SAFETY DATA SHEET

JEM 3X RESIN LIQUID PACK

ISSUE DATE: 30th September 2019

Section 1 : Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
JEM 3X resin - liquid pack

1.2 Relevant identified uses of the substances or mixture and uses advised against
Component of encapsulating medium for power cable joints

1.3 Details of the supplier of the safety data sheet
Company information: Prysmian Cables and Systems Ltd
Oak Road, Wrexham Industrial Estate, Wrexham LL13 9PH

Telephone: +44 (0)1978 66 2375
e-mail: dave.lamb@ Prysmian.com

1.4 Emergency telephone number: +44 (0)1978 66 2216
Section 2: Hazards identification

This product is a mixture

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (EU "CLP" Regulation):
Classified as hazardous.

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Irritation of skin</td>
</tr>
<tr>
<td>2</td>
<td>Eye irritation</td>
</tr>
<tr>
<td>3</td>
<td>Specific Target Organ Toxicity</td>
</tr>
<tr>
<td></td>
<td>Single Exposure</td>
</tr>
</tbody>
</table>

Classification according to UK CHIP Regulations / Directives 1999/45/EC or 67/548/EC:
Not classified as hazardous.

2.2 Label elements

Labelling according to Regulation (EC) 1272/2008 (EU "CLP" Regulation):

Signal Word: Warning

GHS Pictogram: ![Exclamation Mark]

Hazard Statement: Causes skin irritation (H315)
Causes serious eye irritation (H319)
May cause respiratory irritation (H335)

Precautionary Statement (Prevention):
Avoid breathing dust/fume/gas/mist/vapour/spray
Wear protective gloves/protective clothing/eye protection

Precautionary Statement (Response):
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.

Precautionary Statement (Disposal):
Dispose of contents/container in accordance with local regulation
Remarks: Testing to international protocols at independent test houses has shown that JEM liquid is not irritating to eyes and skin nor is it a skin sensitiser. The latter results coupled with the very low vapour pressure would also indicate that it is unlikely to be a respiratory irritant or sensitiser. (See Section 11)

Labelling according to UK CHIP Regulations / Directives 1999/45/EC or 67/548/EC, therefore, was not required

2.3 Other hazards

Polymerisation with heat evolution may occur in the presence of peroxides, reducing substances and/or heavy metal ions.

Section 3: Composition / information on ingredients

This product is a mixture

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>REACH Registration Number</th>
<th>CAS Number</th>
<th>EINECS / ELINCS</th>
<th>Hazard Class/Category/Statement</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isodecylmethacrylate</td>
<td>01-2118949925-17-2003</td>
<td>29964-84-9</td>
<td>249-978-2</td>
<td>Skin Irrit. 2; H315, Eye Irrit. 2; H319, STOT SE 3; H335</td>
<td>97.9%</td>
</tr>
<tr>
<td>Ethanol, 2,2’[(4-methylphenol)imino]bis-</td>
<td></td>
<td>3077-12-1</td>
<td>221-359-1</td>
<td>Acute Tox. Oral 4; H302, Skin Irrit. 2; H315, Eye Irrit. 2; H319, STOT SE 3; H335</td>
<td>1.2%</td>
</tr>
<tr>
<td>Polyacrylate oligomer</td>
<td></td>
<td></td>
<td></td>
<td>Skin Irrit. 2; H315, Eye Irrit. 2; H319, STOT SE; H335</td>
<td>0.9%</td>
</tr>
</tbody>
</table>

Section 4: First aid measures

4.1 Description of first aid measures

*General information:* Remove contaminated clothing immediately. Wash before re-use.
*Inhalation:* Remove to fresh air, provide warmth and rest. If necessary, seek medical attention.
*Skin Contact:* Wash contaminated skin with soap and water. If necessary, seek medical attention.
*Ingestion:* Do not induce vomiting. Drink plenty of water and if necessary seek medical attention.
*Eye Contact:* Flush with large amounts of water. If necessary, seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

No specific effects and/or symptoms have been reported or are known
4.3 Indication of any immediate medical attention and special treatment needed

No data available

Section 5: Firefighting measures

5.1 Extinguishing media

Carbon dioxide, foam or dry powder

5.2 Special hazards arising from the substance or mixture

Decomposes to give carbon dioxide, carbon monoxide and water. Cool endangered vessels with water

5.3 Advice for firefighters

Wear self contained breathing apparatus

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

This material is not classified as hazardous to health but exposure should be minimised. Remove personnel from areas of substantial spillage.

