

November 2022

REACH Candidate List substances in Danfoss products

Danfoss supports the objectives of REACH and has a process to ensure compliance with the EU regulation for **Registration, Evaluation, Authorization and restriction of Chemicals** as described in the [Danfoss Position on REACH](#).

The REACH Candidate List is published by the European Chemicals Agency (ECHA) and is updated with new substances every six months.

As a part of the REACH Article 33 obligations, Danfoss informs customers directly if articles in supplied products contain Candidate List substances in a concentration above 0.1% (w/w).

This document is intended as a service to our customers providing an overview of Danfoss products containing Candidate List (CL) substances in a concentration above 0.1% (w/w).

Danfoss Power Solutions:

Product Type	Product Family	Metallic Lead CAS 7439-92-1	Note
Axial piston variable displacement pumps			
Axial piston units	D1P	X	Free machining steel, axial sliding bearings, brass, soldering
	S90	X	Free machining steel, axial sliding bearings, brass, soldering
	T90 Series	X	Free machining steel, axial sliding bearings, brass, soldering
	H1P	X	Free machining steel, axial sliding bearings, brass, soldering
	H1T	X	Free machining steel, axial sliding bearings, brass, soldering
	S45	X	Free machining steel, axial sliding bearings, brass, soldering
	M46 -PT/PV	X	Free machining steel, axial sliding bearings, brass, soldering
	M25, S40, S42, S46	X	Free machining steel, axial sliding bearings, brass, soldering
	BDA	X	Free machining steel, axial sliding bearings, brass, soldering
	MP1	X	Free machining steel, axial sliding bearings, brass, soldering
	LPV	X	Free machining steel, axial sliding bearings, brass, soldering
	M53	X	Free machining steel, axial sliding bearings, brass, soldering
	M35/44	X	Free machining steel, axial sliding bearings, brass, soldering
	S51	X	Free machining steel, axial sliding bearings, brass, soldering

	T90	X	Free machining steel, axial sliding bearings, brass, soldering
	H1B	X	Free machining steel, axial sliding bearings, brass, soldering
	M46 -MF/MV MMC	X	Free machining steel, axial sliding bearings, brass, soldering
	L/K	X	Free machining steel, axial sliding bearings, brass, soldering
	Fairfield Units	X	Free machining steel, axial sliding bearings, brass, soldering
	45° Kit	X	Free machining steel, axial sliding bearings, brass, soldering
	DDC20 / LDU20	X	Free machining steel, axial sliding bearings, brass, soldering
	CUT M51/44	X	Free machining steel, axial sliding bearings, brass, soldering
	BDU	X	Free machining steel, axial sliding bearings, brass, soldering
	H1 AC	X	Soldering
	Sensors	X	Soldering
Orbital motors			
Orbital motors	O-Series	X	Die casts and machined parts, sealings
	T-Series	X	Die casts and machined parts
	W-Series	X	Die casts and machined parts
	R-Series	X	Die casts and machined parts
Steering Components and systems			
Electrohydraulic steering	EHPS	X	Die casts and machined parts, soldering
	OSPE	X	Die casts and machined parts, soldering
	Ehi	X	Die casts and machined parts, soldering
	PVED CLS	X	Die casts and machined parts, soldering
Hydraulic steering	SU - OSPC	X	Machined parts
	SU - OSPD	X	Machined parts
	SU - OSPF	X	Machined parts
	SU - OSPL	X	Machined parts
	SU - OSPU	X	Machined parts
	SU - VSP	X	Machined parts
	OSQ	X	Machined parts
	OVP/OVR	X	Machined parts
	SV - OLS	X	Machined parts
Valves			
PVG proportional valves	PVG 16	X	Die casts and machined parts
	PVG 32	X	Die casts and machined parts
	PVG 100	X	Die casts and machined parts
	PVG 120	X	Die casts and machined parts
	PVG 128/256	X	Die casts and machined parts
PVE electrohydraulic actuators	PVED	X	Die casts and machined parts
	PVE S7	X	Die casts and machined parts
	PVE-EX	X	Die casts and machined parts
DCV directional control valves	ECO 80	X	Die casts and machined parts
Electronic controls			
PLUS+1® controllers	MC microcontrollers	X	Housing screw inserts, select PCBA components
	SC microcontrollers	X	Housing screw inserts, select PCBA components
	XL104 Controller	X	Housing screw inserts, select PCBA components
PLUS+1® sensors	SASA steering sensor	X	Soldering

