

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 06/15/2015

Reviewed on 06/15/2015

1 Identification

- **Product identifier**
- **Trade name: Surf-Kote PS-100**
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
HOHMAN PLATING & MFG.
814 Hillrose Avenue
Dayton, Ohio 45404-1132
(937) 228-2191
- **Emergency telephone number:**
Chemtrec (US): (800) 424-9300
Chemtrec (Outside US): (703) 527-3887 (Collect calls accepted)

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.
STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
Skin Irrit. 2 H315 Causes skin irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.
Eye Irrit. 2B H320 Causes eye irritation.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS07 GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

Chromium
Nickel
Calcium fluoride
Barium oxide, obtained by calcining witherite

- **Hazard statements**

Harmful if swallowed.

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Causes skin and eye irritation.
May cause an allergic skin reaction.
Suspected of causing cancer.
May cause respiratory irritation.
Causes damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

Do not breathe dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wear protective gloves.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Contaminated work clothing must not be allowed out of the workplace.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If swallowed: Call a poison center/doctor if you feel unwell.
Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.
If skin irritation occurs: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
Rinse mouth.
If on skin: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Unknown acute toxicity:**

56.1 percent of the mixture consists of ingredient(s) of unknown toxicity.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **Hazard(s) not otherwise classified (HNOC):** None known

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

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· Dangerous Components:		
CAS: 7789-75-5 RTECS: EW 1760000	Calcium fluoride ⚠ Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	25-50%
CAS: 7440-02-0	Nickel ⚠ Carc. 2, H351; STOT RE 1, H372; ⚠ Skin Sens. 1, H317	25-50%
CAS: 7440-47-3 RTECS: GB 4200000	Chromium ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2B, H320	15-35%
CAS: 1304-28-5 RTECS: CQ 9800000	Barium oxide, obtained by calcining witherite ⚠ Acute Tox. 3, H331; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319	2-12%
CAS: 7429-90-5 RTECS: BD 0330000	Aluminium ⚠ Flam. Sol. 2, H228	≤ 2.5%
CAS: 7439-96-5 RTECS: OO 9275000	Manganese ⚠ Pyr. Sol. 1, H250; Water-react. 1, H260	≤ 2.5%

4 First-aid measures

· Description of first aid measures

· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Consult a doctor for complaints.

In case of unconsciousness, place patient securely on side position for transportation.

· After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation occurs, consult a doctor.

· After eye contact:

Rinse opened eye for at least 15 minutes under running water. If symptoms persist, consult a doctor.

· After swallowing: If swallowed and symptoms occur, consult a doctor.

· Information for doctor:

· Most important symptoms and effects, both acute and delayed: No further relevant information available.

· Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

· Extinguishing media

· Suitable extinguishing agents:

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· Special hazards arising from the substance or mixture No further relevant information available.

· Advice for firefighters

· Protective equipment:

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures Not required.

· Environmental precautions: Do not allow to enter sewers/ surface or ground water.

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- **Methods and material for containment and cleaning up:**
 Dispose contaminated material as waste according to section 13.
 Ensure adequate ventilation.
 Dispose of the collected material according to regulations.
- **Reference to other sections**
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**

· Components with occupational exposure limits:	
7789-75-5 Calcium fluoride	
PEL	Long-term value: 2.5 mg/m ³ as F
REL	Long-term value: 2.5 mg/m ³ as F
TLV	Long-term value: 2.5 mg/m ³ as F, BEI
7440-02-0 Nickel	
PEL	Long-term value: 1 mg/m ³
REL	Long-term value: 0.015 mg/m ³ as Ni; See Pocket Guide App. A
TLV	Long-term value: 1.5* mg/m ³ elemental, *inhalable fraction
7440-47-3 Chromium	
PEL	Long-term value: 1* 0.5** mg/m ³ *metal;**inorganic compds., as Cr
REL	Long-term value: 0.5* mg/m ³ *metal+inorg.compds.as Cr;See Pocket Guide App. C
TLV	Long-term value: 0.5 mg/m ³

