

## PRODUCT INFORMATION SHEET

# STAUBCO® Heat N

**Environmentally compatible long-term anti-freeze with corrosion inhibitors for heating and cooling systems (e.g., heat pumps, air-conditioning systems, etc.)**

### Product data:

Appearance:	clear, green colored liquid	
Pour point (°C):	< -15	
Flash point (°C):	> 100	(ASTM D 51758)
Boiling point (°C):	> 150	(ASTM D 1120)
Density (20°C):	1.11 - 1.12 g/cm <sup>3</sup>	(DIN 51757)
Refractive index nD20:	1.425 - 1.435	
Water content:	< 2.5%	
pH value (1:1 with neutr. water 20°C):	7.5 - 8.5	(ASTM D 1287)
Viscosity (20°C):	25 - 30 mm <sup>2</sup> /s	

### Product properties:

is an odorless liquid on the basis of monoethylene glycol used in cooling and heating systems as liquid refrigerant or thermal transfer agent.

Special corrosion inhibitors protect all metal and plastic materials commonly used in plant construction, including copper and aluminum, from corrosion, deposits and the formation of layers. In this way, the system efficiency will not suffer.

Seals are not attacked by **STAUBCO® Heat N**.

### **STAUBCO® Heat N**

- is fully miscible with water. As delivered, it provides frost protection > -50°C without separating into constituents
- **should not be diluted to less than 20% by volume of cooling solution (retains corrosion protection)**
- can be mixed with all anti-freeze agents based on monoethylene glycol
- is free of nitrite, amine and phosphate
- contains only corrosion inhibitor of water hazard class WGK 1
- is biodegradable

### General information:

The system should be flushed with water and all connections pressure tested for leaks before filling.

The system should be filled with ready-to use **STAUBCO® Heat N** directly after the pressure test. Do not entrain air.

The product should not be in contact with zinc-coated components because zinc is not resistant to glycol.

The system in which the thermal transfer fluid circulates should be designed as a closed-loop system with membrane pressure compensation tanks according to DIN 4807.

Oxygen entering the system consumes the corrosion inhibitors. Therefore, use only low-diffusion connecting elements and hoses.

Soldered connections should be made with Ag or Cu brazing solder, otherwise the system must be flushed thoroughly.

**Corrosion and removal rates in g/m<sup>2</sup> (acc. to ASTM D 1384):**

Material	Measuring value (g/m <sup>2</sup> )	Max. permitted value acc. to ASTM D 1384 (g/m <sup>2</sup> )
Soft solder	-1.2	-10.0
Brazing solder LAg2P (Cu-Cu)	0.5	-10.0
Brazing solder L-CuSn 97	0.6	-10.0
Brazing solder LAg55Sn (stainless steel-Cu)	0.5	-10.0
Gun metal	-0.8	-10.0
Copper	-0.5	-3.6
Brass	-0.4	-3.6
Grey cast iron	0.2	-3.6
Steel	0.0	-3.6
Aluminum	-1.9	-10.0
V2A	0.1	-10.0

**Material compatibilities:**

Materials commonly used in plant and heating system construction are not attacked.

Incompatible materials are polyurethane elastomers, phenol formaldehyde resins and soft PVC.

**Dilution table:**

STAUBCO® Heat N	Water	Anti-freeze (Crystal formation point)
20% by vol.	80% by vol.	-9°C
27% by vol.	73% by vol.	-14°C
30% by vol.	70% by vol.	-17°C
40% by vol.	60% by vol.	-27°C
50% by vol.	50% by vol.	-40°C

