSURUMI PUMP

Submersible Resin Pumps

VANCS

PU/PN/PSF/PLS/TM/OM



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