

Safety Data Sheet (SDS)

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

Issue date 06/11/2015

Reviewed on 06/11/2015

1 Identification

- **Product identifier**
- **Trade name: Surf-Kote H-205**
- **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**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.



GHS08 Health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**

- **GHS label elements**

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

- **Hazard pictograms**



GHS02



GHS07



GHS08

- **Signal word** Danger

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

Molybdenum Disulphide

Toluene

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Trade name: Surf-Kote H-205**Hazard statements**

Flammable liquid and vapor.
Harmful if inhaled.
Causes skin irritation.
Suspected of damaging fertility or the unborn child.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.
May be fatal if swallowed and enters airways.

Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Use explosion-proof electrical/ventilating/lighting/equipment.
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 / eye protection / face protection.
Wear protective gloves.
Ground/bond container and receiving equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
If swallowed: Immediately call a poison center/doctor.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
Call a poison center/doctor if you feel unwell.
IF exposed or concerned: Get medical advice/attention.
If skin irritation occurs: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
Do NOT induce vomiting.
In case of fire: Use for extinction: CO₂, powder or water spray.
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.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Unknown acute toxicity:

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

Classification system:**NFPA ratings (scale 0 - 4)**

Health = 2
Fire = 2
Reactivity = 0

HMIS-ratings (scale 0 - 4)

HEALTH	*2	Health = *2
FIRE	2	Fire = 2
REACTIVITY	0	Reactivity = 0

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- **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.

· **Dangerous Components:**

CAS: 1317-33-5 RTECS: QA 4697000	Molybdenum Disulphide ⚠ Acute Tox. 4, H332	40-60%
CAS: 108-88-3 RTECS: XS 5250000	Toluene ⚠ Flam. Liq. 2, H225; ⚠ Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336	40-60%

* 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:**
Supply fresh air. If required, provide artificial respiration. Consult doctor if symptoms persist. 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 several minutes under running water. If eye irritation occurs, 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, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**
Combustible liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above flashpoint.
- **Advice for firefighters**
- **Protective equipment:**
Mouth respiratory protective device.
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**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

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- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
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**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
Keep protective respiratory device available.
- **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.
Protect from heat and direct sunlight.
- **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:**

1317-33-5 Molybdenum Disulphide

PEL	Long-term value: 15* mg/m ³ *Total dust
TLV	Long-term value: 10* 3** mg/m ³ as Mo; *inhalable fraction ** respirable fraction

108-88-3 Toluene

PEL	Long-term value: 200 ppm Ceiling limit value: 300; 500* ppm *10-min peak per 8-hr shift
REL	Short-term value: 560 mg/m ³ , 150 ppm Long-term value: 375 mg/m ³ , 100 ppm
TLV	Long-term value: 75 mg/m ³ , 20 ppm BEI

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Ingredients with biological limit values:	
108-88-3 Toluene	
BEI	0.02 mg/L blood prior to last shift of workweek Toluene
	0.03 mg/L urine end of shift Toluene
	0.3 mg/g creatinine urine end of shift o-Cresol with hydrolysis (background)

· **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:**

The usual precautionary measures for handling chemicals should be followed.

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.

Store protective clothing separately.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

· **Breathing equipment:** Not required.

· **Protection of hands:**



Protective gloves

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.

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Trade name: Surf-Kote H-205

· **Eye protection:**

Tightly sealed goggles

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

Liquid

Color:

Bluish black

· **Odor:**

Solvent-like

· **Odor threshold:**

Not determined.

· **pH-value:**

Not determined.

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

Not determined.

Boiling point/Boiling range:

110 °C (230 °F)

· **Flash point:**

45 °C (113 °F)

· **Flammability (solid, gaseous):**

Not applicable.

· **Ignition temperature:**

535 °C (995 °F)

· **Decomposition temperature:**

Not determined.

· **Auto igniting:**

Product is not self-igniting.

· **Danger of explosion:**

Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:****Lower:**

1.2 Vol %

Upper:

7.0 Vol %

· **Vapor pressure @ 20 °C (68 °F):**

29 hPa (22 mm Hg)

· **Density @ 20 °C (68 °F):**1 g/cm³ (8.345 lbs/gal)· **Relative density**

Not determined.

· **Vapor density**

Not determined.

· **Evaporation rate**

Not determined.

