Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: Lacper® 4211
Additional Name: Aqueous Polyurethane Dispersion
Company Name: Wanhua Chemical Group Co., LTD
Address: No.17, Tianshan Rd, YEDA, Yantai, 264006, China
Telephone: 0086-535-3388160
Fax: 0086-535-338222-1150
Emergencies Telephone:
WANHUA +86 535-8203123
China +86 532-8389090
EU +31 20 20 65132/65130、+44 780 183 7343
NA 800-424-9300、+1-703-527-3887

Recommended uses:
Waterborne coatings for wood

Section 2 - HAZARDS IDENTIFICATION

2.1 GHS Classification of the substance or mixture

2.2 Label elements
No labeling necessary according to Directive (EC) No. 1272/2008

Pictogram
No information available

Warning:
No information available

Hazard statements:
No information available

Precautionary statements:
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302 + P305 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing.
Rinse skin with water/ shower.

2.3 Other hazards
No information available
Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Substance/mixture : Mixture

<table>
<thead>
<tr>
<th>NAME</th>
<th>CAS RN</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyurethane</td>
<td>N/A</td>
<td>39-41%</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>59-61%</td>
</tr>
</tbody>
</table>

There is no GHS hazards classification for polyurethane.

Section 4 - FIRST AID MEASURES

Description of first aid measures
General advice: In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
If inhaled: No special measures are necessary. In case of irritation, seek medical advice.
In case of skin contact: Wash with plenty of water/soap. In case of skin reactions, consult a physician.
In case of eye contact: Rinse cautiously with water for at least 20 minutes. Tilt the head in order to avoid contact with the other eye. Contact an ophthalmologist.
If swallowed: In all cases of doubt, or when symptoms persist, seek medical advice immediately.

Most important symptoms and effects, both acute and delayed
Symptoms: May cause irritation by skin contact.

Indication of any immediate medical attention and special treatment needed
Immediate medical attention: First Aid, decontamination, treatment of symptoms.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing media
Suitable extinguishing media: Carbon dioxide (CO₂), Foam, Extinguishing powder, Water spray jet
In case of major fire and large quantities: Water spray jet, alcohol resistant foam
Co-ordinate fire-fighting measures to the fire surroundings.

Advice for firefighters
Firefighters have to wear self-contained breathing apparatus.

Hazards during fire-fighting
Carbon monoxide, Carbon dioxide, Oxynitride.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Personal precautions Use personal protection equipment. Keep unauthorized persons away.

Environmental precautions
Do not empty into drains.

Methods and material for containment and cleaning up
Methods for cleaning up: Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

Reference to other sections
Reference to other sections Safe handling: see section 7
Personal protection equipment: see section 8

Disposal: see section 13

Section 7 - HANDLING AND STORAGE

Control parameters
The product does not contain any relevant quantities of materials with critical values that have to be mentioned at the workplace.

Handling
The precautions required in the handling of solvents must be taken. Ensure adequate ventilation and, if necessary, exhaust ventilation when handling or transferring the product. Explosion protection required.

Storage
The product will keep stable for 6 months when stored in its sealed original packaging at temperatures between 5°C and 35°C. Storage at temperatures below 5°C will make the product frozen and cause irreversible damage. The product should therefore be protected from freezing during storage. Temperatures higher than 35°C should be avoided in order to prevent the evaporation of water, which will result in the formation of a non-redispersible polymer film.

Remarks
The values for density and viscosity are guide values. Please see the product information sheet.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure controls
Respiratory protection: Respiratory equipment required in insufficiently ventilated working areas and during spraying.
Hand protection: Suitable materials for safety gloves; EN 374: Butyl rubber – IIR: thickness >=0.5mm; breakthrough time >=480min.
Recommendation: contaminated gloves should be disposed of. Conditionally suitable materials for protective gloves; EN 374: Nitrile rubber – NBR (>=0.35mm) Breakthrough time not tested; dispose of immediately after contamination.
Eye protection: Wear eye/face protection.
Body protection: Wear suitable protective clothing.