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1304-28-5 Barium oxide, obtained by calcining witherite	
PEL	Long-term value: 0.5 mg/m ³ as Ba
REL	Long-term value: 0.5 mg/m ³ as Ba
TLV	Long-term value: 0.5 mg/m ³ as Ba
7429-90-5 Aluminium	
PEL	Long-term value: 15*; 15** mg/m ³ *Total dust; ** Respirable fraction
REL	Long-term value: 10* 5** mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.
TLV	Long-term value: 1* mg/m ³ as Al; *as respirable fraction
7439-96-5 Manganese	
PEL	Ceiling limit value: 5 mg/m ³ as Mn
REL	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³ fume, as Mn
TLV	Long-term value: 0.02* 0.1* mg/m ³ as Mn; *respirable **inhalable fraction
Ingredients with biological limit values:	
7789-75-5 Calcium fluoride	
BEI	2 mg/L urine prior to shift Fluoride (background, nonspecific)
	3 mg/L urine end of shift Fluoride (background, nonspecific)

· **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing and wash before reuse.
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes and skin.

· **Breathing equipment:** Not required.

· **Protection of hands:**



Protective gloves

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The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/
the chemical mixture.

Select glove material based on penetration times, rates of diffusion and degradation.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

Eye protection:

Tightly sealed goggles

9 Physical and chemical properties**Information on basic physical and chemical properties****General Information****Appearance:****Form:**

Powder

Color:

Gray

Odor:

Odorless

Odor threshold:

Not determined.

pH-value:

Not applicable.

Change in condition**Melting point/Melting range:**

Not determined.

Boiling point/Boiling range:

2000 °C (3632 °F)

Flash point:

Not applicable.

Flammability (solid, gaseous):

Not determined.

Ignition temperature:

580 °C (1076 °F)

Decomposition temperature:

Not determined.

Auto igniting:

Product is not self-igniting.

Danger of explosion:

Product does not present an explosion hazard.

Explosion limits:**Lower:**

Not determined.

Upper:

Not determined.

Vapor pressure:

Not applicable.

Density @ 20 °C (68 °F):5.927 g/cm³ (49.461 lbs/gal)**Relative density**

Not determined.

Vapor density

Not applicable.

Evaporation rate

Not applicable.

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- **Solubility in / Miscibility with Water:** Insoluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not applicable.
 - Kinematic:** Not applicable.
- **Solvent content:**
 - Organic solvents:** 0.0 %
 - Solids content:** 100.0 %
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· LD/LC50 values that are relevant for classification:		
7789-75-5 Calcium fluoride		
Oral	LD50	4250 mg/kg (rat)
7429-90-5 Aluminium		
Oral	LD50	>2000 mg/kg (rat)
Inhalative	LC50/4 h	888 mg/l (rat)
7439-96-5 Manganese		
Oral	LD50	9000 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes. Emissions from broken bulbs may cause an allergic skin reaction.
- **on the eye:** Irritating effect. Causes serious eye irritation.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:** The product shows the following dangers according to internally approved calculation methods for preparations: Irritant
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**
 - Group 1 - Carcinogenic to humans
 - Group 2A - Probably carcinogenic to humans

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- Group 2B - Possibly carcinogenic to humans
- Group 3 - Not classifiable as to its carcinogenicity to humans
- Group 4 - Probably not carcinogenic to humans

7789-75-5	Calcium fluoride	3
7440-02-0	Nickel	1
7440-47-3	Chromium	3

· **NTP (National Toxicology Program)**

7440-02-0	Nickel	R
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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

7440-02-0 Nickel

EC50 1.0 mg/l (Water flea)

7440-47-3 Chromium

EC50 0.07 mg/l (Water flea)

7439-96-5 Manganese

EC50 40 mg/l (Water flea)

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Observe all federal, state and local environmental regulations when disposing of this material.
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· **DOT, ADR, IMDG, IATA**

Non-Regulated Material

· **UN proper shipping name**

· **DOT, ADR, IMDG, IATA**

Non-Regulated Material

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- **Transport hazard class(es)**
- **DOT, ADR, IMDG, IATA**
- **Class** Non-Regulated Material
- **Packing group**
- **DOT, ADR, IMDG, IATA** Non-Regulated Material
- **Environmental hazards:** Not applicable.
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

·	Section 355 (extremely hazardous substances):
	None of the ingredients are listed.

