

Safety information

in accordance with article 32 of the provision (EU) 1907/2006 (REACH)

Material number: 204

Product designation: **StronSal[®], Surface-coated thin sheet metals
with ZM coating (hot-dipped zinc-aluminium-magnesium coating)**

created on: 06/15/2015 revised: 06/15/2015 Issue date: 15.06.2015

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1. Designation of the product and company designation

1.1. Product identifier

1.1.1. **Designation/trade name:** Surface-coated thin sheet metals with ZM coating (hot-dipped zinc-aluminium-magnesium coating), e.g. coil or sheet with alloy additives.

1.1.2. Additional designations

1.1.3. **REACH registration number:** The unalloyed/low alloyed steel in its delivered form is a product for which a registration number is not required.

1.2. **Use of the product:** Use in the steel processing industry

1.3. Details about the supplier that provides the safety information

- | | |
|---|--|
| 1.3.1. EU distributor (producer) | Salzgitter Flachstahl GmbH |
| 1.3.2. Address | Eisenhüttenstraße 99, 38239 Salzgitter |
| 1.3.3. Postal address | 38223 Salzgitter |
| 1.3.4. Country | Germany |
| 1.3.5. Phone: | 05341 / 21-01 |
| 1.3.6. Fax: | 05341 / 21-39 21 |
| 1.3.7. Department that provides information: | Central department occupational safety
Phone 05341 / 21-22 01
Fax 05341 / 21-39 21 |
| 1.3.8. Email address (competent person) | szfg.reach@salzgitter-ag.de |
- 1.4 **Emergency number:** 05341 / 21-112 (plant fire brigade) (covered for 24 h/d)

2. Possible hazards

2.1 Classification of the product:

Coated unalloyed/low alloyed steel in its presented form is a product according to the REAH provision (1907/2006/EG).

The composition from which the product was manufactured is classified as not hazardous in accordance with the regulation (EU) No. 1272/2008 (CLP).

2.2 Other hazards

Dusts and smokes can occur during the mechanical or thermal processing (e.g. welding, cutting, grinding), which can create health hazards when continuously inhaled (see limit values in accordance with No. 8.2.1).

3. Composition/Information about ingredients

3.1 **Chemical characterization:** Unalloyed/low alloyed steel galvanized surface

3.2 Steel ingredients:

EU No. Reg No.	CAS No.	Designation	Share [%]	Classification VO (EU) No.1272/2008
231-096-4 01-2119462838-24	7439-89-6	Iron	>95	-

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3.3 Coating ingredients:

EU No.	CAS No.	Reg-No.	Designation	Share [%]	Classification VO (EG) Nr.1272/2008
231-175-3	7440-66-6	01-2119467174-37	Zink	>96	-
231-175-3	7429-90-5	01-2119529243-45	Aluminium	1 - 2	-
231-175-3	7439-95-4	01-2119537203-49	Magnesium	1 - 2	-

3.4 Additional information:

In accordance with our current state of knowledge, this product does not include any especially worrisome substances in accordance with article 57 and 59(1) of the REACH-VO or substances on the candidate list in appendix XIV with a concentration of more than 0.1%. If changes should occur to the above, then we will inform our customers unrequested and immediately.

On request of the customer, the products can also be delivered with corrosion protection oils, phosphated and/or chemically passivated.

4. First aid actions

4.1. General Information:

The first aid actions are based on dusts and smokes that can be generated during the thermal or mechanical processing.

4.2. Actions after inhaling:

Fresh air supply (e.g. opportunity to move to the open air) and possibly involve physician

4.3. Actions after skin contact:

Wash with water and soap.

4.4. Measures after eye contact:

Open lid and flush thoroughly with running water and possibly involve physician.

4.5. Measures after swallowing:

Flush mouth and drink lots of water.

5. Fire fighting measures

5.1. Suitable extinguishing agents:

Steel in a massive form is not flammable. Adapt fire extinguishing measures to the environmental fire.

5.2. Special hazards that are caused by the substance or mixture

none

5.3. Information for firefighting:

none

6. Measures in case of unintended release

6.1. Person related precautionary measures: Refer to Section 8.

6.2. Environmental measures:

No special environmental protection measures required.

6.3. Cleaning processes:

Collect residues and recycle.

7. Handling and storage

7.1. Protective measures for the safe handling

7.1.1 Information about safe handling:

Steel products can have sharp edges therefore wear cut-

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- 7.1.2 Technical measures:** resistant gloves when handling.
Exhaust at the machine/work place, normally aeration measures, during thermal processing and/or mechanical machining.
Adherence to the following is required:
TRGS 528 "Technical welding works" and TRGS 900 Work place limit values".
- 7.1.3 General hygiene measures:** When using do not eat, drink or smoke. Wash the hands before breaks and after work.
- 7.2. Conditions for safe storage under consideration of intolerance:** Avoid contact with acids (hydrogen development)

8. Exposure limitation and personal protection

8.1. Parameters to be monitored

8.1.1 Workplace limit values (TRGS 900 *):

CAS No.	Designation	ml/m ³	mg/m ³	Peak limitation
	General dust limit value			
	- Respirable fraction		1,25	
	- Airborne respirable fraction		10	2 (II)

*) German limit values: Adherence to the respective national laws / regulations and workplace limit values is required.