### **Test method for corrosion properties:**

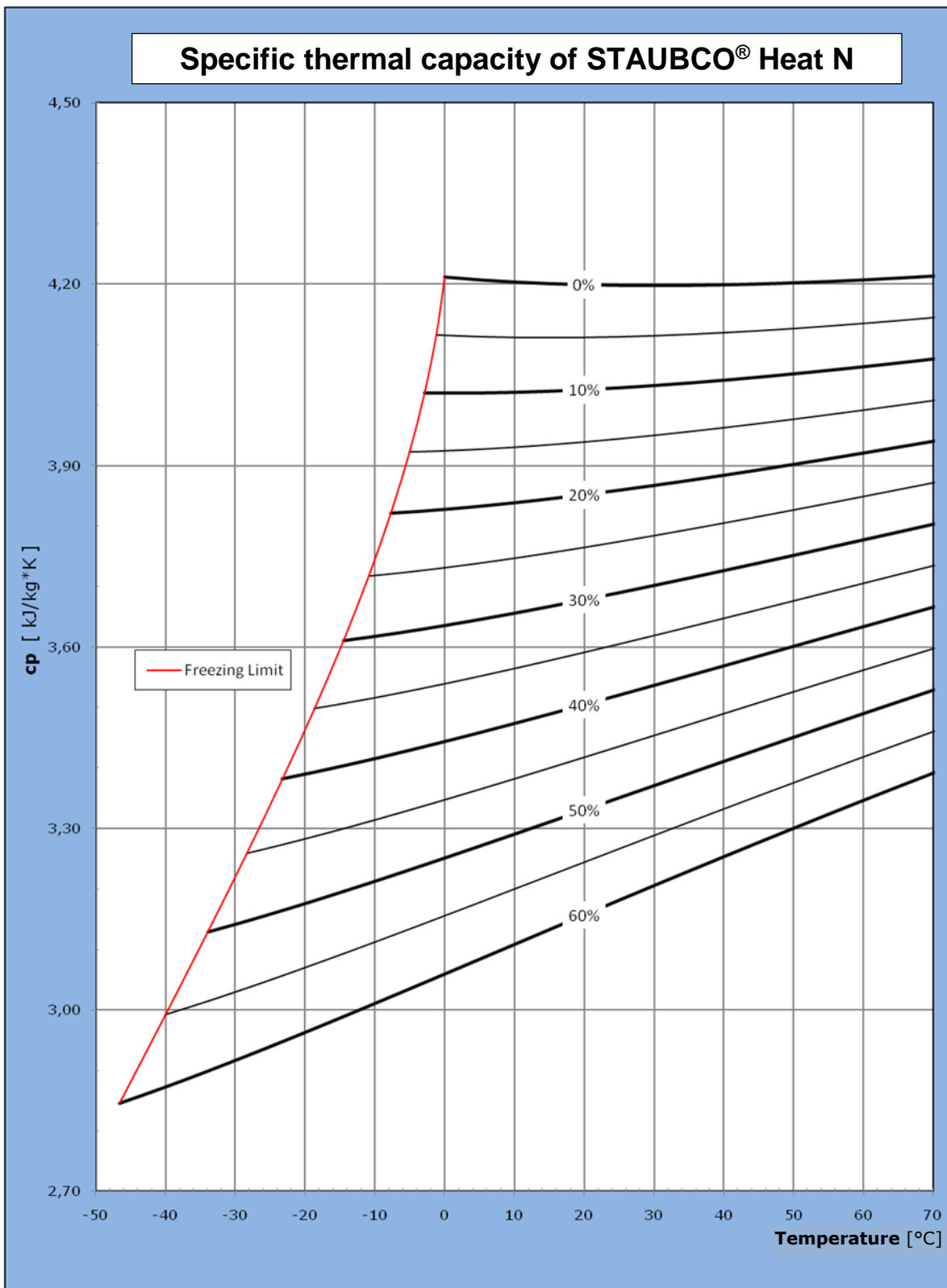
We recommend checking the coolant solution regularly (at least once every year). You can check the corrosion properties of the cooling liquid by reference to the pH value. The pH value should be > 7.5. Measure the pH with a pH value measuring strip. If the pH value is lower, replace the liquid or treat it with Staubco® Korrosionsschutz SOL.

