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Content

Revisions:

Compared to VN 1576-1 (2009-01), the following changes have been made:

a) Content and editorial revision, adaptation to new layout.

b) Chapters 1, 2, 3, 4: Scope, area of application, purpose and normative references newly included.

c) Chapter 6: Replacing chapters 1.1.1 and 1.1.2. Anti-corrosion agents no longer explicitly mentioned, general data on the requisite properties only. Anti-corrosion agents classified into group 1 and group 2.

d) Chapter 7: Preservation matrix revised: Transport type truck, rail and air amalgamated to land/air; transport type container deleted.

e) Chapters 8.3, 8.4: Revised, adapted to chapter 6.

f) Chapter 9: Addition/revision.

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1 Scope

This standard applies across the group to the entire scope of Voith and its subcontractors.

2 Area of application

This standard is applicable in all areas in which components are preserved and stored.

3 Purpose

This standard defines the general preservation and storage procedures to be applied at Voith and its subcontractors. The anti-corrosion agents to be used are described solely through their properties and are classified into two groups. The preservation method to be applied for particular goods can be found in the preservation matrix. In addition, the necessary storage condition is identified by a single-digit characteristic letter. The preservation and storage of rolls is defined in VN 1576-2.

4 Normative references

VN 1576-2 Preservation and Storage
Part 2: Preservation and storage of rolls

5 General

All parts made of stainless materials (e.g. stainless steel, aluminum, bronze, plastic, etc.) are not preserved.
For all preserved parts, a waterproof barrier layer must be used as separating layer from the wooden support. Uncoated paper or board must **not** be used because of possible moisture.

6 Anti-corrosion agents

The anti-corrosion agents to be used are classified into two groups based on properties and use.

6.1 Group 1 anti-corrosion agent

The anti-corrosion agent must be a dewatering fluid. The agent is applied mainly in an immersion bath or by spraying. During the process, a waxy/greasy protective film forms on the component. The anti-corrosion agent is resistant to alkaline carry-over and is used on metal parts. It is normally suitable for preservation during transport and storage. However, the anti-corrosion agent is rather unsuitable for outdoor storage.

6.2 Group 2 anti-corrosion agent

The wax-based anti-corrosion agent is applied by means of a low-pressure spray gun or a brush. During the application process, the temperature of the substrate must be 10 – 35 °C. A waxy, transparent and solid film forms. Adequate ventilation must be provided for the hardening process and in order to inhibit the formation of flammable liquids. The partially-hardened film must not be allowed to come into contact with an ignition source under any circumstances. Moreover, no other product should be applied above or below this coating due to the potential incompatibility between the various materials. It is suitable for preservation during transport and storage indoor and outdoor.

7 Preservation matrix

The preservation method to be applied for particular goods can be found in the preservation matrix below.

	Transport type		
	Land/Air	Sea	
Goods	Preservation method		Storage
Corrosion-resistant materials	K 0	K 0	B, C
Corrosion-sensitive materials	K 1, K 2	K 1, K 2, K 3	B
Electrical and electronic devices	K 4, K 5	K 4, K 5	A

8 Preservation methods

There are five different preservation methods.

8.1 Preservation method K 0: No preservation

The part does not require any preservation.

8.2 Preservation method K 1: VCI method (volatile corrosion inhibitor)

Preservation in corrosion-inhibiting atmosphere (e.g. VCI method).
Recommended for e. g. small single parts, bulk goods, etc.

8.3 Preservation method K 2: Thin-layer preservation

Preservation for all bright and unpainted outer surfaces:

- Coating with a group 1 anti-corrosion agent.
- Covering or wrapping the parts preserved in this way in oil-impregnated paper.

8.4 Preservation method K 3: Thick-layer preservation

Preservation for all bright and unpainted outer surfaces:

- The use of a group 2 anti-corrosion agent is preferred. A group 1 anti-corrosion agent should be used only following consultation with Voith. It should be noted, however, that boreholes and tapped holes are preserved with a group 1 anti-corrosion agent. If components are not packed further, the boreholes and tapped holes must be closed with, for example, plastic plugs (also on parts clad with stainless steel).

8.5 Preservation method K 4: Plastic sack open at bottom

In the as-delivered condition, electrical and electronic devices must be in a plastic sack that is open at bottom.

8.6 Preservation method K 5: Closed plastic sack

In the as-delivered condition, electrical and electronic devices must be in a sealed plastic sack. Care must be taken to ensure that an adequate quantity of drying agent (silica gel or diatomaceous earth) is added.

9 Storage

If storage conditions are not specified for the order, Table 1 shall apply. The necessary storage conditions are identified by a single-digit characteristic letter.

Table 1: Storage conditions

Charateristic letter	Storage
A	Storage in tempered buildings (+10 °C to +35 °C).
B	Storage in dry, unheated buildings.
C	Outdoor storage. Packages protected against rising moisture by suitable underlays and covered and/or under flat or pitch roof.