· **Solubility in / Miscibility with****Water:**

Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:****Dynamic:**

Not determined.

Kinematic:

Not determined.

· **Solvent content:****Organic solvents:**

55.0 %

VOC content:

55.0 %

550.0 g/l / 4.59 lb/gl

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- **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** Heat, flame and ignition sources.
- **Incompatible materials:** Strong oxidizing agents.
- **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:**

1317-33-5 Molybdenum Disulphide

Inhalative	LC50/4 h	2.82 mg/l (rat)
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108-88-3 Toluene

Oral	LD50	5000 mg/kg (rat)
Dermal	LD50	12124 mg/kg (rabbit)
Inhalative	LC50/4 h	12.5-28.8 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

108-88-3	Toluene	3
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- **NTP (National Toxicology Program)**

None of the ingredients are listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

108-88-3 Toluene

EC50	10 mg/l (Green algae)
	8.0 mg/l (Water flea)

- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.

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- **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:**
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** UN1992
- **UN proper shipping name**
- **DOT** Flammable liquids, toxic, n.o.s. (Toluene)
- **ADR** UN1992 Flammable liquids, toxic, n.o.s. (Toluene)
- **IMDG, IATA** FLAMMABLE LIQUID, TOXIC, N.O.S. (TOLUENE)
- **Transport hazard class(es)**

· **DOT**



- **Class** 3 Flammable liquids
- **Label** 3, 6.1

· **ADR**



- **Class** 3 (FT1) Flammable liquids
- **Label** 3+6.1

· **IMDG**



- **Class** 3 Flammable liquids

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· **Label** 3/6.1

· **IATA**



· **Class** 3 Flammable liquids
 · **Label** 3 (6.1)
 · **Packing group** III
 · **DOT, ADR, IMDG, IATA** III
 · **Environmental hazards:** Not applicable.
 · **Special precautions for user** Warning: Flammable liquids
 · **Danger code (Kemler):** 36
 · **EMS Number:** F-E,S-D
 · **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **DOT**
 · **Quantity limitations** On passenger aircraft/rail: 60 L
 On cargo aircraft only: 220 L

· **ADR**
 · **Excepted quantities (EQ)** Code: E1
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 1000 ml

· **IMDG**
 · **Limited quantities (LQ)** 5L
 · **Excepted quantities (EQ)** Code: E1
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 1000 ml
 · **UN "Model Regulation":** UN1992, Flammable liquids, toxic, n.o.s. (Toluene), 3 (6.1), III

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):	108-88-3 Toluene
· TSCA (Toxic Substances Control Act):	All ingredients are listed.
· California Proposition 65	
· Chemicals known to cause cancer:	None of the ingredients are listed.
· Chemicals known to cause reproductive toxicity for females:	108-88-3 Toluene

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· Chemicals known to cause reproductive toxicity for males:	
None of the ingredients are listed.	
· Chemicals known to cause developmental toxicity:	
108-88-3	Toluene
· Carcinogenic categories	
· EPA (Environmental Protection Agency)	
108-88-3	Toluene
· TLV (Threshold Limit Value established by ACGIH)	
108-88-3	Toluene
· NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients are listed.	

· **GHS label elements**

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

· **Hazard pictograms**



GHS02 GHS07 GHS08

· **Signal word** Danger

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

Molybdenum Disulphide
Toluene

· **Hazard statements**

Flammable liquid and vapor.
Harmful if inhaled.
Causes skin irritation.
Suspected of damaging fertility or the unborn child.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.
May be fatal if swallowed and enters airways.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Use explosion-proof electrical/ventilating/lighting/equipment.
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 / eye protection / face protection.
Wear protective gloves.
Ground/bond container and receiving equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
If swallowed: Immediately call a poison center/doctor.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

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IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a poison center/doctor if you feel unwell.
IF exposed or concerned: Get medical advice/attention.
If skin irritation occurs: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
Do NOT induce vomiting.
In case of fire: Use for extinction: CO₂, powder or water spray.
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.
Store in a well-ventilated place. Keep cool.
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

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** 06/11/2015 / 1

· 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)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Flam. Liq. 3: Flammable liquids, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Repr. 2: Reproductive toxicity, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
Asp. Tox. 1: Aspiration hazard, Hazard Category 1

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

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