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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Product number                    104301  
Product name                      Iriodin® 9103 Rutile Sterling Silver WR

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Use of the Sub-                    :    Colouring agent  
stance/Mixture

**1.3 Details of the supplier of the safety data sheet**

Company                            SUSONITY Commercial GmbH, Mainzer Straße 41, 64579 Gerns-  
heim, Germany  
Organisation that prepared      \* e-mail: SDS\_inquiries@susonity.com  
the SDS

**1.4 Emergency telephone number**

CHEMTREC International Emergency Telephone Number +1 703-741-  
5970

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**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture.

**2.2 Label elements****Labelling (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture.

Precautionary statements      :    **Prevention:**  
P260    Do not breathe dust.

**Additional Labelling**

EUH210                    Safety data sheet available on request.

**2.3 Other hazards**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : Mica coated with:  
titanium dioxide + tin oxide + auxiliaries

#### Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Substances with a workplace exposure limit :			
tin dioxide	18282-10-5 242-159-0 01-2119946062-44-XXXX		>= 1 - < 10

For explanation of abbreviations see section 16.

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## SECTION 4: First aid measures

### 4.1 Description of first aid measures

If inhaled : fresh air. Consult doctor if feeling unwell.

In case of skin contact : Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact : rinse out with plenty of water.  
Remove contact lenses.

If swallowed : make victim drink water (two glasses at most). Consult doctor if feeling unwell.

### 4.2 Most important symptoms and effects, both acute and delayed

Symptoms : We have no description of any toxic symptoms.

### 4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No information available.

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : For this substance/mixture no limitations of extinguishing agents are given.

### 5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Not combustible.

Ambient fire may liberate hazardous vapours.

### 5.3 Advice for firefighters

Special protective equipment for firefighters : Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information : none

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Advice for non-emergency personnel:  
Avoid inhalation of dusts.  
Evacuate the danger area, observe emergency procedures, consult an expert.  
Advice for emergency responders:  
Protective equipment see section 8.

### 6.2 Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so.

### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Observe possible material restrictions (see sections 7 and 10).  
Take up dry. Dispose of properly. Clean up affected area.  
Avoid generation of dusts.

### 6.4 Reference to other sections

For disposal considerations see section 13.

For personal protection see section 8.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Advice on safe handling : Observe label precautions.
- Hygiene measures : Change contaminated clothing. Wash hands after working with substance.

### 7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Store in original container.
- Further information on storage conditions : Tightly closed. Dry.

Risks from decomposition products: see section 10

- Recommended storage temperature : If there is a suitable storage temperature range to be complied with, product label contains the relevant information accordingly.

### 7.3 Specific end use(s)

- Specific use(s) : Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

#### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7

#### Personal protective equipment

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled and must meet the specifications of a standard EN/ISO/DIN. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye protection : Safety glasses

Hand protection : not required

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Respiratory protection : required when dusts are generated.  
Filter type : Filter P 1 (acc. to DIN 3181) for solid particles of inert substances

#### Environmental exposure controls

Water : No special precautionary measures necessary.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state : solid  
Form : powder  
Colour : white  
Odour : odourless  
Odour Threshold : Not applicable  
Freezing point : No data available  
Boiling point : No data available  
Flammability : not combustible  
Upper explosion limit / Upper flammability limit : No data available  
Lower explosion limit / Lower flammability limit : No data available  
Flash point : Not applicable  
Auto-ignition temperature : No data available  
Decomposition temperature : No data available  
pH : substance/mixture is non-soluble (in water)  
Viscosity  
Viscosity, kinematic : No data available  
Solubility(ies)  
Water solubility : (20 °C)  
insoluble  
Solubility in other solvents : No data available  
Partition coefficient: n- : No data available

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octanol/water	
Vapour pressure	: No data available
Density	: 2,9 - 3,1 g/cm <sup>3</sup> (20 °C)
Bulk density	: 170 - 220 kg/m <sup>3</sup>
Relative vapour density	: No data available

#### 9.2 Other information

Explosives	: Not classified as explosive.
Oxidizing properties	: none

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

See section 10.3

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

Hazardous reactions : no information available

### 10.4 Conditions to avoid

Conditions to avoid : no information available

### 10.5 Incompatible materials

Materials to avoid : no information available

### 10.6 Hazardous decomposition products

in the event of fire: See section 5.

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## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute toxicity

##### Product:

Acute oral toxicity	: No data available
Acute inhalation toxicity	: No data available
Acute dermal toxicity	: No data available
Acute toxicity (other routes of	: No data available

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administration)

#### **Components:**

##### **tin dioxide:**

Acute oral toxicity : LD50 (Rat, male and female): > 2.000 mg/kg  
GLP: yes  
Remarks: (ECHA)

Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat, male and female): Exposure time: 4 h  
Test atmosphere: aerosol  
Method: OECD Test Guideline 403  
GLP: yes  
Remarks: An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration.

Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : Assessment: The substance or mixture has no acute dermal toxicity

#### **Skin corrosion/irritation**

##### **Product:**

No data available

##### **Components:**

##### **tin dioxide:**

Method : OECD Test Guideline 431  
Result : No skin irritation  
GLP : yes  
Remarks : (ECHA)

#### **Serious eye damage/eye irritation**

##### **Product:**

Species : In vitro study  
Exposure time : 240 min  
Method : OECD Test Guideline 437  
Result : No eye irritation  
GLP : yes  
Remarks : (in analogy to similar compounds)

##### **Components:**

##### **tin dioxide:**

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Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation
GLP	:	yes

#### Respiratory or skin sensitisation

##### Product:

No data available

##### Components:

###### **tin dioxide:**

Test Type	:	Local lymph node assay (LLNA)
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	Does not cause skin sensitisation.
GLP	:	yes

Remarks : (ECHA)

#### Germ cell mutagenicity

##### Product:

Genotoxicity in vitro : No data available

Genotoxicity in vivo : No data available

#### Carcinogenicity

##### Product:

No data available

#### Reproductive toxicity

##### Product:

Effects on fertility : No data available

Effects on foetal development : No data available

##### Components:

###### **tin dioxide:**

Effects on fertility	:	Test Type: Screening for reproductive/developmental toxicity Species: Rat, male and female Application Route: Oral General Toxicity - Parent: NOAEC: 800 mg/kg body weight General Toxicity F2: NOAEC: 800 mg/kg body weight
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Effects on foetal development	:	Species: Rat, female Application Route: Oral
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General Toxicity Maternal: NOAEL: 625 mg/kg body weight  
Embryo-foetal toxicity: NOAEL: 625 mg/kg body weight

### STOT - single exposure

**Product:**

No data available

### STOT - repeated exposure

**Product:**

No data available

### Repeated dose toxicity

**Product:**

No data available

**Components:**

**tin dioxide:**

Species	:	Rat, male and female
NOAEL	:	510 mg/kg
Application Route	:	Oral
Exposure time	:	4 w
Number of exposures	:	daily

### Aspiration toxicity

**Product:**

No data available

## 11.2 Information on other hazards

### Endocrine disrupting properties

**Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### Further information

**Product:**

Remarks	:	Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.
Remarks	:	Inhalation of the dusts should be avoided as even inert dusts may impair respiratory organ functions.
Remarks	:	Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product:

No data available

#### Components:

##### **tin dioxide:**

- Toxicity to fish : NOEC (Oncorhynchus mykiss (rainbow trout)): 100 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203  
GLP: yes  
Remarks: (above the solubility limit in the test medium) (ECHA)
- LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
GLP: yes  
Remarks: (above the solubility limit in the test medium) (ECHA)
- Toxicity to daphnia and other aquatic invertebrates : NOEC (Daphnia magna (Water flea)): > 100 mg/l  
Exposure time: 48 h  
Remarks: (above the solubility limit in the test medium) (own results)
- EC50 (Daphnia magna (Water flea)): > 100 mg/l  
Exposure time: 48 h  
Remarks: (above the solubility limit in the test medium) (own results)
- Toxicity to algae/aquatic plants : NOEC (Desmodesmus subspicatus (green algae)): 9,77 mg/l  
Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: (above the solubility limit in the test medium) (ECHA)
- Toxicity to microorganisms : EC50 (activated sludge): > 1.000 mg/l  
Exposure time: 3 h  
Test Type: static test  
Method: OECD Test Guideline 209  
Remarks: (above the solubility limit in the test medium) (ECHA)

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#### Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

#### 12.2 Persistence and degradability

##### Product:

No data available

##### Components:

##### tin dioxide:

Biodegradability : Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.

#### 12.3 Bioaccumulative potential

No data available

#### 12.4 Mobility in soil

No data available

#### 12.5 Results of PBT and vPvB assessment

##### Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

#### 12.6 Endocrine disrupting properties

##### Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

#### 12.7 Other adverse effects

##### Product:

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Additional ecological information : No ecological problems are to be expected when the product is handled and used with due care and attention.

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### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

Product : Waste should not be disposed of by release to sewers.

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### SECTION 14: Transport information

Not classified as dangerous in the meaning of transport regulations.

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### SECTION 15: Regulatory information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EU) No 2024/590 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. Not applicable

Storage class (TRGS 510) : 10 - 13, Other liquids and solids

#### Other regulations:

Take note of Dir 94/33/EC on the protection of young people at work.

#### 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

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## SECTION 16: Other information

### Full text of H-Statements

### Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### Further information

Decimal notation: "Thousands" places are identified with a dot (example: 2.000 mg/kg means "two thousand mg/kg"). Decimal places are identified with a comma (example: 1,35 g/cm<sup>3</sup>).

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### Revision Note

Safety datasheet sections : SECTION 2 (Classification and labeling)  
which have been updated

### Disclaimer

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product. This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

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