PLUS+1® displays	DP700 Series	X	Housing screw inserts, select PCBA components
	DP600TM Series	X	Housing screw inserts, select PCBA components
	DP570 Series	X	Housing screw inserts, connector housing, select PCBA components
	DP250 Series - Legacy	X	Select PCBA components
PLUS+1® Joysticks	JS1000	X	Soldering
	JS2000	X	Soldering
	JS120	X	Soldering
	Legacy Joystics	X	Soldering, mechanical detents, brass inserts
PLUS+1® Foot Pedals	KEP	X	Soldering
	KEP3	X	Soldering
PLUS+1® Operator interfaces	HMC programmable HMI controllers	X	Soldering
Position controls and sensors	MCX 103 CAN	X	Soldering
	CLS1000	X	Soldering
	CMSS1000	X	Soldering
	CSS1000	X	Soldering
	CYPRI	X	Soldering
	MCX103A	X	Soldering
	MCX103B,D	X	Soldering
	ACX104C	X	Soldering
	MCX120-CAN	X	Soldering
Ultrasonic Controller Sensor	X	Soldering	
Mobile electrification - - -			
Electric Converters	EC-C1200-450	X	Brass Parts
	EC-IDC24	X	Brass Parts
	EC-LTS1200-410	X	Brass Parts
Electric Machines	EM-PMI240-T180	X	Brass Parts
	EM-PMI300-T310	X	Brass Parts
	EM-PMI375-T200	X	Brass Parts
	EM-PMI375-T500	X	Brass Parts
	EM-PMI375-T800	X	Brass Parts
	EM-PMI375-T1100	X	Brass Parts
	EM-PMI540-T1500	X	Brass Parts
	EM-PMI540-T2000	X	Brass Parts
	EM-PMI540-T3000	X	Brass Parts
	EM-PMI540-T4000	X	Brass Parts
	EM-PME375-T150	X	Brass Parts
	EM-PME375-T200	X	Brass Parts
BU GEARS (Turolla) products -			
Aluminium Gear Pumps	Group 0	X	Aluminium alloy
	Group 1	X	Steel backed bronze material, aluminium alloy
	Group 2	X	Steel backed bronze material, aluminium alloy
	Group 3	X	Steel backed bronze material, aluminium alloy
	Group 4	X	Steel backed bronze material, steel alloy

Shhark® low noise gear pumps	Group 2	X	Steel backed bronze material, aluminium alloy
D-Series Gear Pump	DE1 - DE2 - DE3 - DE4	X	Steel backed bronze material,
Aluminium Gear Motors	Group 1 - SKM1	X	Steel backed bronze material, aluminium alloy
	Group 2 - SNM2/SNU2	X	Steel backed bronze material, aluminium alloy
	Group 3 - SNM3/SNU3	X	Steel backed bronze material, aluminium alloy
Fan Drive Gear Motors	Group 2 - SGM2	X	Steel backed bronze material, aluminium alloy
	Group 3 - SGM3	X	Steel backed bronze material, aluminium alloy
D-Series Gear Motors	DEM	X	Steel backed bronze material,
BU ICS (Comatrol) products			
Housings	Aluminium housings	X	Aluminum alloys
HICS	Fan drive HICS	X	Aluminum alloys
	Motor mount HICS	X	Aluminum alloys
	Proportional flow divider	X	Aluminum alloys
	Traction control HICS	X	Aluminum alloys
	Spreader valves HICS	X	Aluminum alloys

Danfoss Climate Solutions

Product type		CL Substance above 0.1% (w/w)	CAS number	
Compressors	Turbocor	Lead	7439-92-1	
	Compressors for air conditioning and heating	Lead	7439-92-1	
	Compressors for refrigeration	MLZ	Lead	7439-92-1
			Diisodecyl phthalate (DIDP)	26761-40-0
			Diisononyl phthalate (DINP)	28553-12-0
Others	Lead	7439-92-1		
Condensing units	Condensing units	Lead	7439-92-1	
Switches	Industrial pressure switch	Lead	7439-92-1	
	Industrial temperature switch	Lead	7439-92-1	
	Electronic pressure switch	Lead	7439-92-1	
	Pressure switches and thermostats for refrigeration	Lead	7439-92-1	
Sight glasses	Sight glasses	Lead	7439-92-1	
		Cobalt dichloride	7646-79-9	
Sensors and transmitters	Gas detecting sensor	Lead	7439-92-1	
	Position sensors	Lead	7439-92-1	
	Industrial pressure transmitters	AKS, MBS, EMP	Lead	7439-92-1
			Dodecamethylcyclohexasiloxane (D6)	540-97-6
	Others	Lead	7439-92-1	
	Industrial temperature sensor	AKS, MBT	Lead	7439-92-1
			Dodecamethylcyclohexasiloxane (D6)	540-97-6
	Others	Lead	7439-92-1	
	Liquid level sensors	Lead	7439-92-1	
Refrigeration pressure transmitters	Lead	7439-92-1		
Refrigeration temperature sensors	Lead	7439-92-1		

