SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product name: BR® 6747-1 Water Based Primer, 20-40% Solids
Product Description: Mixture of modified epoxy resin and water
Intended/Recommended Use: Engineered materials

CYTEC INDUSTRIES B.V., BOTLEKWEG 175, 3197 KA BOTLEK-ROTTERDAM, HAVENS 4501, THE NETHERLANDS
EMERGENCY PHONE: IN THE NETHERLANDS: 0181-295600; OUTSIDE THE NETHERLANDS: 31-181-295600

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2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Component / CAS No.</th>
<th>% (w/w)</th>
<th>EC-No</th>
<th>Symbol / Risk Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strontium chromate 7789-06-2</td>
<td>2 - 4</td>
<td>232-142-6</td>
<td>T; N; R45 R22 R50/53</td>
</tr>
<tr>
<td>Aromatic amine</td>
<td>3 - 6</td>
<td>-</td>
<td>Xn; R:22</td>
</tr>
<tr>
<td>Aromatic substituted urea</td>
<td>2 - 5</td>
<td>-</td>
<td>Xi; R:36</td>
</tr>
<tr>
<td>Modified phenolic epoxy resin</td>
<td>2 - 4</td>
<td>-</td>
<td>Xi; R:36-43</td>
</tr>
<tr>
<td>Phenolic epoxy resin #1</td>
<td>2 - 5</td>
<td>-</td>
<td>Xi; N; R:43-51/53</td>
</tr>
<tr>
<td>Poly(aromatic glycidyl ether) #2</td>
<td>10 - 30</td>
<td>-</td>
<td>Xi; N; R:36/38-43-51/53</td>
</tr>
</tbody>
</table>

See Section 16 for Ingredient Risk Phrase Text

3. HAZARDS IDENTIFICATION

HUMAN AND ENVIRONMENTAL HAZARDS
May cause sensitization by skin contact.
May cause cancer.
4. FIRST AID MEASURES

**Ingestion:**
If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

**Skin contact:**
Flush with a continuous flow of lukewarm water until material is removed. Remove contaminated clothing and shoes without delay. Obtain medical attention. Do not reuse contaminated clothing without laundering.

**Eye contact:**
Rinse immediately with plenty of water for at least 15 minutes. Obtain medical advice if there are persistent symptoms.

**Inhalation:**
Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:**
Use water spray or fog, carbon dioxide or dry chemical.

**Protective Equipment:**
Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See MSDS Section 8 (Exposure Controls/Personal Protection).

**Special Hazards:**
Keep containers cool by spraying with water if exposed to fire.

6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:**
Where exposure level is not known, wear approved, positive pressure, self-contained respirator. Where exposure level is known, wear approved respirator suitable for level of exposure. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impermeable boots.

**Methods for cleaning up:**
Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water.

**Environmental Precautions:**
Use appropriate containment to avoid environmental contamination.

7. HANDLING AND STORAGE

**Handling**
None
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL PARAMETERS - Limits

Strontium chromate 7789-06-2

The Netherlands: MAC (Maximal Aanvaarde Concentratie)
- 0.025 mg/m³ (MAC)
- 0.5 mg/m³ (MAC)
- 0.05 mg/m³ (STEL)
- 0.01 mg/m³ (STEL)
- 0.01 mg/m³ as Cr (STEL)
  (skin)

Germany: MAK (Maximale Arbeitsplatzkonzentration)
- 0.05 mg/m³ inhalable fraction (TRK)

United Kingdom: MEL (Maximum Exposure Limits)
- 0.05 mg/m³ (MEL-TWA)
- 0.5 mg/m³ (OES-TWA)

France: VLEP (Valeur Limites d'Exposition Professionnelle)
- 0.05 mg/m³ as Cr (VME)
- 0.5 mg/m³ (VME)

Denmark: Graensevaerdier
- 0.0005 mg/m³ as Cr (TWA)
- 0.5 mg/m³ dust (TWA)
- 0.005 mg/m³ as Cr (TWA)

Norway:
- 0.02 mg/m³ as Cr (TWA - OEL)
- 0.5 mg/m³ as Cr (TWA - OEL)

Sweden: Hygieniska Gransvarden
- 0.5 mg/m³ total dust (LLV)
- 0.02 mg/m³ as Cr (LLV)
- 0.5 mg/m³ total dust, as Cr, except chromic acid and chromates (LLV)
- 0.0005 mg/m³ as Cr (TWA)

Engineering measures:
Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure when spraying or curing at elevated temperatures.

