

DATA CENTER SOLUTIONS

DAISAVE

NEXT-GEN COOLANTS

SS-110
1P-IC

SS-54
2P-D2C

SS-49
2P-IC



Low GWP



High safety



Excellent insulation



Excellent compatibility

Immersion Cooling for Servers

With the rapid growth in data processing demands, managing heat in data centers has become increasingly critical, especially in high-density environments.

Immersion cooling is emerging as a superior alternative to traditional air and water cooling methods.

By submerging servers in fluorinated liquids, this method provides several key benefits:

- Enhanced Cooling Efficiency: Direct immersion in the refrigerant eliminates the need for fans and pumps, leading to lower operational cooling costs and a decrease in the PUE.
- Corrosion Prevention: Equipment is isolated from humidity, oxygen, and dust particles, significantly reducing the risk of corrosion- and contamination-related failures.
- Space Optimization: Smaller rack sizes allow for higher server density, making more efficient use of server room space.
- To fulfill such performance, 2P-D2C is dependent on qualitatively superior dielectric fluids.

Scan for more
information.



Features

- High Insulation Property: Eliminates the risk of short-circuiting, ensuring safe operation of equipment.
- Low Viscosity and Excellent Thermal Conductivity: Large heat transport capacity and excellent cooling efficiency.
- No Flash Point: Safe and easy to handle.
- Environmentally friendly: Zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP) < 20**.

Physical Properties¹

Properties	Unit	DAISAVE		
		SS-49	SS-54	SS-110
Flash Point	°C	none		
GWP	-	< 20**	264 (AR4)	< 100**
Boiling Point	°C	49	54	110
Freezing Point	°C	< -90	-92	< -130
Density 25 °C	g / cm ³	1.61	1.39	1.78
Kinetic Viscosity 25 °C	mm ² / s	0.36	0.4	0.95
Specific Heat 25 °C	kJ / kg · K	1.10	1.30	1.03
Thermal Conductivity 25 °C	W / m · K	0.064	0.081	0.064
Dielectric Strength	kV	> 40	26*	> 40*
Volume Resistivity	Ω · cm	10 ¹⁶ *	10 ⁹ *	10 ¹³ *
Dielectric Constant at 1 kHz	-	1.8*	8.9	2.0*

Material Compatibility²

Category	Material	DAISAVE		
		SS-49	SS-54	SS-110
Plastics	ABS, AS, PS, PVC, PP, PE, PC, m-PPE, PET, PBT, PA6, PA66, POM, PPS, FEP	S	S	S
	PMMA	D	S	S
	PTFE, PFA	S	S	B
	ETFE	n.a.	S	S
	Epoxy glass, PF	S	S	S
Rubbers	CSM	S	S	S
	EPDM, IIR, NR	A	S	S
	CR	A	S	A
	NBR	C	S	S
	U	D	S	S
Metals	Aluminum, Copper, Brass, SUS304	S	S	S
	Nickel	S	n.a.	S

¹ Listed values are typical and not guaranteed.

² Volume / weight change: **S**: ± <1% | **A**: ± <1% / ± <5% or vice versa | **B**: ± <5% | **C**: ± <5% / ± >5% | **D**: ± >5% | **n.a.**: unrated

* Measurements taken at room temperature (20 - 25 °C).

** Values under evaluation and subject to future changes.