DinaFluid
smart cooling

-10°C | -15°C | -20°C
-30°C | -40°C | -55°C
FREEZING POINTS

Heat transfer fluid

BIODEGRADABLE

SUITABLE FOR FOOD INDUSTRY

NON-TOXIC

ANTI-CORROSION

PATENTED PRODUCT
PROPIETARY FORMULATION

NSF
Nonfood Compounds HT1

ASTM
D-1384 TESTED

Heat transfer fluid and corrosion inhibitor for closed circuits

Characteristics

Heat transfer fluid based on non-toxic organic salts combined with biodegradable organic corrosion inhibitors.

It is supplied in a range of different freezing points from -10°C to -60°C for direct use, undiluted.

Compared to propylene glycol and ethylene glycol-based liquids, it offers superior thermodynamic properties as a heat transfer fluid.

It features lower dynamic viscosity and higher thermal conductivity—an advantage that increases as temperatures drop.

This results in significant energy savings in both system design and operation.

Physical Properties

Appearance	Liquid
Color	Colorless or slightly yellowish
pH (20ºC):	8.5 – 9.5
Specific Gravity:	1.10 – 1.27 g/cc (at 20°C)
Freezing point:	Range -10°C a -60°C
Boiling point:	Approx. 109°C
Solubility:	Fully water-soluble

Packaging

- **25 liters** *PE Jerrycan with sealed cap*
- **208 liters** *PE Drum with sealed cap*
- **1000 liters** *IBC with NW50 dispensing valve*
- **Bulk Tanker** *for larger volumes*

Keep containers closed, protected from sunlight, and at temperatures above the freezing point.

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DinaFluid
smart cooling

-10°C | -15°C | -20°C
-30°C | -40°C | -55°C
FREEZING POINTS

Advantages

Superior thermodynamic properties compared to glycol-based fluids.

Lower dynamic and kinematic viscosities than glycol-based liquids, resulting in lower installation and operating costs (lower power pumps, smaller diameter piping, and optimized exchangers).

High thermal conductivity due to a high heat transfer coefficient, increasing transfer and reducing the temperature differential between the fluid and the tube/exchanger wall.

Reduced system energy consumption by operating the chiller evaporator at a temperature 2º to 3º higher.

Minimal volume variation with temperature, even at the freezing point.

Latest-generation corrosion inhibitor technology. Optimized formulation providing high protection.

Chemically stable product: Non-toxic, non-flammable, and biodegradable. Very low water toxicity (WGK 1 according to German standards).

Wide operating temperature range from -60°C to +60°C, without causing corrosion or affecting soft metals.

Complies with ASTM D-1384 Corrosion Resistance Test.

Suitable for the Food Industry. Registered under NSF HT1 category. Includes compliance with FDA 21 CFR standards.

Applications

Used in **Secondary Refrigeration Systems** and freezing plants due to its excellent performance as a low-temperature heat transfer fluid.

Secondary systems are an alternative to direct expansion systems, reducing the primary refrigerant charge and providing safety and energy efficiency advantages.

Due to its safety and stability, it is ideal for the **Food Industry.**

NSF Nonfood Compounds HT1

Suitable for use in the Food Industry. Registered under NSF HT1 category

Recommended Applications:

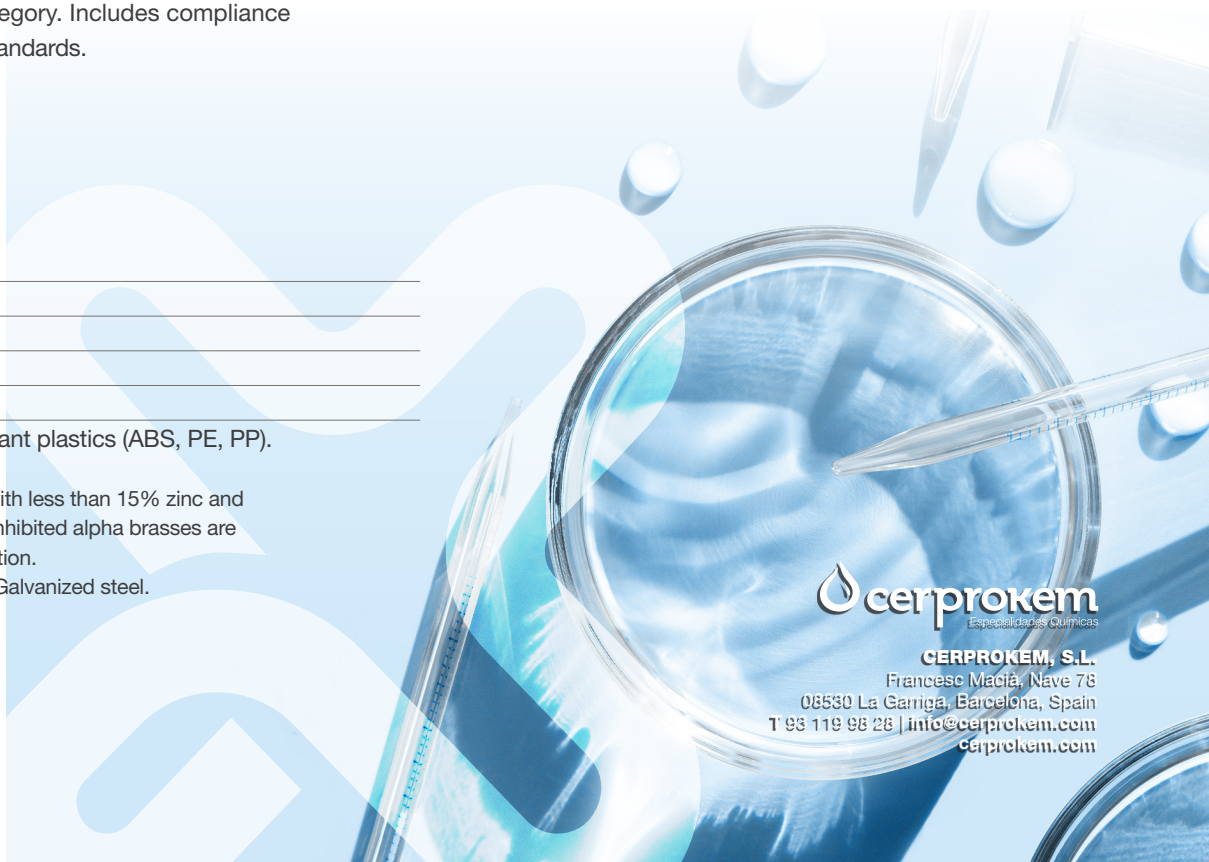
- Food and pharmaceutical industry
- Supermarkets
- Ice rinks
- Logistics centers
- Sports facilities
- Hot fluid defrosting in CO_2 systems

Materials

Compatible with:

- Copper
- Admiralty brass
- Stainless steel
- Cast iron
- Carbon steel
- Temperature-resistant plastics (ABS, PE, PP).

Note: Copper alloys with less than 15% zinc and arsenic- or antimony-inhibited alpha brasses are resistant to dezincification.
Not recommended: Galvanized steel.



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DinaFluidX
smart cooling

-10°C | -15°C | -20°C
-30°C | -40°C | -55°C
FREEZING POINTS

Instructions for Use

Use **neat/undiluted** (ready to use). Do not mix with other liquids, as this would decrease effectiveness and alter its composition.

Classification, Safety, and Transport

Non-hazardous to the environment

The circuit must be clean of residues from other treatments (prior cleaning with a biodispersant is recommended)

If diluted, it may be discharged into the sewage system after consulting local authorities

Stable, non-combustible, and non-explosive

Use only **DinaFluidX®** for top-ups

Prolonged skin contact may cause irritation; protective gloves are recommended

Thermophysical Properties

Physical properties at standard supplied concentrations:
DinaFluidX® -10, -15, -20, -30, -40, -55

		DX Freezing points					
Property	**Unit**	**-10**	**-15**	**-20**	**-30**	**-40**	**-55**
Density	kg/m³	1103	1125	1147	1183	1218	1257
Specific heat	kJ/kg·K	3,548	3,483	3,309	3,089	2,978	2,805
Thermal conductivity	W/m·K	0,538	0,527	0,514	0,494	0,476	0,456
Dynamic viscosity	mPa·s (cP)	1,55	1,72	1,97	2,55	3,37	4,34
Kinematic viscosity	mm²/s (cSt)	1,41	1,53	1,72	2,16	2,77	3,45

Note: For other freezing temperatures, please consult the technical department.

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