Respiratory protection:
Where exposures are below the established exposure limit, no respiratory protection is required.
Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure.
A full facepiece respirator also provides eye and face protection.
Cutting, grinding or sanding of parts fabricated after curing may create respirable dust particles. Respiratory protection appropriate for this dust may be required. Refer to components listed above for potential hazardous components in the dust.

Eye protection:
Wear eye/face protection such as chemical splash proof goggles or face shield.
Eyewash equipment and safety shower should be provided in areas of potential exposure.

Skin Protection:
Avoid skin contact.
Wear impermeable gloves and suitable protective clothing.
Barrier creams may be used in conjunction with the gloves to provide additional skin protection.
Additional advice:
Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water. It is recommended that a shower be taken after completion of workshift especially if significant contact has occurred. Work clothing should then be laundered prior to reuse. Street clothing should be stored separately from work clothing and protective equipment. Work clothing and shoes should not be taken home.

9. PHYSICAL AND CHEMICAL PROPERTIES

Colour: yellow
Appearance: liquid
Odour: slight amine
Boiling Point: 100 °C (value for water)
Melting Point: Not applicable
Vapour pressure: similar to water
Specific Gravity/Density: 1.05g/cc
Vapour density: similar to water
Percent Volatile (% by wt.): 60 - 80(water)
PH: 7.0 - 8.0
Saturation In Air (% By Vol.): Not available
Evaporation rate: similar to water
Solubility In Water: dispersible
Volatile Organic Content (EU): Not applicable
Flash point: >93.3 °C closed cup
Flammable Limits (% By Vol.): Not applicable
Autoignition temperature: Not applicable
Partition coefficient (n-octanol/water):

10. STABILITY AND REACTIVITY

Stability: Stable
Conditions To Avoid: None known
Polymerization: May occur
Conditions To Avoid: Avoid contact with oxidizing agents. Avoid contact with bases or amines. Do not heat above 29 C (85 F).
Materials to avoid: Bases and amines.
Hazardous decomposition products: carbon dioxide Carbon monoxide oxides of nitrogen

11. TOXICOLOGICAL INFORMATION

Potential health effects
May cause sensitization by skin contact.
May cause cancer.
Irritating to eyes and skin.
SUBSTANCE/PREPARATION

ACUTE TOXICITY DATA

<table>
<thead>
<tr>
<th>Route</th>
<th>Species</th>
<th>LD50 (Actual)</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>rat</td>
<td>&gt; 2000 mg/kg</td>
<td>&gt;3,300 mg/kg</td>
</tr>
<tr>
<td>Dermal</td>
<td>rabbit</td>
<td>&gt; 2000 mg/kg</td>
<td>&gt;2,000 mg/kg</td>
</tr>
<tr>
<td>Inhalation</td>
<td>rat</td>
<td>Acute LC50</td>
<td>No data</td>
</tr>
</tbody>
</table>

LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation  
- Dermal  
  - Irritating

ALLERGIC SENSITIZATION

<table>
<thead>
<tr>
<th>Sensitization</th>
<th>Skin</th>
<th>Respiratory</th>
<th>Sensitizing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitization</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

GENOTOXICITY

Assays for Gene Mutations
- Ames Salmonella Assay  
  - No data

HAZARDOUS INGREDIENT TOXICITY DATA

ACUTE TOXICITY DATA

- Phenolic epoxy resin #1  
  - Oral  Acute LD50 (Actual) > 2000 mg/kg  
  - Dermal  Acute LD50 (Actual) > 2000 mg/kg  
- Aromatic amine  
  - Oral (gavage)  rat  Acute LD50 (Actual) > 300 mg/kg  
  - Dermal  rabbit  Acute LD50 (Actual) > 2000 mg/kg  
- Aromatic substituted urea  
  - Oral  rat  Acute LD50 (Actual) > 5000 mg/kg  
  - Dermal  rabbit  Acute LD50 (Actual) > 2000 mg/kg  
- Modified phenolic epoxy resin  
  - Oral  rat  Acute LD50 (Actual) > 5000 mg/kg  
  - Dermal  rabbit  Acute LD50 (Actual) > 10000 mg/kg  
- Poly(aromatic glycidyl ether) #2  
  - Oral  rat  Acute LD50 (Actual) > 5000 mg/kg  
  - Dermal  rabbit  Acute LD50 (Actual) > 2000 mg/kg  
  - Inhalation  rat  Acute LC50 (actual) > 700 mg/m³

