

# Chemical Safety Technical Instructions (SDS)

## Polyester resin solution

Version number: V1.0.0.2 Report number: HGNM19NRS7

\* Compiled in accordance with GB/T 17519 and GB/T 16483



### 1 Chemical Product and Company Identification

#### Products information

|                          |                          |
|--------------------------|--------------------------|
| Chinese Name of Products | Polyester resin solution |
| English Name of Product  | Polyester resin solution |
| Product model            | SKYBON ES410S            |
| CAS No.                  | not applicable           |
| EC No.                   | not applicable           |
| Molecular formula        | not applicable           |

#### Product Recommendation and Restricted Use

|                             |                                              |
|-----------------------------|----------------------------------------------|
| Recommended uses of Product | Coatings, inks, adhesives and resin binders. |
| Limited use of products     | No data available.                           |

#### Safety Technical Specification Provider Information

|                                |                                                                                    |
|--------------------------------|------------------------------------------------------------------------------------|
| Enterprise name                | SK Chemicals (Yantai) Co.LTd                                                       |
| Enterprise address             | #10, Xi'an RD, Yantai Economic and Technological district, Shandong Province,China |
| Zip code                       | -                                                                                  |
| Contact number                 | +86-5356392008                                                                     |
| Fax number                     |                                                                                    |
| Enterprise Emergency Telephone | +86-5356392008                                                                     |

### 2 Hazards Identification

#### Summary of emergencies

Liquid. Flammable, its vapor and air mix, can form explosive mixtures. If swallowed, it may cause severe lung injury.

#### GHS Risk Category

|                   |            |
|-------------------|------------|
| Flammable liquid  | Category 3 |
| Inhalation hazard | Category 1 |



#### GHS Labels



|             |               |
|-------------|---------------|
| Signal word | <b>DANGER</b> |
|-------------|---------------|

**Risk statement**

|      |                                                            |
|------|------------------------------------------------------------|
| H226 | Flammable liquids and vapors                               |
| H304 | Swallowing and entering the respiratory tract can be fatal |

**Precautionary statement**

## ◆ Preventive measure

|      |                                                                                     |
|------|-------------------------------------------------------------------------------------|
| P210 | Keep away from heat source/spark/open flame/hot surface.No Smoking.                 |
| P233 | Keep the container airtight.                                                        |
| P240 | Containers and receiving equipment are grounded/equipotentially connected.          |
| P241 | Use explosion-proof electrical/ventilation/lighting equipment.                      |
| P242 | Only tools that do not spark can be used.                                           |
| P243 | Measures to prevent electrostatic discharge are taken.                              |
| P280 | Wear protective gloves/protective clothing/protective eye patches/protective masks. |

## ◆ Accident response

|                |                                                                                                                       |
|----------------|-----------------------------------------------------------------------------------------------------------------------|
| P331           | No vomiting should be induced.                                                                                        |
| P301+P310      | If swallowed by mistake: Call the detoxification center/doctor immediately.                                           |
| P370+P378      | In case of fire: use the appropriate extinguishing, medium mentioned in Part V of this report to extinguish the fire. |
| P303+P361+P353 | For skin (or hair) contamination: remove/remove all contaminated clothes immediately. Wash skin/shower with water.    |

## ◆ Safe storage

|           |                                                         |
|-----------|---------------------------------------------------------|
| P405      | Storage must be locked.                                 |
| P403+P235 | Store in a well-ventilated place. Keep low temperature. |

## ◆ Disposal

|      |                                                                                                       |
|------|-------------------------------------------------------------------------------------------------------|
| P501 | Disposal of contents/containers in accordance with local/regional/national/international regulations. |
|------|-------------------------------------------------------------------------------------------------------|

**Hazard description**

## ◆ Physical and chemical hazards

|  |                                                                                  |
|--|----------------------------------------------------------------------------------|
|  | Flammable liquids, whose vapors are mixed with air, can form explosive mixtures. |
|--|----------------------------------------------------------------------------------|