- 8.1.2 Additional information about limit values:** The limit value analysis is related to dusts/smokes that can be generated during the processing and machining.
The risk of explosion or ignition at the time of the aspiration and confined accumulation of metallic dust shall be taken into account.
- 8.1.3 DNEL and PENEK value:** A DNEL value was compiled for iron as part of the CSR:
Long term, oral (general public): 0.71 mg/kg/day
Long term, inhaling (general public): 1.5 mg/m³

8.2. Limitation and monitoring of the exposure

- 8.2.1. Suitable technical equipment:** Refer to Section 7.
- 8.2.2. Respiration mask:** Not required for the massive form. Suitable respiration masks must be used for a short time if the limit values are exceeded during the mechanical and/or thermal processing despite technical measures for aeration.
- 8.2.3. Hand protection:** Depending on the respective processing and machining. Wear cut-resistant gloves (EN 388) when handling metal sheets.
- 8.2.4. Eye protection:** In accordance with the work processes, protective glasses must be worn in case of smoke and dust development during welding and burning.

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8.2.5. **Body protection:** Safety shoes, work clothes

9. Physical and chemical properties

- Aggregate state: solid
- Color: silver gray
- Odor: odorless
- Density at 20°C: 7.7 – 8.3 g/cm³
- Melting point: 1325 - 1530 °C (steel), 380-450 °C (zinc-aluminium-magnesium))
- Flashing point: not flammable
- Water solubility: insoluble

10. Stability and reactivity

- 10.1. **Reactivity:** Not reactive under normal ambient conditions.
- 10.2. **Chemical stability:** stable.
- 10.3. **Conditions to be avoided:** No hazardous conditions known.
- 10.4. **Incompatible materials:** Avoid contact with acid and alkali solutions (risk of corrosion), generation of hydrogen possible.
- 10.5. **Hazardous decomposition products:** None known.

11. Toxicological information

- 11.1. **General information:** The toxicity information is based on iron, which has the largest share (>85%) in the entire product.
- 11.2. **Acute toxicity**
- Inhalative (rat) carbonyl iron**
LC50(6h): >250 mg/m³ (CSR)
- Oral (rat) electrolytic iron powder**
LD50 7500 mg/kg
- 11.3. **Irritation/burn effect:** **Skin:** No irritation effect (in accordance with OECD 404)
Eye: No irritation effect (in accordance with OECD 405) (CSR)
Irritation effect due to tribological rubbing.
- 11.4. **Sensitization** not sensitizing (CSR)
- 11.5. **Toxicity when consumed repeatedly:** **Oral (rat) iron**
LOAEL: 26 mg/kg/per day
Inhalative (rat) iron
NOAEC: 5 mg/m³ (CSR)
- 11.6. **CMR effect (cancer causing, genetic makeup changing and reproduction endangering effect):**
- 11.6.1. **Cancer causing:** No reference to cancer causing effect and
- 11.6.2. **Genetic makeup changing:** No reference to genetic makeup changing effect (negative test results for bacteria and cell culture test) (CSR)
- 11.6.3. **Reproduction endangering:** No data available
- 11.7. **Practical experience:** No data available

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12. Environment related information

- 12.1. **General information:** The environment related information is based on iron that has the largest share (>85%) of the entire result.
- 12.2. **Ecological toxicity:** No reference to ecological toxicity
Aquatic, fish short term (*Brachydanio rerio*)
LLO (96h): >1000 mg/l (iron oxides)
Other studies listed in CSR
- 12.3. **Resistance and degradability** The methods for the determination of the biological degradability cannot be applied to inorganic substances.
- 12.4. **Biological accumulation potential:** n/a. Iron is an essential element and its concentration in the organism is self-regulating.
- 12.5. **Mobility in the soil:** n/a. Iron oxidizes in the long term in the environment into a more stable iron(III) oxide.
- 12.6. **Result of the PBT and vPvB characteristic determination:** Iron does not fulfill the criteria for persistent, biologically accumulative or toxic.
- 12.7. **Other harmful effects** not known

13. Disposal considerations

- 13.1. **Processes for waste handling:**
- 13.1.1. **Disposal/waste (product)** Recycle steel

14. Transport Information

- 14.1. **Further specifications:** Not a hazardous material in accordance with the transport regulations

15. Information about statutory provisions:

- 15.1. **Regulations about the safety, health and environment specific statutory provisions for the product:** none
- 15.2. **Domestic regulations:** none
- 15.3. **Hazardous Incident Ordinance:** N/A
- 15.4. **Water hazard class acc. to VwVwS:** N/A
- 15.5. **Substance safety assessment:** A safety assessment is not required for this product.

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16. Other information

16.1 Other information

Abbreviations:

n/a = not applicable.

DNEL = no effect concentration (health)

PNEC = no effect concentration (environment)

16.2 Sources:

CSR: Chemical Safety Report IRON,
[regulation (EU) No. 1907/2006 (REACH)]

Explanation:

The content of this safety information is based on the current state of our knowledge and experience. The safety information describes the products with respect to the safety requirements. The information does not have the meaning of characteristics guaranties.