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

PRODUCT NAME: POLYESTER POLYOL PIGMENT DISPERSION

MANUFACTURER / SUPPLIER: Llewellyn Ryland Ltd.
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TELEPHONE: + 44 (0) 121 440 2284 FAX: + 44 (0) 121 440 0281
E-MAIL: sales@llewellyn-ryland.co.uk

INTENDED USE: In polyurethane systems for general polyurethane purposes.

2. HAZARDS IDENTIFICATION

Not classified as hazardous under current UK legislation.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>HAZARDOUS INGREDIENTS</th>
<th>CAS NO.</th>
<th>CLASSIFICATION</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No hazardous ingredients.</td>
<td></td>
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</tr>
</tbody>
</table>

4. FIRST AID MEASURES

INHALATION: In extreme cases, move the exposed person to fresh air. Keep warm and at rest and obtain medical attention.

INGESTION: DO NOT INDUCE VOMITING. Give milk or water (not if person is unconscious) and obtain medical attention.

SKIN: Promptly wash affected area with soap and water. Remove contaminated clothing and wash before re-use.

EYES: Hold eyes open for at least 15 minutes under running water and obtain medical attention.
5. FIRE-FIGHTING MEASURES

**SUITABLE EXTINGUISHING MEDIA:**
Dry chemical, CO₂, foam, sand and water spray.

**NOT TO BE USED:**
Water jet.

**SPECIAL FIRE-FIGHTING PROCEDURES:**
Do not allow run-off from fire-fighting to enter drains or water courses.

**SPECIAL PROTECTIVE EQUIPMENT:**
Material is combustible and will produce dense black smoke in a fire, therefore suitable breathing apparatus may be required.

**HAZARDOUS COMBUSTION PRODUCTS:**
Oxides of carbon and partially oxidised organic fragments of the product’s main components may be produced.

6. ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS:**
Wear suitable protective clothing. Spilt product presents a slip hazard.

**ENVIRONMENTAL PRECAUTIONS:**
Confine spill. Do not allow product to enter sewers, rivers or open water.

**CLEAN-UP METHODS:**
Contain and absorb with inert material and shovel to disposal. Do not allow the area to remain slippery with product residues. Clean-up preferably with a detergent; avoid use of solvents.

7. HANDLING AND STORAGE

**HANDLING PRECAUTIONS:**
Use with care and avoid spillage. Do not eat, drink or smoke. Avoid eye and skin contact.

**STORAGE PRECAUTIONS:**

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**OCCUPATIONAL EXPOSURE LIMITS:**
Not applicable

**INHALATION:**
No particular ventilation requirements.

**SKIN:**
Prolonged or repeated skin contact should be avoided. The use of chemically-resistant gloves and/or barrier cream is recommended.

**EYES:**
Eye or face protection is recommended where a risk of splashing exists.

**INDUSTRIAL HYGIENE:**
Good standards of industrial hygiene are required for the use of this material.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>PHYSICAL FORM:</th>
<th>Viscous liquid or paste</th>
</tr>
</thead>
<tbody>
<tr>
<td>COLOUR:</td>
<td>Various</td>
</tr>
<tr>
<td>ODOR:</td>
<td>Bland</td>
</tr>
<tr>
<td>SPECIFIC GRAVITY:</td>
<td>Varies with colour</td>
</tr>
<tr>
<td>POUR POINT:</td>
<td>Not determined</td>
</tr>
<tr>
<td>BOILING POINT:</td>
<td>Not determined</td>
</tr>
<tr>
<td>pH:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>MISCELLIBILITY WITH WATER:</td>
<td>Immiscible</td>
</tr>
<tr>
<td>VAPOUR PRESSURE:</td>
<td>&lt; 5 mmHg (@20°C) (resin)</td>
</tr>
<tr>
<td>VAPOUR DENSITY (air=1):</td>
<td>Not determined</td>
</tr>
<tr>
<td>AUTO-IGNITION TEMPERATURE:</td>
<td>Not determined</td>
</tr>
<tr>
<td>FLASH POINT:</td>
<td>Approximately 100°C (closed cup method)</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under recommended handling and storage conditions.

CONDITIONS TO AVOID: Direct sources of heat.

MATERIALS TO AVOID: Oxidising agents, strong acids and strong alkalis.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide, carbon monoxide, oxides of nitrogen and smoke may be produced if material is exposed to high temperatures.

11. TOXICOLOGICAL INFORMATION

The following toxicological assessment is based on a knowledge of the toxicity of the product’s components

INHALATION: High concentrations of vapour may be irritating to the respiratory tract and may cause headaches, dizziness and ultimately unconsciousness.

INGESTION: Ingestion of large quantities of this material may be severely irritating to the alimentary canal and may cause nausea and sickness.

SKIN: May be irritating to the skin. Frequent or prolonged exposure cause de-fatting of the skin and may lead to dermatitis.

EYES: May be irritating to the eyes.

CHRONIC EFFECTS: Repeated or prolonged contact with the skin may lead to non-allergic dermatitis.

12. ECOLOGICAL INFORMATION

MOBILITY: Mobile, viscous liquid. Insoluble in water.

PERSISTENCE AND DEGRADABILITY: No information available.

BIOACCUMULATIVE POTENTIAL: No information available.

ECOTOXICITY: Spills may form a film on water surfaces which may impair oxygen transfer and cause physical damage to some organisms.

13. DISPOSAL CONSIDERATIONS

Disposal must be in accordance with local and national legislation

PRODUCT: Material should be removed by approved waste contractors.

EMPTY PACKAGING: Empty packages may contain combustible residues and should be disposed of in a manner acceptable to local authorities.
14. TRANSPORT INFORMATION

CLASSIFICATION FOR TRANSPORT: NOT CLASSIFIED.

PROPER SHIPPING NAME: NOT APPLICABLE.

UN NO: Not applicable. PACKING GROUP: Not applicable.

ROAD / RAIL (ADR / RID) CLASS: Not applicable. AIR (ICAO / IATA) CLASS: Not applicable.

SEA (IMO / IMDG) CLASS: Not applicable. MARINE POLLUTANT: No.

15. REGULATORY INFORMATION

CLASSIFICATION FOR SUPPLY: NOT CLASSIFIED.

RISK PHRASES: Not applicable.

SAFETY PHRASES: Not applicable.

STATUTORY INSTRUMENTS:
- Control of Substances Hazardous to Health Regulations 2002.
- Environmental Protection Act 1990.

16. OTHER INFORMATION

SDS REF: Polyester Polyol Pigment Dispersion.

ISSUE NO: 2 (June 2009).

REPLACES ISSUE: 1 (May 2007).

ISSUED IN ACCORDANCE WITH REGULATION (EC) NO: 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL.

Note: Where this product is used in applications other than those specified by Llewellyn Ryland Ltd., no responsibility can be accepted for loss or damage incurred.

The following references (available from the HSE) provide further information on specific aspects:

- HS(G) 51 Storage of flammable liquids in containers.
- HS(G) 140 The safe use and handling of flammable liquids.
- L5 COSHH 2002 Approved Code of Practice and Guidance.
- EH 40/2005 Workplace exposure limits.