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>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Translucent to milky white</td>
</tr>
<tr>
<td>Odour</td>
<td>Slight inherent odour</td>
</tr>
<tr>
<td>Property</td>
<td>Value</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>Not established</td>
</tr>
<tr>
<td>pH</td>
<td>7.0-9.0</td>
</tr>
<tr>
<td>Pour point</td>
<td>Not established</td>
</tr>
<tr>
<td>Initial boiling point</td>
<td>approx. 100 °C (water)</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not established</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not established</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Burning number</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Not established</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not established</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not established</td>
</tr>
<tr>
<td>Density</td>
<td>ca. 1.04 g/cm³ at 20 °C</td>
</tr>
<tr>
<td>Miscibility with water</td>
<td>Miscible at 20 °C</td>
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<tr>
<td>Surface tension</td>
<td>Not established</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not established</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
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</tr>
<tr>
<td>Ignition temperature</td>
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<tr>
<td>Decomposition temperature</td>
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<tr>
<td>Viscosity, dynamic</td>
<td>10 – 200 mPa.s at 25 °C</td>
</tr>
<tr>
<td>Explosive properties</td>
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<tr>
<td>Dust explosion class</td>
<td>Not applicable</td>
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<tr>
<td>Oxidising properties</td>
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</tbody>
</table>

9.2 Other information
The indicated values do not necessarily correspond to the product specification. Please refer to the technical information sheet for specification data.

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

10.1 Stability
No decomposition when used properly.

10.2 Materials to avoid
Acids, bases and electrolyte solution.

10.3 Conditions to avoid
Strong light, high temperature and low temperature.

10.4 Hazardous decomposition products
On drying of the coating release of neutralizing agent.

Section 11 - TOXICOLOGICAL INFORMATION
Toxicological studies on the product is not yet available.
Section 12 - ECOLOGICAL INFORMATION
Ecological studies on the product is not yet available.
DO not allow to escape into waterways, wastewater or soil.

Section 13 - DISPOSAL CONSIDERATIONS
Waste treatment methods
Disposal considerations: Do not dispose of with household waste. Do not allow to enter drains.
Dispose of waste according to applicable legislation.
Uncleaned empty packaging: Handle contaminated packages in the same way as the substance itself.
Suitable cleaning agents: Water (with cleaning agent)
Retain contaminated washing water and dispose it.

Section 14 - TRANSPORTATION INFORMATION

ADR/RID

<table>
<thead>
<tr>
<th>14.1 UN number</th>
<th>Not dangerous goods</th>
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<tbody>
<tr>
<td>14.2 UN proper shipping name</td>
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</tr>
<tr>
<td>14.3 Transport hazard class</td>
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</tr>
<tr>
<td>14.4 Packing group</td>
<td>Not dangerous goods</td>
</tr>
<tr>
<td>14.5 Environment hazards</td>
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ADN

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IATA

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<tr>
<td>14.5 Environment hazards</td>
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</table>
IMDG

14.1 UN number  Not dangerous goods
14.2 UN proper shipping name  Not dangerous goods
14.3 Transport hazard class  Not dangerous goods
14.4 Packing group  Not dangerous goods
14.5 Environment hazards  Not dangerous goods

14.6 Special precautions for user

See section 6-8.

Additional information : Not dangerous cargo.

Avoid heat above 35°C or lower than 5°C, stay away from food, acids and bases. According to 57th of IATA DGR 2016, this product is not dangerous.

Section 15 - REGULATORY INFORMATION

15.1 The product is classified and labelled according to Regulation (EC)No. 1272/2008 (GHS/CLP).
15.2 Safety, health and environmental regulation/legislation specific for the substance or mixture Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances.
Not applicable
15.3 All ingredients are listed in IECSC, or exempted, or confirmed by suppliers.

Section 16 - OTHER INFORMATION

Legend

<table>
<thead>
<tr>
<th>TLV</th>
<th>Threshold Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
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</table>

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