Valves for cooling systems	Shut-off valves		Lead	7439-92-1
	Check valves		Lead	7439-92-1
	Control and regulation valves	KV, CPCE	Lead Diisopentylphthalate (DIPP)	7439-92-1 605-50-5
		Others	Lead	7439-92-1
	Electric expansion valves	With sight glass	Lead Cobalt dichloride	7439-92-1 7646-79-9
		Without sight glass	Lead	7439-92-1
	Shut-off ball valves for re- frigeration		Lead	7439-92-1
	Solenoid valves		Lead	7439-92-1
	Thermostatic expansion valves		Lead	7439-92-1
Thermostatic valves		Lead	7439-92-1	
Externally operated valves		Lead	7439-92-1	
Solutions	Flexline		Lead	7439-92-1
Burner components	Oil nozzles		Lead	7439-92-1
	Oil pumps		Lead	7439-92-1
	Ignition units		Lead	7439-92-1
Differential pressure and flow control- lers	Differential pressure, flow and temperature control- lers		Lead	7439-92-1
Energy meter- ing	Energy meters		Lead	7439-92-1
Floor heating, ice and snow melting	Electric underfloor heating – thermostats	Danfoss Next Plus, Veria T45, DEVIreg Opti, easy&cosy Digital Controller, Wireless Devidry Kit Veria, Clickkit	Lead	7439-92-1
	Electric underfloor heating – accessories	Fitting for DEVI aqua, Heating cables	Lead	7439-92-1
	Ice and snow melting – thermostats	Ground sensor for DEVIreg 850, Roof sensor for DEVIreg 850	Lead	7439-92-1
	Pipe tracing – cables	DEVI aqua heating cables	Lead* *Cables produced after September 2022: Parts containing lead has been replaced and the cables no longer contain Candidate List substances >0,1%.	7439-92-1
	Hydronic underfloor heating	Room controls (Danfoss ECtemp Next, Basic Plus, Basic Plus2, FH-CWF Floor Sensor) Manifolds and actuators Mixing shunts	Lead	7439-92-1
Radiator and room thermostats	Radiator sensors	Radiator thermostats with a M30 and M28 connection, all remote setting thermostats, all remote sensor thermostats, all FJVR sensors	Lead	7439-92-1
	Radiator valves		Lead	7439-92-1
	Room thermostats and time controls	Programmable room thermostat, TPone Motorized Zone Valves	Lead	7439-92-1
Stations and domestic hot water systems	Flat stations		Lead	7439-92-1
	Domestic hot water systems		Lead	7439-92-1
	Substations		Lead	7439-92-1

Valves for heating	Hydronic balancing and control		Lead	7439-92-1
	Motorized control valves and actuators		Lead	7439-92-1
	Shut-off ball and butterfly valves for district energy		Lead	7439-92-1

Danfoss Drives Segment:

DDS Product Family	Metallic Lead (CAS 7439-92-1)
VLT®	
VLT® FC-51	X
VLT® FC-101	X
VLT® FC-102	X
VLT® FC-103	X
VLT® FCM/FCP-106	X
VLT® FC-202	X
VLT® FC-301	X
VLT® FC-302	X
VLT® FCD-302	X
VLT® LD302	X
VLT® FC-322	X
VLT® FC-360	X
VLT® FC-361	X
VLT® FC-280	X
ISD 401	X
ISD 410	X
ISD 510	X
MCB 150, MCB151, MCB152	X
OneGearDrive®	X
VLT® Advanced Active Filter AAF06	X
VLT® Multiaxis Servo Drive MSD 510 System	
PSM 510	X
DAM 510	X
SDM 511	X
SDM 512	X
EXM 510	X
Vacon®	
Vacon® 20	X
Vacon® 20 Cold Plate	X
Vacon® 20X	X
Vacon® 100	X
Vacon® 100X	X
Vacon® NX	X

Danfoss Silicon Power (DSP)	
Product Type*	
1x07xx	X
1x20xx	X
1x26xx	X
1x27xx	X
1x28xx	X
Power stack IM2	X
Power stack IM3	X
<p>* The product type is coded in the last six digits of the product name (which is given on the product data sheet): The relevant digits are the third and fourth last ones. Example: DP15F1200TO101910 => 101910 => 1x19xx</p>	

For more information about REACH, see www.echa.europa.eu

Should you require further information or have any questions on the affected products, please contact your sales representative.