LOCAL EFFECTS ON SKIN AND EYE

- Strontium chromate  
  - Acute Dermal Irritation  
    - Not irritating
- Aromatic amine  
  - Acute Dermal Irritation  
    - Not irritating
  - Acute Eye Irritation  
    - Not irritating
- Aromatic substituted urea  
  - Acute Eye Irritation  
    - Irritating
- Modified phenolic epoxy resin  
  - Acute Dermal Irritation  
    - Not irritating
  - Acute Eye Irritation  
    - Irritating
- Poly(aromatic glycidyl ether) #2  
  - Acute Eye Irritation  
    - Irritating
Acute Dermal Irritation  irritating

ALLERGIC SENSITIZATION
Strontium chromate
  Skin Sensitization  Sensitizing
  Skin Sensitization  Sensitizing
Phenolic epoxy resin #1
  Sensitization dermal  Sensitizing
Modified phenolic epoxy resin
  Skin Sensitization  Sensitizing
Poly(aromatic glycidyl ether) #2
  Skin Sensitization  Sensitizing

GENOTOXICITY
Assays for Gene Mutations
Aromatic amine
  Ames Salmonella Assay  Not mutagenic

Assays For Chromosomal Aberrations
Aromatic amine
  Chromosome Aberration  Not mutagenic

Assays for DNA effects
Aromatic amine
  DNA Repair  Not mutagenic

OTHER INFORMATION
Strontium chromate
  Human Carcinogen

12. ECOLOGICAL INFORMATION
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
The ecological assessment for this material is based on an evaluation of its components.

13. DISPOSAL CONSIDERATIONS
CYTEC encourages the recycle, recovery and reuse of materials, where permitted. If disposal is necessary, CYTEC recommends that organic materials, especially when classified as hazardous waste, be disposed of by thermal treatment or incineration at approved facilities. All local and national regulations should be followed.
14. TRANSPORT INFORMATION
This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

ADR/RID
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.
Class: 9
UN Number: 3082
Packing Group: III
Transport Label Required: Miscellaneous
Technical Name (N.O.S.): Contains poly(aromatic glycidyl ether) and strontium chromate

IMO
Proper shipping name: Environmentally hazardous substance, liquid, n.o.s.
Hazard Class: 9
UN Number: 3082
Packing group: III
Transport Label Required: Miscellaneous
Technical Name (N.O.S.): Contains poly(aromatic glycidyl ether) and strontium chromate

ICAO / IATA
Proper shipping name: Environmentally hazardous substance, liquid, n.o.s.
Hazard Class: 9
Packing group: III
UN Number: 3082
Transport Label Required: Miscellaneous
Packing Instructions/Maximum Net Quantity Per Package:
Passenger Aircraft: 914; No Limit
Cargo aircraft: 914; No Limit
Technical Name (N.O.S.): poly(aromatic glycidyl ether), strontium chromate

15. REGULATORY INFORMATION

EU MARKING AND LABELING
Symbol(s):
T - Toxic
N - Dangerous for the environment

Risk Phrases:
R43 - May cause sensitization by skin contact.
R45 - May cause cancer.
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R36/38 - Irritating to eyes and skin.

Safety Phrases:
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).
S53 - Avoid exposure - obtain special instructions before use.
S57 - Use appropriate containment to avoid environmental contamination.
S36/37 - Wear suitable protective clothing and gloves.

INVENTORY INFORMATION
European Union (EU):
All components of this product are included on the European Inventory of Existing Chemical Substances (EINECS) or are not required to be listed on EINECS.
United States (USA):  
All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

Canada:  
All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the DSL.

Australia:  All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on AICS.

China:  All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

Japan:  All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese inventory.

Korea:  All components of this product are NOT included on the Korean (ECL) inventory.

Philippines:  All components of this product are NOT included on the Philippine (PICCS) inventory.

16. OTHER INFORMATION

Reasons for Issue: Revised Section 14

Component Risk Phrases

Strontium chromate  
R45 - May cause cancer.  
R22 - Harmful if swallowed.  
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Aromatic amine  
R22 - Harmful if swallowed.

Aromatic substituted urea  
R36 - Irritating to eyes.

Modified phenolic epoxy resin  
R36 - Irritating to eyes.  
R43 - May cause sensitization by skin contact.

Phenolic epoxy resin #1  
R43 - May cause sensitization by skin contact.  
R36/38 - Irritating to eyes and skin.  
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Poly(aromatic glycidyl ether) #2  
R43 - May cause sensitization by skin contact.  
R36/38 - Irritating to eyes and skin.  
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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