

## Safety Data Sheet

### 1. Products and company identification

Product name	SUISEI ROVAL Part A: Powder
Supplier	Roval Corporation
Address	1-1, Nomuramotomachi, Hirakata, Osaka
Section in charge	Technical service department
Phone number	+81-72-894-7590
Fax number	+81-72-894-7593
e-mail address	jp-info@roval-group.com
Emergency Phone Number	+81-72-894-7191
Preparation, revision, and confirmation	May 8, 2023
Product type	Zinc powder for waterborne organic zinc rich paints
Recommended use	Rust prevention of iron and galvanizing surfaces

### 2. HAZARDS IDENTIFICATION

#### [GHS Classification]

PHYSICAL HAZARDS		Not applicable			
HEALTH HAZARDS	Acute toxicity				
	Oral	Dermal	Inhalation (Gas)	Inhalation (Vapors)	Inhalation (Dust/Mist)
	Not calassified	Classification not possible	Not calassified	Classification not possible	Not calassified
	Skin corrosive Irritating	Serious to eyes Damage/eye irritation	Respiratory/Skin sensitization		
			Solid/Liquid	Gas	Skin sensitisation
	Not calassified	Category 2B	Classification not possible	Classification not possible	Classification not possible
	Germ cell mutagenicity		Carcinogenicity	Reproductive toxicity	Effects on or via lactation
	Classification not possible		Classification not possible	Category 2	Classification not possible
	STOT (Single exposure)	Category 1 _____	Category 2 Respiratory system, systemic toxicity		Category 3 _____
	STOT (Repeated exposure)	Category 1 _____	Category 2 _____		
Aspiration hazard		Hazardous to the aquatic environment (Acute)		Hazardous to the aquatic environment (Chronic)	Hazardous to the ozone layer
Classification not possible		Category 1		Category 1	Classification not possible

#### [GHS Symbols]

##### Pictogram:



Warning

##### Signal word:

##### Hazard statement:

H319 : Causes serious eye irritation.

H361 : Suspected of damaging fertility or the unborn child.

H371 : May cause damage to organs(Respiratory system, systemic toxicity).

##### Precautionary Statement:

##### [SAFETY MEASURES]

P201 : Obtain special instructions before use.

P202 : Do not handle until all safety precautions have been read and understood.

P260 : Do not breathe dust/fume/gas/mist/vapours/spray.

P264 : Wash hands thoroughly after handling.

P270 : Do not eat, drink or smoke when using this product.

P273 : Avoid release to the environment.

P280 : Wear protective gloves/protective clothing/eye protection/face protection.

[FIRST AID]

P305+P351+P338 : IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 : IF exposed or concerned: Get medical advice/attention.

P337+P313 : If eye irritation persists: Get medical advice/attention.

P391 : Collect spillage.

[STORAGE]

P405 : Store locked up.

[DISPOSAL]

P501 : Appropriately dispose of the contents/containers in accordance with laws and regulations.

### 3. Composition/information on ingredients

Distinguishing Chemicals and Mixtures: Mixtures

Substance name	%Weigh	CAS No.
Zinc	93 ~ 98	7440-66-6
Zinc oxide	1 ~ 5	1314-13-2

### 4. First-aid measures

#### **Inhalation:**

Get medical advice/attention if you feel unwell.

#### **Skin contact:**

Wash with water and soap.

#### **Eye contact:**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

#### **When swallowed:**

Rinse mouth. Get medical advice/attention if you feel unwell.

#### **Expected acute and delayed symptoms:**

Inhalation: Metallic taste, fume heat. Symptoms may be delayed.

Skin: Dry skin

Ingestion: Abdominal pain, nausea, vomiting.

< Zinc oxide >

Inhalation: Sore throat, headache, fever/increased body temperature, nausea, vomiting, weakness, chills, myalgia

Ingestion: Abdominal pain, diarrhea, nausea, vomiting

#### **Most important signs and symptoms:**

#### **Protective of persons who take first aid:**

The rescuer should wear appropriate personal protective equipment in accordance with the specific situation.

#### **Special note to doctor:**

Symptoms of metal fume fever do not develop until several hours have passed.

### 5. Fire-fighting measures

#### **Suitable extinguishing agents:**

Powder extinguishing agent, dry sand, etc.

#### **Fire extinguishing agents not to be used:**

Avoid pouring water as it reacts with water to generate hydrogen gas.

Zinc fumes may be generated by specific hazardous fires.

