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**Petrolatum paste and paste tapes
for corrosion protection**

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Association of Corrosion Control (JACC)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS Z 1903:2007** is replaced with this Standard.

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Petrolatum paste and paste tapes for corrosion protection

Introduction

This Japanese Industrial Standard was established in 1995 and has gone through two revisions up to the present. The last revision was made in 2007, and the revision at this time is to correspond to the recent widespread use of the petrolatum paste tapes for corrosion protection, which are the tape-shaped non-woven fabrics impregnated with paste having good workability.

No corresponding International Standard has been established at this point.

1 Scope

This Standard specifies the petrolatum paste for corrosion protection and petrolatum paste tapes for corrosion protection (hereafter referred to as petrolatum pastes for corrosion protection) used as the primer of petrolatum tapes for corrosion protection, which are used for the long-term corrosion protection of steel pipes, steel plates, bar steels and other irons and steels.

WARNING Persons carrying out tests based on this Standard should be familiar with normal laboratory practice. This Standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this Standard to establish appropriate safety and health practices.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) listed below shall be applied.

JIS B 0651 *Geometrical Product Specifications (GPS)—Surface texture: Profile method—Nominal characteristics of contact (stylus) instruments*

JIS B 7503 *Mechanical dial gauges*

JIS B 7512 *Steel tape measures*

JIS B 7516 *Metal rules*

JIS C 2338 *Pressure-sensitive adhesive polyester tapes for electrical purposes*

JIS G 3101 *Rolled steels for general structure*

JIS G 3141 *Cold-reduced carbon steel sheet and strip*

JIS G 4305 *Cold-rolled stainless steel plate, sheet and strip*

JIS G 4308 *Stainless steel wire rods*

JIS H 3100 *Copper and copper alloy sheets, plates and strips*

JIS H 4000 *Aluminium and aluminium alloy sheets, strips and plates*

JIS H 4554 *Nickel and nickel alloy wire and drawing stock*

- JIS K 0050 *General rules for chemical analysis*
- JIS K 2201 *Gasoline for industrial purpose*
- JIS K 2235 *Petroleum waxes*
- JIS K 2246 *Rust preventive oils*
- JIS K 2251 *Crude petroleum and petroleum products—Sampling*
- JIS K 2265-4 *Determination of flash points—Part 4: Cleveland open cup method*
- JIS K 2839 *Glasswares for testing apparatus of petroleum products*
- JIS K 5600-1-7 *Testing methods for paints—Part 1: General rule—Section 7: Determination of film thickness*
- JIS K 6272 *Rubber—Tensile, flexural and compression test equipment (constant rate of traverse)—Specification*
- JIS K 8891 *Methanol (Reagent)*
- JIS P 3801 *Filter paper (for chemical analysis)*
- JIS R 3645 *Glass rods*
- JIS R 6251 *Abrasive cloths*
- JIS R 6252 *Abrasive papers*
- JIS R 6253 *Waterproof abrasive papers*
- JIS Z 0103 *Glossary of terms used in rust and corrosion preventive technology*
- JIS Z 0237 *Testing methods of pressure-sensitive adhesive tapes and sheets*
- JIS Z 0311 *Metallic blast-cleaning abrasives*
- JIS Z 0312 *Non-metallic blast-cleaning abrasives*
- JIS Z 0701 *Silicagel desiccants for packaging*
- JIS Z 1522 *Pressure sensitive adhesive cellophane tapes*
- JIS Z 1902 *Petrolatum tapes for corrosion protection*
- JIS Z 2371 *Methods of salt spray testing*
- JIS Z 8401 *Guide to the rounding of numbers*
- JIS Z 8703 *Standard atmospheric conditions for testing*

3 Terms and definitions

For the purposes of this Standard, the terms and definitions given in **JIS Z 0103**, and the following apply.

3.1 petrolatum paste for corrosion protection

petrolatum paste separated and refined from the vacuum distillate of petroleum, to which the corrosion inhibitor, filler, etc. are added, to be used as the primer of covering such as petrolatum tapes for corrosion protection specified in **JIS Z 1902**

3.2 petrolatum paste tape for corrosion protection

thin flexible non-woven fabric tape impregnated with petrolatum paste for corrosion protection, to be used as the primer of covering such as petrolatum tapes for corrosion protection specified in **JIS Z 1902**

3.3 petrolatum

wax separated and refined from the vacuum distillate of crude oil, which is semisolid at ordinary temperature

3.4 consistency

parameter to express the hardness of the paste for corrosion protection, one unit of which is 0.1 mm of the depth where the specified cone is advanced vertically in the sample under the specified conditions

3.5 melting point

temperature at which the molten sample is adhered and solidified on the mercury part of the thermometer then heated under the specified conditions, and the initial drop falls from the thermometer

3.6 flash point

lowest temperature of the sample at which the mixture of the oil vapour and the air is instantaneously combusted with generating sparks when the sample is heated under the specified conditions and a small flame is brought close to the oil surface

3.7 evaporation

amount of the substance evaporated when the sample is heated under the specified condition, which is expressed in percentage

3.8 sag resistance

property that the coating film does not sag down to the reference line when the test piece coated with the sample is kept upright for one hour at the specified temperature

3.9 low temperature adhesive property

property that the coating film of the sample is adhered to a surface of the test piece at low temperature

3.10 water-paste substitutability

property that the sample is substituted with the water adhered to the surface of the test piece to prevent corrosion

3.11 tensile strength

force when the sample is pulled at a constant speed and reaches fracture

3.12 salt water immersion test method

test method to examine the property of sample to prevent the corrosion of the test piece when the test piece coated with the sample is immersed in salt water for the specified period of time

3.13 corrosiveness

property of the sample to corrode metal

3.14 purified water

ion-exchanged water or distilled water

4 Classification

The classification shall be as follows.

- a) Petrolatum paste for corrosion protection Class 1 (for general use)
- b) Petrolatum paste for corrosion protection Class 2 (for underwater use)
- c) Petrolatum paste tape for corrosion protection

5 Quality

5.1 Performances

The performances of the petrolatum pastes for corrosion protection shall comply with Table 1 when tested in accordance with 8.2 to 8.12.

Table 1 Performances of petrolatum pastes for corrosion protection

Item	Classification			Applicable subclause
	Petrolatum paste for corrosion protection Class 1	Petrolatum paste for corrosion protection Class 2	Petrolatum paste tape for corrosion protection	
Consistency	100 to 370		50 to 200	8.2
Melting point °C	40 min.			8.3
Flash point °C	175 min.			8.4
Evaporation %	3.0 max.			8.5
Sag resistance	No sag of coating film			8.6
Low temperature adhesive property	No peel of coating film			8.7
Water-paste substitutability	—	No corrosion		8.8
Tensile strength N	—		49.0 min.	8.9
Corrosion protection (salt water immersion)	—	Class A (degree of corrosion: 0 %)		8.10
Corrosion protection (neutral salt spray test)	Class A (degree of corrosion: 0 %)			8.11
Corrosiveness mg/cm ²	Steel ± 0.2 Zinc ± 0.2 Stainless steel ± 0.1 Brass ± 0.2 Aluminium ± 0.2			8.12