YSHIELD Shielding Paints Material Safety Data Sheet

Company
YSHIELD EMR-Protection, Christian Danner, Gewerbering 6, 94060 Pocking, GERMANY

SECTION 1 - PRODUCT IDENTIFICATION

Product Class (Use)
Conductive Coatings

Trade Name(s)
YSHIELD Shielding Paints HSF53-P, NSF33-P, HSF54, HSF54-FR, NSF34, HSF71, NSF21

SECTION 2 - COMPOSITION

<table>
<thead>
<tr>
<th>INGREDIENT NAME</th>
<th>CAS NUMBER</th>
<th>PROPORTION</th>
<th>HSF53-P</th>
<th>NSF33-P</th>
<th>HSF54</th>
<th>HSF54-FR</th>
<th>NSF34</th>
<th>HSF71</th>
<th>NSF21</th>
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<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>40-70 %</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>20-25 %</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Carbon Black</td>
<td>1333-86-4</td>
<td>10-15 %</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Acrylic polymer</td>
<td>Trade secret</td>
<td>10-15 %</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Natural resin</td>
<td>Trade secret</td>
<td>10-15 %</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Natural latex</td>
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<td>5-10 %</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<td>Ethyl alcohol</td>
<td>64-17-5</td>
<td>2.5-5 %</td>
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<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Polycondensate</td>
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<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Defoamer</td>
<td>Trade secret</td>
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<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Dispersing agent</td>
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<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<td>Surfactant</td>
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<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Cellulose</td>
<td>9004-62-0</td>
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<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Preservative</td>
<td>Trade secret</td>
<td>&lt; 1 %</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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</tr>
</tbody>
</table>

SECTION 3 - HAZARDS IDENTIFICATION

Primary route(s) of exposure
Inhalation, skin contact, eye contact, ingestion.

Inhalation:
Irritation of respiratory tract, lungs. Prolonged inhalation may lead to mucous membrane irritation, dizziness and/or lightheadedness, headache, nausea, chest pain, coughing, difficulty of breathing, severe lung irritation, pneumoconiosis.

Skin contact:
Irritation of skin.

Eye contact:
Irritation of eyes. Prolonged or repeated contact can cause tearing of eyes, redness of eyes.

Ingestion:
Ingestion may cause mouth and throat irritation, nausea, gastro-intestinal disturbances, abdominal pain.

Medical conditions aggravated by exposure:
Eye, skin, respiratory disorders, asthma-like conditions.

SECTION 4 - FIRST-AID MEASURES

Inhalation:
Remove to fresh air. Restore and support continued breathing. Get emergency medical attention. Have trained person give oxygen if necessary. Get medical help for any breathing difficulty. Remove to fresh air if inhalation causes eye watering, headaches, dizziness, or other discomfort.

Skin contact:
Wash thoroughly with soap and water. If any product remains, gently rub petroleum jelly, vegetable or mineral/baby oil onto skin. Repeated applications may be needed. Remove contaminated clothing. Wash contaminated clothing before re-use.

Eye contact:
Flush immediately with large amounts of water, especially under lids for at least 15 minutes. If irritation or other effects persist, obtain medical treatment.

Ingestion:
If swallowed, obtain medical treatment immediately.

SECTION 5 - FIRE-FIGHTING MEASURES

Fire extinguishing media:
Dry chemical or foam water fog. Carbon dioxide. Closed containers may burst if exposed to extreme heat or fire. In closed tanks, water or foam may cause frothing or eruption.

Fire fighting procedures:
Water may be used to cool and protect exposed containers. Firefighters should use full protective clothing, eye protection, and self-contained breathing apparatus.

Hazardous decomposition or combustion products:
Carbon monoxide, carbon dioxide. Sodium oxide, oxides of calcium.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is released or spilled:
Comply with all applicable health and environmental regulations. Eliminate all sources of ignition. Ventilate area. Evacuate all unnecessary personnel. Place collected material in proper container. Small spills - use absorbent to pick up residue and dispose of properly.
SECTION 7 - HANDLING AND STORAGE
Handling and storage:
Store between 5°C (41°F) and 35°C (95°F).

Other precautions:
Use only with adequate ventilation. Keep out of reach of children. Avoid contact with skin and eyes, and breathing of vapors. Wash hands thoroughly after handling, especially before eating or smoking. Keep containers tightly closed and upright when not in use. Avoid conditions which result in formation of inhalable particles such as spraying, or abrading (sanding) painted surfaces. If such conditions cannot be avoided, use appropriate respiratory protection as directed under exposure controls/personal protection.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION
Respiratory protection:
Control environmental concentrations to be below applicable exposure standards when using this material. When respiratory protection is determined to be necessary, use a NIOSH/MSHA (Canadian z94.4) approved elastomeric sealing-surface facepiece respirator, outfitted with organic vapor cartridges and paint spray (dust/mist) prefilters.

Ventilation:
Provide dilution ventilation or local exhaust to prevent build-up of vapors.

Personal protective equipment:
Eye wash, safety shower, safety glasses or goggles. Impervious gloves, impervious clothing.

SECTION 9 – PHYSICAL DATA
Freezing point:
Delivery form as powder: N/A;
Ready usable as liquid paint: 0°C / 32°F.

Evaporation rate (Water=80):
80

Specific Gravity:
1.05 - 1.25

Physical State:
Delivery form: Powder (-P);
Ready usable: Liquid.

pH Level:
7.5 - 9.0

Color:
Black

V.O.C.:
N/A

SECTION 10 – STABILITY AND REACTIVITY
Under normal conditions:
Stable under normal conditions.

Conditions to avoid:
Elevated temperatures, sparks, open flame.

Hazardous polymerization:
Will not occur.

SECTION 11 – TOXICOLOGICAL INFORMATION
Health information:
No additional effects are anticipated.

Reproductive effects:
No reproductive effects are anticipated.

Mutagenicity:
No mutagenic effects are anticipated.

Teratogenicity:
No teratogenic effects are anticipated.

SECTION 12 – ECOLOGICAL INFORMATION
No ecological testing has been done on this product as a whole. Care should be taken to minimize release of any industrial chemicals into the environment.

SECTION 13 – DISPOSAL CONSIDERATIONS
Waste disposal / Disposal methods:
Empty paint containers should be recycled. Dried up leftovers of paint can be disposed of in household waste. Bring liquid leftovers of paint to waste collection centers. Do not dispose of in sink, water, or ground! Dispose in accordance with all applicable regulations. Avoid discharge to natural waters.

SECTION 14 – TRANSPORTATION INFORMATION
DOT Hazard Class:
Not regulated per DOT.

SECTION 15 – REGULATORY INFORMATION
As of the date of this MSDS, all of the components in this product are listed (or are otherwise exempt from listing) on the TSCA inventory. This product has been classified in accordance with the hazard criteria of the CPR (controlled products regulations) and the MSDS contains all the information required by the CPR.

The information contained herein relates only to specific materials identified. YSHIELD EMR-protection Company believes that such information is accurate and reliable as of the date of this material safety data sheet, but no representation, guarantee or warranty, express or implied, is made as to the accuracy, reliability, or completeness of the information. YSHIELD EMR-protection Company urges persons receiving this information and directions as guidelines, and to make their own determination as to the information’s suitability and completeness for their particular application.