

The correct sampling and shipping of samples from heat transfer systems:

Regular analysis of heat transfer oils is essential to ensure the safe and efficient operation of heat transfer systems in the long term. However, a meaningful result is only possible if the collected sample is taken correctly and is truly representative. This guide outlines the entire sampling and shipping process based on relevant regulations (Operational Safety Ordinance, DIN 4754-1, VDI 3033):

Sample Container

For collecting the sample, please use aluminum containers (625 ml). Fill the container to approximately 90%. These containers are equipped with a self-sealing and self-locking lid to prevent leakage of the sample. Ensure that the container is undamaged and suitable for shipping. The appropriate sample containers are available from Bolztherm upon request.



Figure 1: Sample Container

Safety Precautions

When taking the sample, it is important to prioritize your safety. Wear heat-insulated protective gloves to protect yourself from potential burns, and use safety glasses or a mask to protect against fumes or splashes.

Sampling Point at the System

The heat transfer system should be equipped with an appropriate sampling device, which must be thoroughly flushed before use. This ensures that the collected sample actually comes from the main flow of the system and is therefore representative. If the heat transfer fluid is operated at temperatures above 100°C, a cooling device is required to cool the sample to below 80°C before collection. This prevents the evaporation of low-boiling components and moisture.

Shipping

The lid of the sample container should be hand-tightened until it clicks into place. Please send the labeled sample container along with the completed sample information sheet (download: <https://bolztherm.com/analyse/Probenformular.pdf>) to:

**Bolztherm GmbH
Labor
Opelstrasse 12
D-48599 Gronau**

Dangerous Goods

You can check the safety data sheet of your heat transfer fluid to determine whether it is classified as dangerous goods. Dangerous goods can be shipped in limited quantities (LQ) via package. The outer packaging must be properly labeled according to ADR regulations for dangerous goods. Two LQ labels and two orientation arrows (Figure 2) must be placed on opposite sides of the outer packaging. The total weight of the shipment must not exceed 30 kg. The maximum allowable filling quantity for dangerous goods depends on its UN number and should be verified with the hazardous goods officer if in doubt. The sample containers supplied by Bolztherm can be filled with any heat transfer fluid provided by Bolztherm.

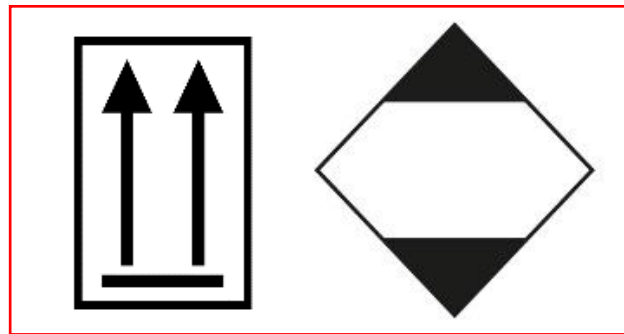


Figure 2: LQ Labels and Orientation Arrows

Analysis Results

The results of our analysis and corresponding recommendations for action will be sent by email to the person responsible, as listed in the sample information sheet, and will be discussed with them if necessary.

The key points summarized:	
1. Sample collection from the main flow	
2. Thoroughly flush the sampling point	
3. Cool the sample to below 80°C before collection	
4. Use appropriate sample containers	