

JIS

JAPANESE INDUSTRIAL STANDARD

**Volatile corrosion inhibitor
treated paper**

JIS Z 1535—1994

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In the event of any doubt arising,
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Volatile corrosion inhibitor
treated paper

Z 1535-1994

1. Scope This Japanese Industrial Standard specifies the volatile corrosion inhibitor treated paper used for preventing rust generated on iron or steel.

- Remarks
1. The volatile corrosion inhibitor treated paper shall retain the compound which sublimates at normal temperature and is effective for preventing rust generation, or the mixture mainly composed of the compound on the packaging papers through coating or impregnation.
 2. The following standards are cited in this Standard:
 - JIS G 3108 Rolled carbon steel for cold-finished steel bars
 - JIS G 3141 Cold rolled carbon steel sheets and strip
 - JIS H 3100 Copper and copper alloy sheets, plates and strips
 - JIS H 4000 Aluminium and aluminium alloy sheets and plates, strip and coiled sheets
 - JIS H 4080 Aluminium and aluminium alloy seamless pipes and tubes
 - JIS K 0050 General rules for chemical analysis
 - JIS K 1503 Acetone
 - JIS K 2201 Gasoline for industrial purpose
 - JIS K 3351 Glycerines for industrial use
 - JIS K 8891 Methanol
 - JIS P 3801 Filter paper (for chemical analysis)
 - JIS R 3201 Sheet glasses
 - JIS R 3202 Float and polished plate glasses
 - JIS R 3503 Glass apparatus for chemical analysis
 - JIS R 6251 Abrasive cloths
 - JIS R 6252 Abrasive papers
 - JIS R 6253 Waterproof abrasive papers
 - JIS Z 0208 Testing methods for determination of the water vapour transmission rate of moisture-proof packaging materials (dish method)
 - JIS Z 0701 Silicagel desiccants for packaging
 - JIS Z 1514 Polyethylene coated paper
 - JIS Z 1522 Pressure sensitive adhesive cellophane tapes
 - JIS Z 1524 Pressure sensitive adhesive cloth tapes for packaging

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2. Definitions For the purpose of this Standard, the following definitions apply:

- (1) packaging paper The paper which is suitable for packaging and treated to give strength, moisture proof, etc. thereto.
- (2) compatibility The property to give no adverse effects on the subject matters when the volatile corrosion inhibitor treated paper is placed in the same hermetically enclosed space as the subject matters.
- (3) vapour inhibitor ability The property of the volatile corrosion inhibitor treated paper to perform the effects to prevent rust generation on steel or iron under the vapour phase condition.
- (4) vapour inhibitor ability after exposure The property to still have the vapour inhibitor ability after the volatile corrosion inhibitor treated paper is exposed under the specified conditions for the specified period of time in the open space.
- (5) corrosion preventive ability in contact The property to perform the effects to prevent rust generation on steel or iron under the condition where the steel or iron is hermetically packaged with the volatile corrosion inhibitor treated paper.
- (6) refined water Ion-exchanged water or distilled water.

3. Classification and grade The volatile corrosion inhibitor treated papers shall be classified into the following class and grade according to their range of application and the performance of corrosion inhibitor.

- (1) Classification The classification shall be as specified in Table 1.

Table 1. Classification of volatile corrosion inhibitor treated paper

Class	Range of application
Class 1	Applicable to iron or steel coated with nonferrous metal ⁽¹⁾ , and to combinations of coexistent iron or steel and nonferrous metal ⁽¹⁾ .
Class 2	Applicable exclusively for iron and steel.

Note ⁽¹⁾ Limited to copper and aluminium.

- (2) Grade The grades shall be in accordance with Table 2.

Table 2. Grades of volatile corrosion inhibitor treated paper

Grade		Division according to the time required to show the corrosion inhibiting effect ⁽¹⁾	Division according to the durability of the corrosion inhibiting effect ⁽²⁾
Grade 1	Type H	Fast-acting	Long
	Type L	Slow-acting	
Grade 2	Type H	Fast-acting	Medium
	Type L	Slow-acting	
Grade 3	Type H	Fast-acting	Short
	Type L	Slow-acting	

Notes (1) Fast-acting property and slow-acting property shall be classified according to the time until the cooling water is poured in the vapour inhibitor ability test, which is 1 hour for the fast-acting property and 20 h for the slow-acting property.

(2) Since the method to directly measure the durability of volatile corrosion inhibiting effect is not specified, the division of "long", "medium" and "short" shall be classified according to the time of exposure in the vapour inhibitor ability test after exposure, and "long" shall be defined as up to 120 h, "medium" as up to 48 h, and "short" as up to 24 h respectively.

4. Quality The quality of volatile corrosion inhibitor treated paper shall comply with the requirements of Table 3 when tested in accordance with 5. below.

Table 3. Quality of volatile corrosion inhibitor treated paper

Test items Class and grade			Compatibility with polyethylene coated paper	Compatibility with nonferrous metal		Vapour inhibitor ability	Vapour inhibitor ability after exposure	Corrosion preventive ability in contact
				Copper	Aluminium			
Class 1	1	H	No abnormality shall be observed	No corrosion shall be observed	No corrosion shall be observed	No rust shall be observed	No rust shall be observed	No rust shall be observed
		L						
	2	H						
		L						
	3	H						
		L						
Class 2	1	H	No abnormality shall be observed	—	—	No rust shall be observed	No rust shall be observed	No rust shall be observed
		L						
	2	H						
		L						
	3	H						
		L						