



## Safety Data Sheet acc. to OSHA HCS


Printing date 05/08/2015

Reviewed on 05/08/2015

### 1: Identification

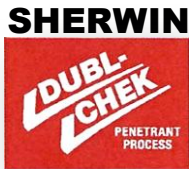
- **1.1 Product identifier**
- **Trade name: Penetrant HM-220**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture**  
NDT Inspection penetrant "Type 1 Methods "A" per AMS-2644/ ASTM E-1417
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Sherwin Incorporated  
5530 Borwick Ave  
South Gate, CA 90280  
Phone: (562) 861-6324  
Fax: (562) 923-8370  
<https://www.sherwininc.com/>
- **Information department:** Product safety department
- **1.4 Emergency telephone number:**  
ChemTel 1-800-255-3924 in U.S.A, Canada, Puerto Rico and US Virgin Islands;  
ChemTel +01-813-248-0585 outside U.S.A, Canada, Puerto Rico and US Virgin Islands  
ChemTel Brazil: 0-800-591-6042, China: 400-120-0751, India: 000-800-100-4086 and Mexico: 01-800-099-0731.

### 2: Hazard(s) identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
Eye Dam. 1 H318 Causes serious eye damage.  
Skin Irrit. 2 H315 Causes skin irritation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labeled according to the CLP regulation.
- **Hazard pictograms**  
  
GHS05
- **Signal word** Danger
- **Hazard-determining components of labeling:**  
Secondary alcohol ethoxylates (1)  
Secondary alcohol ethoxylates (3)
- **Hazard statements**  
H315 Causes skin irritation.  
H318 Causes serious eye damage.
- **Precautionary statements**  
P280 Wear protective gloves.  
P280 Wear eye protection / face protection.  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a doctor.  
P321 Specific treatment (see on this label).  
P332+P313 If skin irritation occurs: Get medical advice/attention.

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



- **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	1	Fire = 1
REACTIVITY	0	Reactivity = 0

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3: Composition/information on ingredients

- **3.2 Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

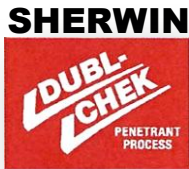
- **Dangerous components:**

25498-49-1	Propanol, [2-(2-methoxymethylethoxy)methylethoxy]-	50-70%
84133-50-6	Secondary alcohol ethoxylates (3)	10-30%
84133-50-6	Secondary alcohol ethoxylates (1)	1-10%
25322-68-3	Polyethylene glycol	1-5%
25265-71-8	Dipropylene glycol	1-5%

### 4: First-aid measures

- **4.1 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. Keep patient warm. Consult doctor if symptoms persist.  
In case of unconsciousness place patient stably in side position for transportation.  
Take affected persons into fresh air and keep quiet.
- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly.  
If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Do not induce vomiting; immediately call for medical help.  
Immediately call a doctor.  
A person vomiting while lying on their back should be turned onto their side.

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- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5: Fire-fighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
Water haze  
Foam  
ABC powder
- **For safety reasons unsuitable extinguishing agents:** Water spray
- **5.2 Special hazards arising from the substance or mixture** Carbon monoxide and carbon dioxide
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.

### 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation
- **6.2 Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Collect liquid in an appropriate container or absorb with an inert material such as vermiculite, dry sand, or earth;  
DO NOT use combustible materials.  
Place in a chemical waste container.
- **6.4 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

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:**  
Use explosion-proof apparatus / fittings and spark-proof tools.  
Containers may be hazardous when empty since residue liquid and vapors may be present
- **7.2 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:** None.

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- **7.3 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 item 7.
- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work.  
Do not inhale gases / fumes / aerosols.  
Avoid contact with the skin.  
Avoid contact with the eyes and skin.
- **Breathing equipment:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.



Ventilation System: A system of local or general exhaust is recommended to keep employee exposure below the airborne exposure limits. If exposure limit is exceeded use organic vapor respirator (type A), or self contained breathing apparatus.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the 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 found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**

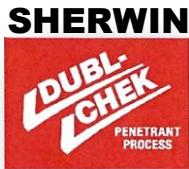


Safety glasses

Tightly sealed goggles

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· **Body protection:** Use protective suit.

**9: Physical and chemical properties**

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· **Form:** Liquid  
· **Color:** Yellow fluorescent

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· **Melting point/Melting range:** Undetermined.