6.2 Environmental precautions

Prevent product from entering drains / surface water / ground water

6.3 Methods and material for containment and cleaning up

Contain the spillage and absorb using earth, sand or other absorbent material. Particulate materials such as SAFFIRE (supplied by Zeppelin and Co) have been found to be particularly effective and may be incinerated for disposal purposes. The recommended disposal route is incineration. Alternatively, liquid spillages may be mopped up with the powder component of the resin pack. After curing, the residue may be disposed of as general waste.

6.4 Reference to other sections

See Section 13 for disposal information.

Section 7: Handling and storage

7.1 Precautions for safe handling

Use in a well ventilated area.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool dry location. Avoid prolonged exposure to sunlight. Maximum recommended storage temperature is 40°C. There is no lower limit on storage temperature.
7.3 Specific end use(s)

See Section 1.2

Section 8: Exposure controls / personal protection

8.1 Control parameters

No occupational exposure limits have been assigned to this material.

8.2 Exposure controls

Observe normal safety and hygiene standards Wear suitable overalls and gloves (nitrile or neoprene)

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>clear yellowish liquid</td>
</tr>
<tr>
<td>Odour</td>
<td>slight ester like</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>no data available</td>
</tr>
<tr>
<td>pH</td>
<td>not applicable</td>
</tr>
<tr>
<td>Melting point</td>
<td>not applicable (liquid).</td>
</tr>
<tr>
<td>Boiling point</td>
<td>&gt;250 ºC</td>
</tr>
<tr>
<td>Flash point</td>
<td>115ºC (Closed Cup)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>no data available</td>
</tr>
<tr>
<td>Flammability</td>
<td>no data available</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>no data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>4.8 Pa @ 25ºC</td>
</tr>
<tr>
<td>Vapour density</td>
<td>&gt;1 @ 20ºC (relative to air)</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.88 g/cm³ @ 20ºC</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Solubility in other ingredients</td>
<td>Miscible with most organic solvents</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>log P&lt;sub&gt;ow&lt;/sub&gt; 4.92</td>
</tr>
<tr>
<td>Octanol/water</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>Viscosity (dynamic)</td>
<td>3.2 mPas @ 20ºC</td>
</tr>
<tr>
<td>Explosion properties</td>
<td>no data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>not oxidising</td>
</tr>
</tbody>
</table>

9.2 Other information

No additional data available
**Section 10 : Stability and reactivity**

10.1 Reactivity

Not reactive to materials commonly used in the transportation, handling and storage of industrial materials.

10.2 Chemical stability

Stable at room temperature and temperatures up to 60°C

10.3 Possibility of hazardous reactions

Will polymerise exothermically when mixed with radical forming substances such as peroxides. Maximum exothermic temperature is 55°C.

10.4 Conditions to avoid

Avoid prolonged exposure to direct sunlight.

10.5 Incompatible materials

Strong oxidising and reducing agents

10.6 Hazardous decomposition products

None when used as directed

**Section 11 : Toxicological information**

11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>no data available</td>
</tr>
<tr>
<td>Skin Corrosion / Irritation</td>
<td>Skin irritancy has been investigated (for isodecyl methacrylate) using OECD Test Method 404. Single 4 hour application to rabbit skin produced minimal signs of irritation.</td>
</tr>
<tr>
<td>Eye Corrosion / Irritation</td>
<td>Eye irritancy has been investigated (for isodecyl methacrylate) using OECD Test Method 405. Single application to rabbit eye produced minimal conjunctival irritation.</td>
</tr>
<tr>
<td>Sensitisation Data</td>
<td>Skin sensitisation has been investigated (for the liquid blend) using OECD Test Method 406. No evidence of skin sensitisation was detected. There are no known reports of respiratory sensitisation.</td>
</tr>
<tr>
<td>Repeated dose toxicity</td>
<td>no data available</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>no data available</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td>no data available</td>
</tr>
<tr>
<td>Toxicity for reproduction</td>
<td>no data available</td>
</tr>
</tbody>
</table>
Section 12 : Ecological information

12.1 Toxicity
No data available

12.2 Persistence and biodegradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
No data available

12.6 Other adverse effects
No data available

Section 13 : Disposal considerations

13.1 Waste treatment methods
Product: Waste incineration with the approval of the responsible local authority.

Packaging: Plastic containers may be disposed of by approved landfill if contaminated by cured material. Uncontaminated packaging (i.e. the external plastic container for two part kits) may be re-granulated for further use.