## ◆ Health hazard

|            |                                                                                                   |
|------------|---------------------------------------------------------------------------------------------------|
| Inhalation | During normal production, swallowing the product and entering the respiratory tract can be fatal. |
| Ingestion  | Accidental ingestion of this product may be harmful to individual health.                         |



|                      |                                                                                                   |
|----------------------|---------------------------------------------------------------------------------------------------|
| <b>Skin contact</b>  | Entering the blood through cuts, abrasions or lesions may have harmful effects on the whole body. |
| <b>Eye</b>           | Direct eye contact with this product can cause temporary discomfort.                              |
| ◆ Environment hazard |                                                                                                   |
|                      | Refer to Chapter 12                                                                               |

### 3 Composition/Information on Ingredients

| Component                                       | Cas No.      | EC No.    | Content range (mass fraction,%) |
|-------------------------------------------------|--------------|-----------|---------------------------------|
| Saturated polyester                             | Trade secret | -         | 30~40                           |
| DBE                                             | mixture      | 203-631-1 | 20~40                           |
| Naphtha solvent (petroleum),<br>light aromatics | 64742-94-5   | 265-198-5 | 20~40                           |

### 4 First aid Measures

#### Description of first aid measures

|                                          |                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ordinary suggestion</b>               | Emergency measures are usually required. Please show this SDS to the doctor who arrives at the scene.                                                                                                                                                                                                                              |
| <b>Eye contact</b>                       | Rinse thoroughly with plenty of water for at least 15 minutes. If you have any discomfort, see a doctor.                                                                                                                                                                                                                           |
| <b>Skin contact</b>                      | Take off the contaminated clothes immediately. Wash your skin with plenty of soapy water and clean water. If you have any discomfort, see a doctor.                                                                                                                                                                                |
| <b>Ingestion</b>                         | No vomiting. Don't feed anything to the unconscious. Call the doctor or poisoning control center immediately.                                                                                                                                                                                                                      |
| <b>inhalation</b>                        | Immediately move the patient to fresh air to keep the breath open. If breathing is difficult, give oxygen. If the patient ingests or inhales the substance, mouth-to-mouth artificial respiration is not allowed. If breathing stops. Cardiopulmonary resuscitation was performed immediately. Seek medical treatment immediately. |
| <b>Protection of Emergency Personnel</b> | To ensure that health care workers understand the hazard characteristics of products and take their own protective measures to protect themselves and prevent the spread of pollution.                                                                                                                                             |

#### Advice for the protection of rescuers

|   |                                                      |
|---|------------------------------------------------------|
| 1 | Clear all fire sources and enhance ventilation.      |
| 2 | Avoid contact with skin and eyes.                    |
| 3 | Avoid inhaling steam.                                |
| 4 | Use protective equipment, including breathing masks. |

#### Special tips for doctors

|   |                                                                  |
|---|------------------------------------------------------------------|
| 1 | According to the symptoms, we should deal with them pertinently. |
| 2 | Note that symptoms may be delayed.                               |



Firefighting measures



**Extinguishing medium**

|                                           |                                                                                                                                                                                |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suitable fire extinguishing medium</b> | Small fire: dry chemical fire extinguishing agent, carbon dioxide, water or anti foam fire extinguishing agent; fire: water, water mist or anti foam fire extinguishing agent. |
| <b>Improper fire extinguishing medium</b> | Avoid using too strong water vapor to extinguish fire, because it may spread and disperse the flames.                                                                          |

**Special hazards arising from this substance or mixture**

|   |                                                                                                                                 |
|---|---------------------------------------------------------------------------------------------------------------------------------|
| 1 | It can form explosive mixtures with air.                                                                                        |
| 2 | Containers exposed to fire may leak content through pressure relief valves, thereby increasing fire and/or vapor concentration. |
| 3 | Steam may move to the ignition source and flash back.                                                                           |
| 4 | Liquids and vapors are flammable. When heated, the container may explode.                                                       |
| 5 | Expansion or explosive decomposition may occur when heated or exposed to flame.                                                 |

**Fire extinguishing precautions and protective measures**

|   |                                                                                                                                                             |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | When extinguishing a fire, you should wear a breathing mask (which meets the requirements of MSHA/NIOSH or equivalent) and a full-body protective clothing. |
| 2 | Fire extinguishing at a safe distance with adequate protection.                                                                                             |
| 3 | Prevent fire water from polluting surface and groundwater systems.                                                                                          |