#### **Special methods for extinguishing fires, protection of persons who extinguish fires:**

When extinguishing a fire, wear respiratory protective devices such as an inhalation type respirator.

### 6. Accidental release measures

#### **Precautions for human body:**

Workers should wear appropriate personal protective equipment (see 8. Exposure controls/Personal protection) and avoid contact with eyes, skin, and inhalation of dust and fumes.

#### **Environmental precautions:**

Be careful not to discharge into rivers, etc. and cause environmental effects.

### **Collection, neutralization:**

Prevent spill spread and recover appropriately. Dispose of the spilled substance in accordance with relevant laws and regulations after collecting it in sealable containers such as broomsticks, scoops, vacuum cleaners, etc. with care not to make dust. If infiltration into soil or runoff into rivers occurs, check the condition of contamination and dispose of it appropriately.

### **Containment and Purification Methods and Equipment:**

Although there is no regulation by the Soil Contamination Countermeasures Law, it is desirable to remove the moat of the soil.

### **Measures to prevent secondary disasters:**

Prevent inflow into drains, sewers, basements, or confined areas.

## **7. Handling and storage**

### **Handling:**

#### <Technical measures>

Take the equipment measures described in "8. Exposure controls/personal protection", workers should wear appropriate personal protective equipment, and avoid inhalation and direct contact.

#### <Local exhaust and general ventilation>

Local exhaust and general ventilation are performed.

#### <Safety Precautions>

Take care not to damage the container such as a broken bag.

Do not contact, aspirate or swallow.

Avoid contact with eyes.

Do not inhale dust or fumes.

Be careful with moisture as it reacts with moisture in the air to form oxides.

Wash hands thoroughly after handling.

Use only outdoors or in a well ventilated area.

Do not eat, drink or smoke when using this product.

#### <Avoidance of contact>

Avoid contact with "10. Stability and reactivity: incompatible substances".

### **Storage:**

#### <Technical measures>

storage and store in a roofed warehouse from the viewpoint of quality, and avoid hot and humid conditions.

#### <Contact Hazardous Substances>

"10. Stability and reactivity: Contact Hazardous Substances"

#### <Storage conditions>

Avoid direct sunlight. Do not let it get wet.

#### <Container and Packaging Materials>

Place in a sealable, non-breakable container.

## **8. Exposure controls/personal protection**

Substance name	ACGIH
Zinc	—
Zinc oxide	2 mg / m <sup>3</sup> (TWA)

### **[Equipment Measures]**

Eyewashes and safety showers shall be provided in the workplace. Ventilation should be used to keep the dust concentration in the air below the exposure limit.

### **[Protection]**

#### <Respiratory protection>

Wear appropriate respiratory protection.

#### <Eye protection>

Wear appropriate eye protection.

#### <Protective equipment for skin and body>

Wear appropriate gloves, protective clothing, etc.

#### <Others>

No entry.

## 9. Physical and Chemical Properties and safety characteristics

Physical State	
Color	Gray, blue-gray, silver-white
Description	Powder (individual)
Odor	Odorless
Melting • freezing point	419.53°C : Lide (88th, 2008), HSDB (2006)
Boiling point or initial boiling point and boiling point range	907°C : Lide (88th, 2008), HSDB (2006), Hommel (1996), Mixed color hazard Hb (2nd edition, 1997), ICSC(1994), ICSC (J) (1994)
Flash point	No data
Evaporation rate (butyl acetate = 1)	No data
Auto-ignition temperature	460°C : ICSC(1994), ICSC(J)(1994)
Decomposition temperature	No data
pH	No data
Combustibility (solid, gas)	No data
Combustion or explosion Limits	No data
Viscosity (viscosity)	No data
Solubility	Water: insoluble : HSDB (2006), incompatible Hb (2nd edition, 1997) Acid, alkaline: soluble: HSDB (2006)
n-octanol/water partition	LogP=-0.47 : SRC (Access on 7. 2008)
Vapor pressure	1mmHg (487°C) : Sax (11th., 2004), Hommel (1996)
Density and/or relative density	7.142 : Incompatible hazard Hb (2nd edition, 1997)
Relative vapour density	No data
Particle property	No data

## 10. Stability and reactivity

Stability:	Reacts with moisture in the air to form oxides. Reacts with water to generate hydrogen gas. Stable at room temperature. Soluble in acid and alkali hydroxide. When reacted with a large amount of acid and alkali hydroxide, it exothermically generates hydrogen.
Possibility of hazard reaction :	Although it has no spontaneous ignitability, it reacts with water to generate hydrogen gas, which may ignite under certain conditions because of an exothermic reaction.
Conditions to avoid:	Contact with incompatible hazardous materials. Moisture, fire, mixing, impact.
Possibility of Hazardous Reactions:	Halogenated hydrocarbons, alkalis hydroxides, amines, sulfur, strong oxidants, strong bases.
HazardousDecomposition products:	Heating at very high temperatures may produce toxic fumes.