·	Section 313 (Specific toxic chemical listings):
7440-02-0	Nickel
7440-47-3	Chromium
1304-28-5	Barium oxide, obtained by calcining witherite
7429-90-5	Aluminium
7439-96-5	Manganese

·	TSCA (Toxic Substances Control Act):
	All ingredients are listed.

- **California Proposition 65**

·	Chemicals known to cause cancer:
7440-02-0	Nickel

·	Chemicals known to cause reproductive toxicity for females:
	None of the ingredients are listed.

·	Chemicals known to cause reproductive toxicity for males:
	None of the ingredients are listed.

·	Chemicals known to cause developmental toxicity:
	None of the ingredients are listed.

- **Carcinogenic categories**

·	EPA (Environmental Protection Agency)	
7440-47-3	Chromium	D
1304-28-5	Barium oxide, obtained by calcining witherite	D, CBD(inh), NL(oral)
7439-96-5	Manganese	D

·	TLV (Threshold Limit Value established by ACGIH)	
7789-75-5	Calcium fluoride	A4
7440-02-0	Nickel	A5
7440-47-3	Chromium	A4
1304-28-5	Barium oxide, obtained by calcining witherite	A4

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7429-90-5	Aluminium	A4
· NIOSH-Ca (National Institute for Occupational Safety and Health)		
7440-02-0	Nickel	

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

Chromium
 Nickel
 Calcium fluoride
 Barium oxide, obtained by calcining witherite

· **Hazard statements**

Harmful if swallowed.
 Causes skin and eye irritation.
 May cause an allergic skin reaction.
 Suspected of causing cancer.
 May cause respiratory irritation.
 Causes damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

Do not breathe dust/fume/gas/mist/vapors/spray.
 Avoid breathing dust/fume/gas/mist/vapors/spray.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves.
 Wash thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Contaminated work clothing must not be allowed out of the workplace.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If swallowed: Call a poison center/doctor if you feel unwell.
 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 Wash contaminated clothing before reuse.
 IF exposed or concerned: Get medical advice/attention.
 If skin irritation occurs: Get medical advice/attention.
 If skin irritation or rash occurs: Get medical advice/attention.
 If eye irritation persists: Get medical advice/attention.
 Get medical advice/attention if you feel unwell.
 Rinse mouth.
 If on skin: Wash with plenty of water.
 Take off contaminated clothing and wash it before reuse.
 Store locked up.
 Store in a well-ventilated place. Keep container tightly closed.

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Dispose of contents/container in accordance with local/regional/national/international regulations.

· National regulations:

The product is subject to be classified according with the latest version of the regulations on hazardous substances.

· State Right to Know

CAS: 7789-75-5 RTECS: EW 1760000	Calcium fluoride ⚠ Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	25-50%
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CAS: 7440-47-3 RTECS: GB 4200000	Chromium ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2B, H320	15-35%
CAS: 1304-28-5 RTECS: CQ 9800000	Barium oxide, obtained by calcining witherite ⚠ Acute Tox. 3, H331; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319	2-12%
CAS: 7429-90-5 RTECS: BD 0330000	Aluminium ⚠ Flam. Sol. 2, H228	≤ 2.5%
CAS: 7439-96-5 RTECS: OO 9275000	Manganese ⚠ Pyr. Sol. 1, H250; Water-react. 1, H260	≤ 2.5%
All ingredients are listed.		

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· Date of preparation / last revision 06/15/2015 / -

· Abbreviations and acronyms:

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
 ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Flam. Sol. 2: Flammable solids, Hazard Category 2
 Pyr. Sol. 1: Pyrophoric Solids, Hazard Category 1
 Water-react. 1: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 1

Acute Tox. 4: Acute toxicity, Hazard Category 4
 Acute Tox. 3: Acute toxicity, Hazard Category 3
 Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
 Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
 Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B
 Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
 Carc. 2: Carcinogenicity, Hazard Category 2

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STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1

· * **Data compared to the previous version altered.**

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