Section 14 : Transport information

14.1 UN Number
Not regulated under transport regulation.

14.2 UN proper shipping name
Not regulated under transport regulation.

14.3 Transport hazard class(es)
Not regulated under transport regulation.

14.4 Packing group
Not regulated under transport regulation.
14.5 Environmental hazards
Not regulated under transport regulation.

14.6 Special precautions for user
None identified

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and IBC code
No data available

Section 15 : Regulatory information

This Safety Data Sheet has been prepared in accordance with the requirements of regulation (EC) No 1907/2006 as amended by regulation (EU) No 453/2010. The Workplace exposure Limit given in section 8 has been taken from the UK HSE document: EH40/2005 Workplace exposure limits as amended.

Relevant regulations:
Regulation (EC) 1272/2008 (EU ‘CLP’ regulation)
Regulation (EC) 790/2009 First Adaptation to Technical Progress (ATP) for CLP regulation
Regulation (EC) No 1907/2006 (‘REACH’)

15.1 Safety, health and environmental regulations specific for the substance or mixture
None applicable

15.2 Chemical safety assessment
A chemical safety assessment has not been undertaken for this mixture
Section 16 : Other information

Risk Phrases / Hazard Statements (Ref: Section 3):

Isodecyl methacrylate

H315 Causes Skin Irritation
H319 Causes serious eye irritation
H335 May cause respiratory irritation

Ethanol, 2,2'[(4-methylphenol)imino] bis-

H302 Harmful if swallowed
H315 Causes Skin Irritation
H319 Causes serious eye irritation
H335 May cause respiratory irritation

This SDS (version 1.0) is the first version of this SDS for this product.

This information is believed to be accurate and represents the best information available to the company at this time. This information is provided as a guide to the hazards and respective safety precautions relevant to this product. This SDS does not represent any guarantee of performance or specification. The information relates only to the product specified and may not be suitable for combinations with other materials or in processes other than those specifically described herein.
SAFETY DATA SHEET

JEM RESIN POWDER PACK

ISSUE DATE: 30th September 2019

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
JEM resin - powder pack

1.2 Relevant identified uses of the substances or mixture and uses advised against
Component of encapsulating medium for power cable joints

1.3 Details of the supplier of the safety data sheet
Company information: Prysmian Cables and Systems Ltd
Oak Road, Wrexham Industrial Estate, Wrexham LL13 9PH

Telephone: +44 (0)1978 66 2375
e-mail: dave.lamb@prysmian.com

1.4 Emergency telephone number: +44 (0)1978 66 2216

Section 2: Hazards identification

This product is a mixture

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) 1272/2008 (EU "CLP" Regulation):
Not classified as hazardous.
2.2 Label elements

Labelling according to Regulation (EC) 1272/2008 (EU "CLP" Regulation): Labelling not required.

2.3 Other hazards

No information available

Section 3 : Composition / information on ingredients

This product is a mixture

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>REACH Registration Number</th>
<th>CAS Number</th>
<th>EINECS / ELINCS</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica Sand</td>
<td>14808-60-7</td>
<td>1317-65-3</td>
<td>2152796</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium Carbonate</td>
<td>7778-18-9</td>
<td>94-36-0</td>
<td>2023276</td>
<td></td>
<td>70.2%</td>
</tr>
<tr>
<td>Calcium Sulphate</td>
<td>286-0-0</td>
<td></td>
<td></td>
<td></td>
<td>26.3%</td>
</tr>
<tr>
<td>Dibenzoyl peroxide</td>
<td>01-2119511472-50</td>
<td></td>
<td></td>
<td>Eye Irrit 2; H319</td>
<td>2.8%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Skin Sens 1; H317</td>
<td></td>
</tr>
</tbody>
</table>

Section 4 : First aid measures

4.1 Description of first aid measures

General information: Remove contaminated clothing. Wash before re-use.
Inhalation: Remove to fresh air, provide warmth and rest. If necessary, seek medical attention.
Skin Contact: No special measures necessary
Ingestion: Do not induce vomiting. Drink plenty of water and if necessary seek medical attention.
Eye Contact: Flush with large amounts of water. If necessary, seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

No specific effects and/or symptoms have been reported or are known

4.3 Indication of any immediate medical attention and special treatment needed

No data available

Section 5 : Firefighting measures

5.1 Extinguishing media

Not combustible

5.2 Special hazards arising from the substance or mixture
5.3 Advice for firefighters

None

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

This material is not classified as hazardous to health. Spillage could be regarded as nuisance dust.