## 11. Toxicological information

### ACUTE TOXICITY

Substance name	Oral	Classification	Dermal	Classification
Zinc	> 2.0 g / kg	Not calassified	Classification not possible	
Zinc oxide	> 5.0 g / kg	Not calassified	> 5.0 g / kg	Not calassified

### ACUTE TOXICITY

Substance name	Inhalation (Gas)	Classification	Inhalation (Vapors)	Classification	Inhalation (dust, mist)	Classification
Zinc	Not calassified		Classification not possible		> 5.4 mg / L	Not calassified
Zinc oxide	Not calassified		Not calassified		> 5.7 mg / L	Not calassified

Substance name	Skin corrosive/Irritating	Serious eye damage /eye Irritation	Respiratory sensitisation	Skin sensitisation
Zinc	Not calassified	Category 2B	Classification not possible	Not calassified
Zinc oxide	Not calassified	Not calassified	Classification not possible	Not calassified

Substance name	Germ cell mutagenicity	Carcinogenicity	Reproductive toxicity
Zinc	Classification not possible	Classification not possible	Classification not possible
Zinc oxide	Classification not possible	Classification not possible	Category 2

Substance name	STOT (Single exposure)	STOT (Repeat exposure)	Aspiration hazard
Zinc	Classification not possible	Classification not possible	Classification not possible
Zinc oxide	Category 1 (respiratory, systemic toxicity)	Classification not possible	Classification not possible

## 1 2 . Ecological information

General precautions: When leaking or disposing of the product, be careful to handle it because it may affect the environment.

The product may have adverse effect on environment.

Substance name	Hazardous to the aquatic environment(Acute)	Hazardous to the aquatic environment (Chronic)	Hazardous to the ozone layer
Zinc	Category 1	Category 1	Classification not possible
Zinc oxide	Category 1	Category 1	Classification not possible

### **Ecotoxicity:**

No data

### **Persistence and degradability:**

No rapid degradability (metal compound) « zinc »

### **Bioaccumulation:**

No data

### **Mobility in soil:**

No data

## 1 3 . Disposal considerations

### **[Residual Waste, Contamination Containers and Packaging]**

When disposing of it, comply with relevant laws and regulations as well as local government standards. To consign and dispose of the waste to an industrial waste disposal contractor licensed by the prefectural governor. When waste disposal is entrusted, the hazard and toxicity shall be notified to the disposal contractor and the processing shall be entrusted.

Containers should be cleaned and recycled or appropriately disposed of in accordance with relevant legislation and local standards. When discarding empty containers, completely remove the contents.

## 1 4 . Transport information

UN No. 1436 Proper shipping name: Zinc powder or Zinc dust

Hazard class: 4.3 Hazard label: Substances which, in contact with water, emit flammable gases PG :III

### **[International Regulations]**

Comply with the regulations of the Maritime Control IMO.

Comply with the regulations of the Aircraft Regulatory Information ICAO/IATA.

Proper Shipping Name. Zinc powder

### **Special safety measures:**

The special safety carrier follows the transport precautionary statements on each product label.

Do not transport with food and feedstuffs.

During transportation, avoid direct sunlight, damage and corrosion of containers,

Load the cargo in a leak-free manner to prevent collapse of cargo. Do not stack heavy objects.

### **EU classification:**

F, N, R : 15-17-50/53, S: (2-)/7/8-43-46-60-61

## 1 5 . Regulatory information

### **Classification and labeling in accordance with Labor Safety and Health Act:**

See Section 2

### **Other regulation for foreign countries:**

Regulatory information with regards to this preparation in your country or region should be examined by your own responsibility.

## 1 6 . Other information

### **References:**

- 1) GHS Classification Guidance for Enterprises.
- 2) SDS from manufacturers of raw materials
- 3) Roval's own data

The information herein is given in good faith, but no warranty, express or implied, is made.

The information contained herein is, to the best of Roval's knowledge and belief, accurate and reliable as of the data issued. It is the user's responsibility to determine the suitability of this information for the adoption of necessary safety precautions. We reserve the right to revise SDS periodically as new information becomes available.

More than