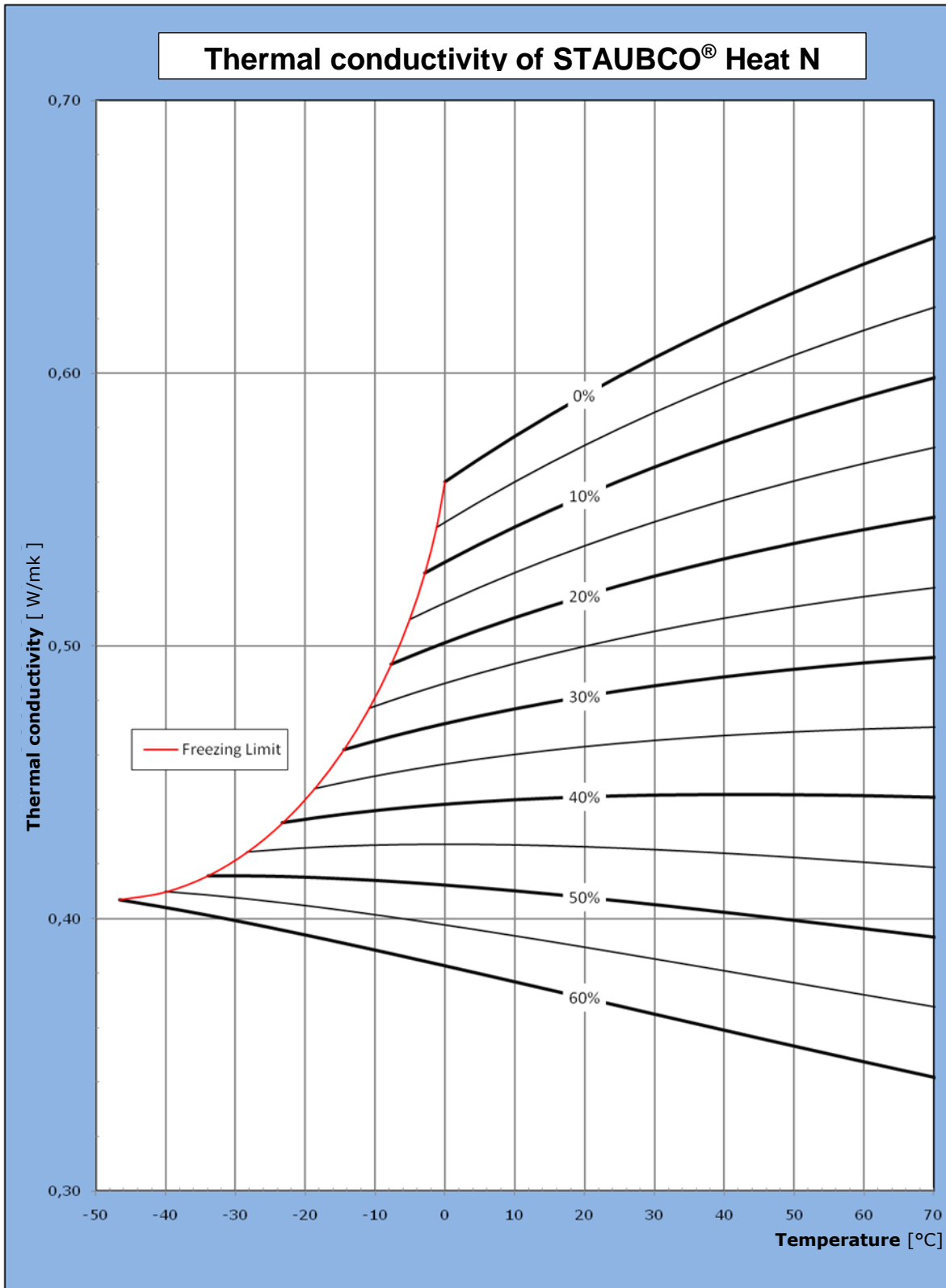
### **General notes:**

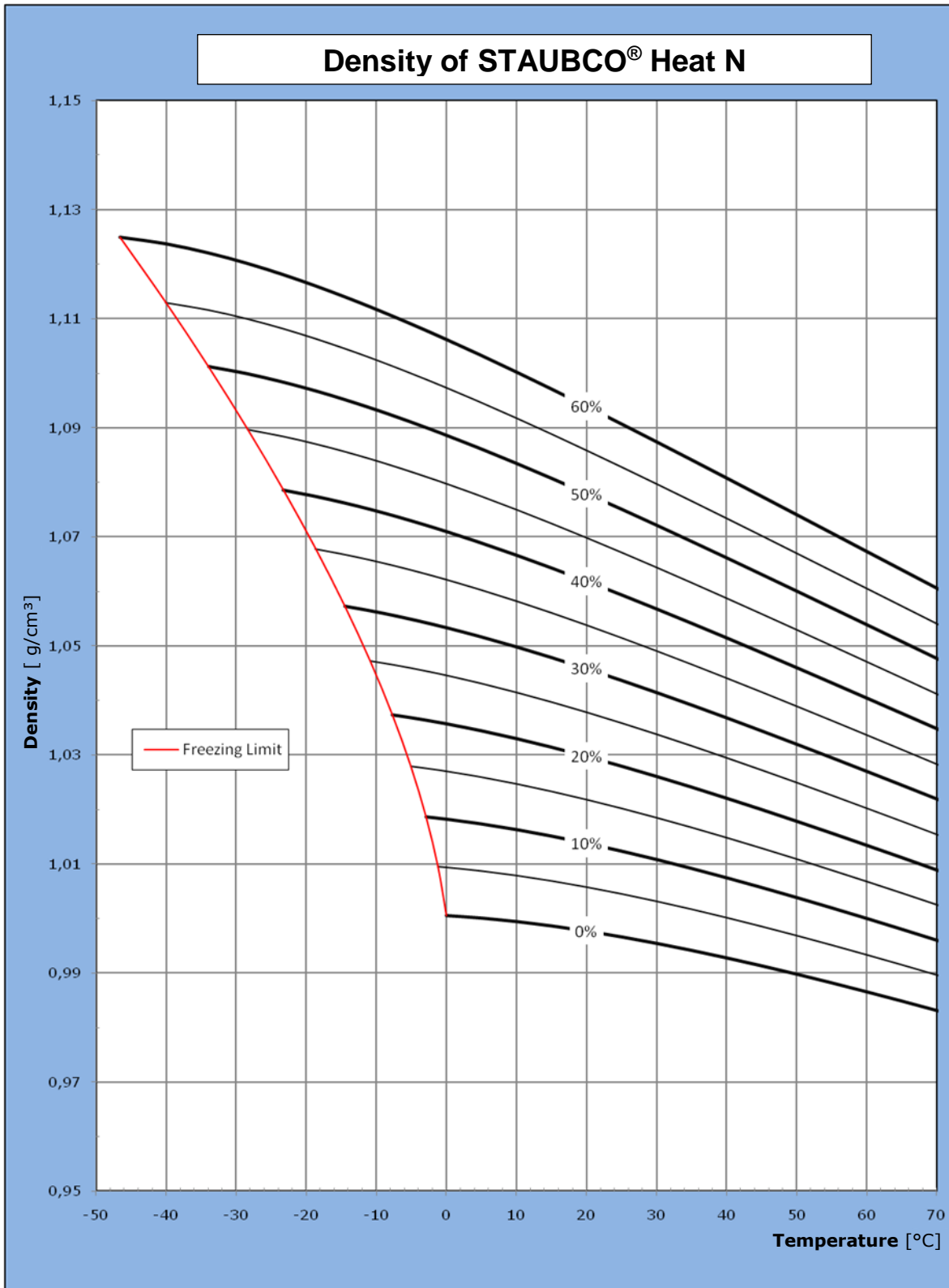
The application information in the product sheet and the materials safety data sheet is empirical and reflects our technical experience. The information is not a binding assurance of certain properties. The suitability of a product for a particular purpose must be established by prior tests.

