Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: Vesmody® U601
Additional Name: Hydrophobically Modified Ethoxylated Urethane

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:
Rheology modifier for waterborne coating

Section 2 - HAZARDS IDENTIFICATION

2.1 GHS Classification of the substance or mixture
Serious eye damage   Eye Dam. 1 H318
Skin irritation Skin Irrit. 2 H315

2.2 Label elements
Pictogram

Signal word: Danger
Hazard statements
H318 Causes serious eye damage.
H315 Causes skin irritation.
Precautionary statements
P264 Wash thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash before reuse.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several mintues.
   Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.

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

Substance/mixture : Mixture

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Concentration</th>
<th>CAS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyurethane</td>
<td>20%</td>
<td>Trade Secret</td>
</tr>
<tr>
<td>Iso-C13-aliphatic alcohol ethoxylates-8</td>
<td>15%</td>
<td>69011-36-5</td>
</tr>
<tr>
<td>Water</td>
<td>65%</td>
<td>7732-18-5</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 (CO$_2$), 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**
Store in tightly sealed original container, in a dry, cool and well-ventilated place. Keep away from heat and fire sources. Avoid storage together with foodstuffs. The product will keep stable for at least twelve months when stored in its sealed original packaging at temperatures between 5°C and 35°C. After each use is finished, it is necessary to reseal containers.

**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>Status</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Clear to slightly opaque liquid</td>
</tr>
<tr>
<td>Property</td>
<td>Value</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Misible</td>
</tr>
<tr>
<td>Odour</td>
<td>Extremely slight odour</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not established</td>
</tr>
<tr>
<td>Vapour pressure (kPa)</td>
<td>Not established</td>
</tr>
<tr>
<td>pH</td>
<td>6.0-7.0</td>
</tr>
<tr>
<td>Partition coefficient n-octanol / water (logkow)</td>
<td>Not established</td>
</tr>
<tr>
<td>Flash point (°C)</td>
<td>Not established</td>
</tr>
<tr>
<td>Density (g/cm³)</td>
<td>1.04 ± 0.05 at 20 °C</td>
</tr>
<tr>
<td>Upper Explosive Limit [% (v/v)]</td>
<td>Not established</td>
</tr>
<tr>
<td>Lower Explosive Limit [% (v/v)]</td>
<td>Not established</td>
</tr>
<tr>
<td>Boiling point (°C)</td>
<td>Not established</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not established</td>
</tr>
<tr>
<td>Auto-ignition temperature (°C)</td>
<td>Not established</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not established</td>
</tr>
<tr>
<td>Volatile substance</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Molecular weight (g/mol)</td>
<td>Not established</td>
</tr>
<tr>
<td>Relative density (Air = 1)</td>
<td>Not established</td>
</tr>
<tr>
<td>Relative density (Water = 1)</td>
<td>1.04 ± 0.05</td>
</tr>
<tr>
<td>Viscosity (cst)</td>
<td>26000-34000 mPa•s at 25 °C</td>
</tr>
<tr>
<td>VOC (g/L)</td>
<td>Not established</td>
</tr>
</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
Not established

Section 11 - TOXICOLOGICAL INFORMATION

Toxicological studies on the product is not yet available.
Please find below the toxicological data available to us for the iso-C13-aliphatic alcohol ethoxylates-8.

11.1 Information on toxicological effects

Acute toxicity
Rats (male/female)
LD50 > 300-2000 mg/kg bw
Skin corrosion/irritation
Skin - Rabbit
Result: Mild skin irritation - 4h
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Highly irritating. (72 h).
(OECD Test Guideline 405)

Respiratory or skin sensitization
No data

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity – single exposure
No data available

Specific target organ toxicity – repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
No data available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12 - ECOLOGICAL INFORMATION
Ecotoxicological studies of the product are not available.
DO not allow to escape into waterways, wastewater or soil.
Please find below the ecotoxicological data available for the iso-C13-aliphatic alcohol ethoxylates-8.
12.1 Toxicity
Toxicity to fish
12.2 persistence and degradability
Biodegradability
Aerobic - Exposure time 28 d
Result: 60 % - Readily biodegradable
(OECD Test Guideline 301B)

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
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

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
ADN

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

IATA

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

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 temperature higher than 50°C, stay away from food, acids and bases. According to 56th of IATA DGR 2015, this product is not dangerous.

Section 15 - REGULATORY INFORMATION

15.1 The product is classified and labeled 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

Disclaimer:

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

Completed on: 2019-1-15