· **Boiling point/Boiling range:** 240 °C (464 °F)

· **Flash point:** > 93 °C (> 199 °F) (ASTM D-93)

· **Ignition temperature:** 270 °C (518 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

· **Lower:** Not determined.

· **Upper:** Not determined.

· **Vapor pressure:** Not determined.

· **Density at 20 °C (68 °F):** 0.8 g/cm<sup>3</sup> (6.676 lbs/gal) (ASTM D-1298)

· **Relative density** 0.874 (20 °C)

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

· **Water:** Not determined.

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

· **Viscosity:**

· **Dynamic:** Not determined.

· **Kinematic at 40 °C (104 °F):** 7 mm<sup>2</sup>/s (ASTM D-445)

· **9.2 Other information**

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### 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**  
Avoid contact with acetaldehyde, acids, chlorine, ethylene oxide, isocyanate and strong oxidizing agents
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:** Information on hazardous ingredients
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **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)

Group 1	Carcinogenic to humans
Group 2A	Probably carcinogenic to humans
Group 2B	Possibly carcinogenic to humans
Group 3	Not classifiable as to its carcinogenicity to humans
Group 4	Probably not carcinogenic to humans

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC

#### • NTP (National Toxicology Program)

None of the ingredients is listed.

#### • OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

### 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**  
Information on hazardous ingredients

**25498-49-1** Propanol, [2-(2-methoxymethylethoxy)methylethoxy]-

EC50/ 48 h >100 mg/l (daphnia)

LC50/ 96 h >100 mg/l (Fish)

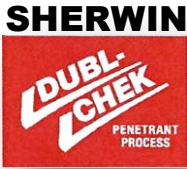
**84133-50-6** Secondary alcohol ethoxylates (1)

EC50/ 48 h 4.01 mg/l (daphnia)

LC50/ 96 h 3.4 mg/l (Fish)

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**84133-50-6 Secondary alcohol ethoxylates (3)**

EC50/ 48 h	3.1 mg/l (daphnia)
LC50/ 96 h	1-10 mg/l (Fish)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**  
Secondary alcohol ethoxylates: This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

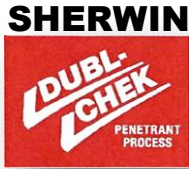
### 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Waste/ unused products  
Collect all waste in suitable and labeled containers and dispose according to local legislation.
- **Uncleaned packagings:**
- **Recommendation:**  
Waste / used products  
Waste products and empty packages dispose of in accordance with local regulations.  
Empty containers may contain flammable residue and vapors.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14: Transport information

- **14.1 UN-Number**
  - **DOT**
  - **DOT**
  - **ADR, IMDG, IATA**
  - **14.2 UN proper shipping name**
  - **DOT**
  - **ADR, IMDG, IATA**
- |  |                |
|--|----------------|
| <b>Drums</b>   | Not regulated  |
| <b>Bulk</b>  | UN3082         |
|  | not applicable |
| <b>Bulk - Marine pollutant (Secondary alcohol ethoxylates)</b> |                |
|  | not applicable |

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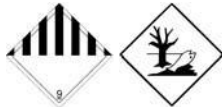
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• **14.3 Transport hazard class(es)**

• **DOT Bulk**



• **Class** 9 Miscellaneous dangerous substances and articles  
 • **Label** 9

• **ADR, IMDG, IATA**

• **Class** not applicable

• **14.4 Packing group**

• **DOT** **Bulk** III  
 • **ADR, IMDG, IATA** not applicable

• **14.5 Environmental hazards:**

• **Marine pollutant:** No

• **14.6 Special precautions for user** Not applicable.

• **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

• **Transport/Additional information:**

Not dangerous according to the above specifications.

• **DOT**

• **Quantity limitations**



On passenger aircraft/rail: No limit



On cargo aircraft only: No limit

• **Remarks:**

Special marking with the symbol (fish and tree).

• **UN "Model Regulation":**

-

**15: Regulatory information**

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

• **Sara**

• **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

• **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

• **TSCA (Toxic Substances Control Act):**

All components listed

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**• Proposition 65****• Chemicals known to cause cancer:**

None of the ingredients is listed.

**• Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

**• Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

**• Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

**• Cancerogenity categories****• EPA (Environmental Protection Agency)**

None of the ingredients is listed.

**• TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

**• NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

**• 15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**• Contact:** Sherwin Incorporated**• Date of preparation / last revision** 05/08/2015 / -**• Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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)

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

**• \* Data compared to the previous version altered.**

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