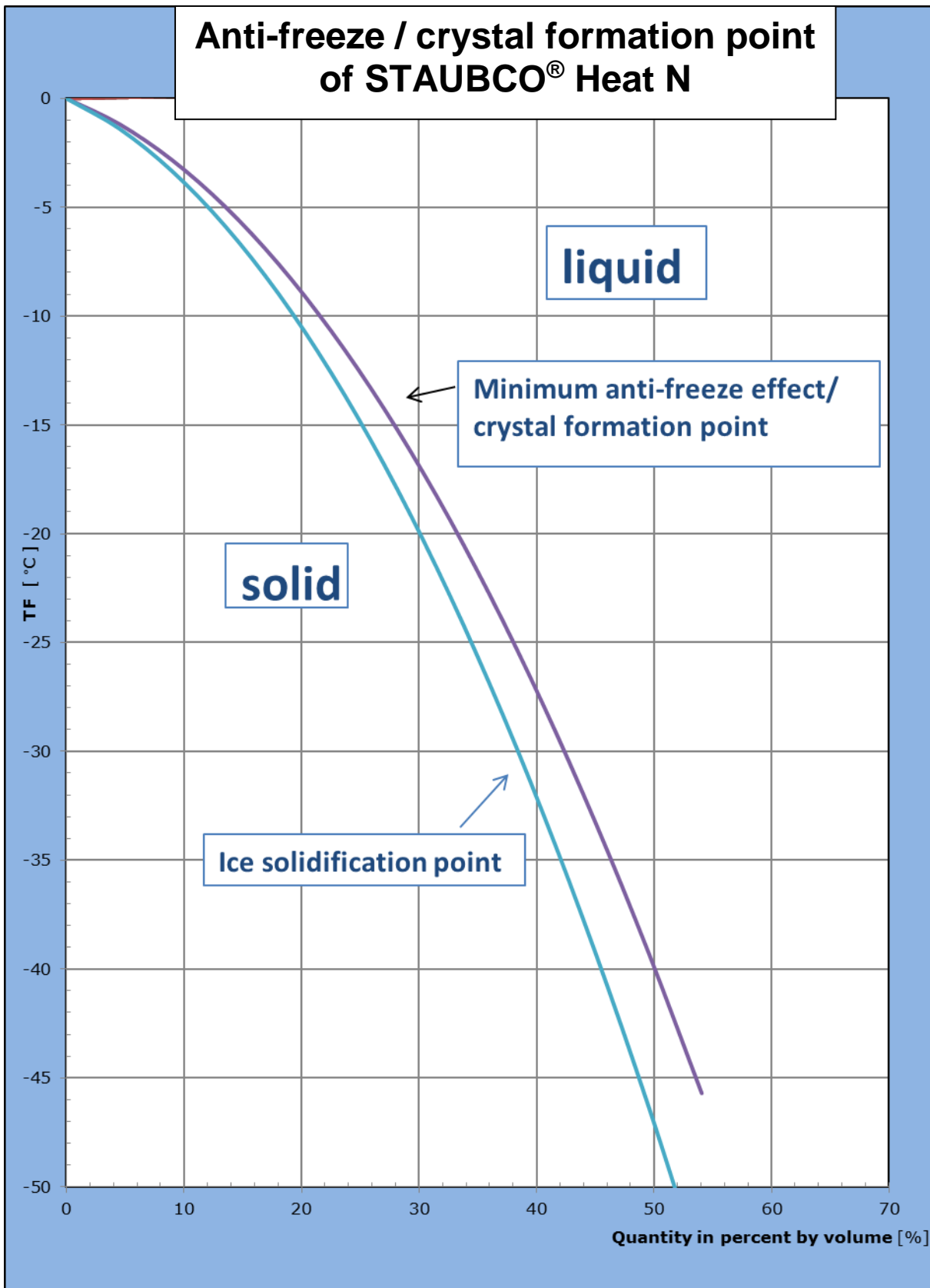
This product information sheet does not release you from your obligation to check incoming goods according to HGB (German Commercial Code) §§ 377 and 378.