6.2 Environmental precautions

No specific requirements

6.3 Methods and material for containment and cleaning up

Take up mechanically (e.g. sweep or vacuum) into closed containers prior to disposal.

6.4 Reference to other sections

See Section 13 for disposal information.

Section 7: Handling and storage

7.1 Precautions for safe handling

Handle in accordance with good practice for industrial safety and hygiene.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool dry location. Avoid prolonged exposure to sunlight. Maximum recommended storage temperature is 45°C. There is no lower limit on storage temperature.

7.3 Specific end use(s)

See Section 1.2

Section 8: Exposure controls / personal protection

8.1 Control parameters

No occupational exposure limits have been assigned to this material.

8.2 Exposure controls
Section 9 : Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance: free flowing white powder
Odour: no data available
Odour threshold: no data available
pH: not applicable
Melting point: not applicable
Boiling point: no data available
Flash point: no data available
Evaporation rate: no data available
Flammability: no data available
Upper/lower flammability or explosive limits: not applicable
Vapour pressure: not applicable
Vapour density: not applicable
Relative density: not applicable
Solubility in water: Insoluble
Solubility in other ingredients: Insoluble
Partition coefficient: not applicable
Octanol/water: not applicable
Auto-ignition temperature: not applicable
Decomposition temperature: not applicable
Viscosity (dynamic): not applicable
Explosion properties: not applicable
Oxidising properties: not applicable

9.2 Other information

No additional data available

Section 10 : Stability and reactivity

10.1 Reactivity

Not reactive to materials commonly used in the transportation, handling and storage of industrial materials.

10.2 Chemical stability

Stable at room temperature and temperatures up to 60°C

10.3 Possibility of hazardous reactions
10.4 **Conditions to avoid**

Avoid prolonged exposure to direct sunlight.

10.5 **Incompatible materials**

Strong acids

10.6 **Hazardous decomposition products**

None when used as directed

**Section 11 : Toxicological information**

11.1 **Information on toxicological effects**

- **Acute toxicity**
  - no data available

- **Skin Corrosion / Irritation**
  - Rabbit (Skin): 500mg/24 hours MOD (calcium carbonate)

- **Eye Corrosion / Irritation**
  - Rabbit (eye): 750 microgram/24hours (calcium carbonate)

- **Sensitisation Data**
  - There are no known reports of sensitisation.

- **Repeated dose toxicity**
  - no data available

- **Carcinogenicity**
  - no data available

- **Mutagenicity**
  - no data available

- **Toxicity for reproduction**
  - no data available

**Section 12 : Ecological information**

12.1 **Toxicity**

No data available

12.2 **Persistence and biodegradability**

No data available

12.3 **Bioaccumulative potential**

No data available

12.4 **Mobility in soil**

No data available
12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

No data available

Section 13: Disposal considerations

13.1 Waste treatment methods

Product: Landfill with the approval of the responsible local authority.

Packaging: Plastic containers may be disposed of by approved landfill if contaminated by cured material. Uncontaminated packaging (i.e. the external plastic container for two part kits) may be re-granulated for further use.

Section 14: Transport information

14.1 UN Number

Not regulated under transport regulation.

14.2 UN proper shipping name

Not regulated under transport regulation.

14.3 Transport hazard class(es)

Not regulated under transport regulation.

14.4 Packing group

Not regulated under transport regulation.

14.5 Environmental hazards

Not regulated under transport regulation.

14.6 Special precautions for user

None identified

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and IBC code

No data available

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Relevant regulations:
- Regulation (EC) 1272/2008 (EU 'CLP' regulation)
- Regulation (EC) 790/2009 First Adaptation to Technical Progress (ATP) for CLP regulation
- Regulation (EC) No 1907/2006 ('REACH')

15.1 Safety, health and environmental regulations specific for the substance or mixture
None applicable

15.2 Chemical safety assessment
A chemical safety assessment has not been undertaken for this mixture

Section 16 : Other information

Risk Phrases / Hazard Statements (Ref: Section 3):

Dibenzoyl peroxide

H241: Heating may cause a fire or explosion
H317: May cause an allergic skin reaction
H319: Causes serious eye irritation

This SDS (version 2.0) is the second version of this SDS for this product.

This information is believed to be accurate and represents the best information available to the company at this time. This information is provided as a guide to the hazards and respective safety precautions relevant to this product. This SDS does not represent any guarantee of performance or specification. The information relates only to the product specified and may not be suitable for combinations with other materials or in processes other than those specifically described herein.