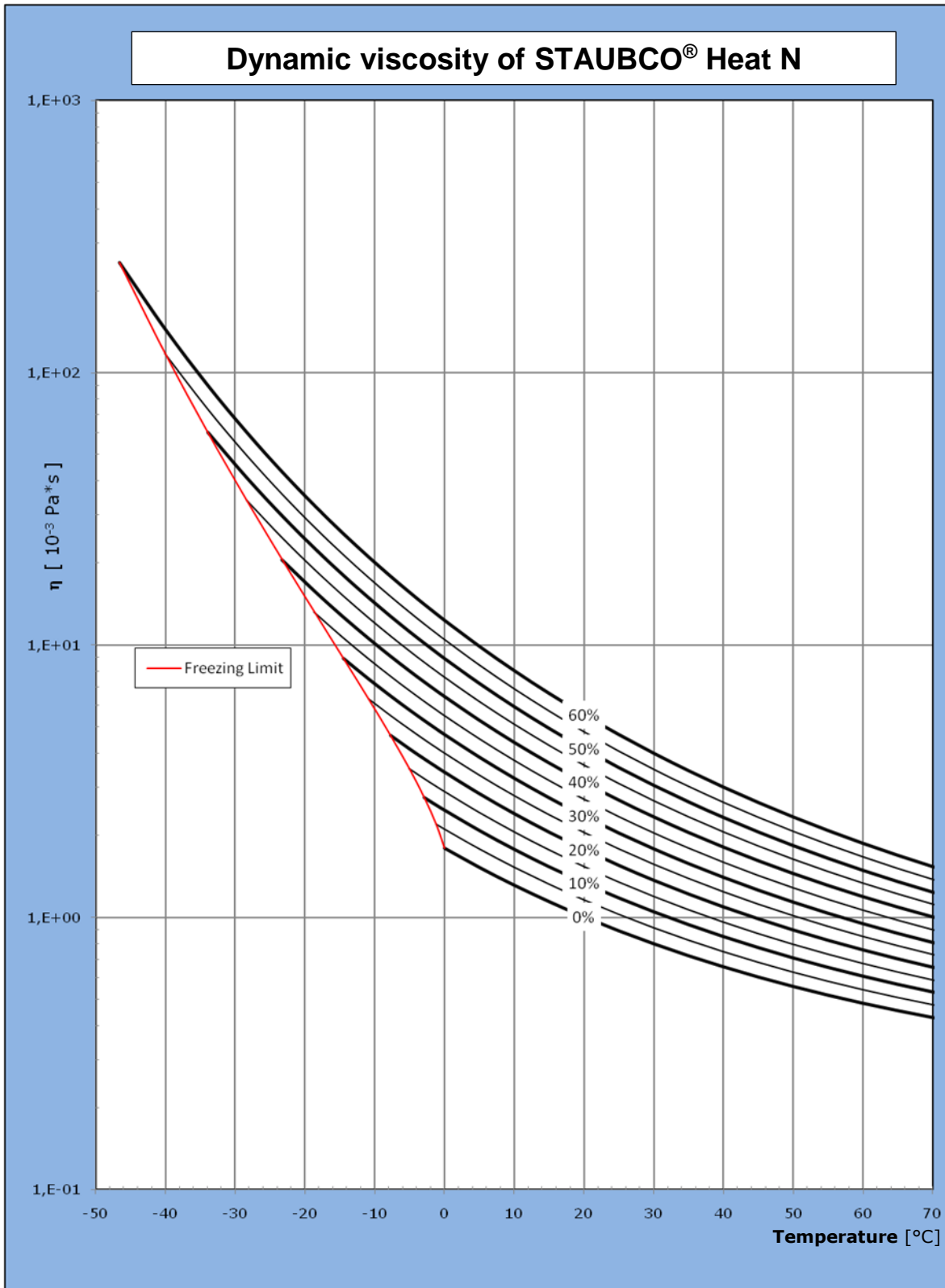
**If you have questions about our anti-freeze products, the technical advisors of STAUB & CO. - SILBERMANN GmbH will be glad to assist you.**



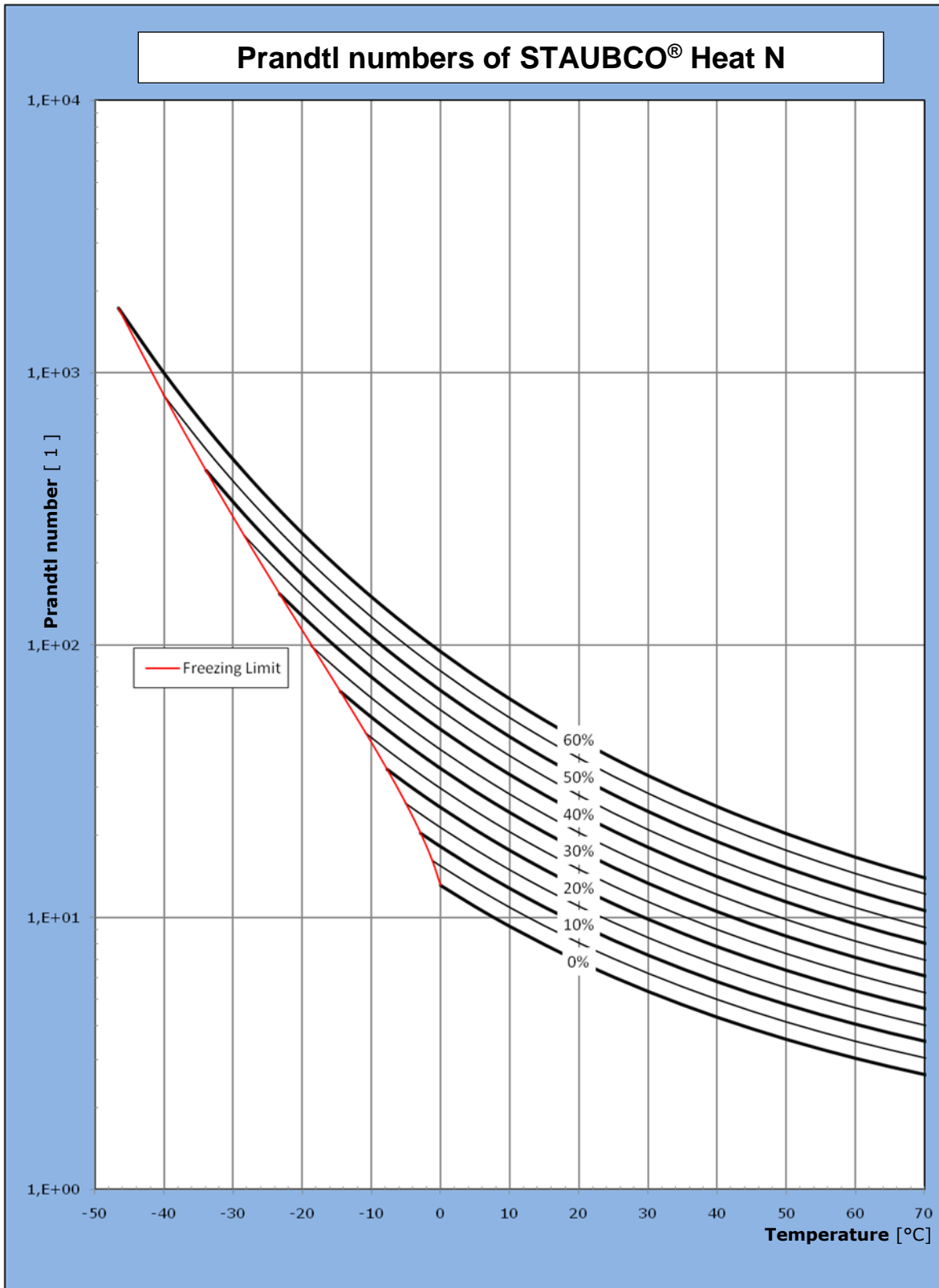












**Boiling point of STAUBCO® Heat N mixtures  
 as a function of the concentration**