## 6 Accidental release measures

**Operators protective measures, protective equipment and emergency handling procedures**

|   |                                                                                                                                                                                |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Avoid inhaling steam, touching skin and eyes.                                                                                                                                  |
| 2 | Beware of vapor accumulation to explosive concentrations.                                                                                                                      |
| 3 | Steam can accumulate in low-lying areas.                                                                                                                                       |
| 4 | It is suggested that emergency personnel wear positive pressure self-contained breathing apparatus, anti-virus and anti-static clothing and chemical anti-permeability gloves. |
| 5 | Ensure adequate ventilation. Clear all ignition sources. Take anti-static measures.                                                                                            |
| 6 | Quickly evacuate the personnel to the safe area, away from the leakage area and in the upwind direction.                                                                       |
| 7 | Use personal protective equipment. Avoid inhaling steam, smoke or gas.                                                                                                         |

**Environmental protection measures**

|   |                                                                          |
|---|--------------------------------------------------------------------------|
| 1 | To ensure safety, take measures to prevent further leakage or spillover. |
| 2 | Avoid discharging into the surrounding environment.                      |

**Containment, Clearance and Disposal Materials of Leakage Chemicals**

|   |                                                                               |
|---|-------------------------------------------------------------------------------|
| 1 | Clear all ignition sources and use fire-proof tools and riot-proof equipment. |
|---|-------------------------------------------------------------------------------|



|   |                                                                                                                                                                                                  |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | When a small amount of leakage occurs, dry sand or inert adsorbent material can be used to absorb the leakage. When a large amount of leakage occurs, dyke construction is needed to control it. |
| 3 | Attachments or collections should be stored in appropriate sealed containers and disposed of in accordance with relevant local laws and regulations.                                             |

## 7 Handling and storage

### Operational considerations

|   |                                                                                                                                |
|---|--------------------------------------------------------------------------------------------------------------------------------|
| 1 | Avoid inhaling steam.                                                                                                          |
| 2 | Only tools that do not spark can be used.                                                                                      |
| 3 | In order to prevent the vapor ignition caused by electrostatic discharge, all metal parts on the equipment should be grounded. |
| 4 | Use explosion-proof equipment.                                                                                                 |
| 5 | Operate in a well-ventilated area.                                                                                             |
| 6 | Wear appropriate personal protective gear.                                                                                     |
| 7 | Avoid contact with skin and eyes.                                                                                              |
| 8 | Keep away from heat                                                                                                            |

### Storage considerations

|   |                                                                                    |
|---|------------------------------------------------------------------------------------|
| 1 | Keep the container airtight.                                                       |
| 2 | Store in a dry, cool and ventilated place.                                         |
| 3 | Keep away from heat sources, sparks, open fires and hot surfaces.                  |
| 4 | Store away from incompatible materials and food containers.                        |
| 5 | Opened containers must be carefully re-sealed and kept upright to prevent leakage. |

## 8 Exposure controls/personal protection

### Control parameter

Occupational exposure limits

No data

Biological limit

|                  |         |
|------------------|---------|
| Biological limit | No data |
|------------------|---------|

### ♦ Monitoring method

|   |                                                                                                   |
|---|---------------------------------------------------------------------------------------------------|
| 1 | EN 14042 Workplace Air Procedure Guide for Assessing Exposure to Chemical or Biological Reagents. |
| 2 | GBZ/T 160.1~GBZ/T 160.81-2004 Workplace Air Toxic Substances Determination (Series Standards).    |

### engineering control

|   |                                                                            |
|---|----------------------------------------------------------------------------|
| 1 | Maintain adequate ventilation, especially in enclosed areas.               |
| 2 | Make sure that there are eyewash and shower facilities near the workplace. |



|   |                                                                                       |
|---|---------------------------------------------------------------------------------------|
| 3 | Use explosion-proof electrical appliances, ventilation, lighting and other equipment. |
| 4 | Set up emergency evacuation corridor and necessary risk relief area.                  |
| 5 | Operate according to good industrial hygiene and safety standards.                    |

### Personal protective equipment

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General requirements          |       |
| Eye protection                | Wear chemical goggles (in line with EU EN 166 or US NIOSH standards).                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Hand protection               | Wear chemical protective gloves (e.g. butyl rubber gloves). Suggestions for selection via EU EN 374, US F739 or Protective gloves tested by AS/NZS 2161.1 standard.                                                                                                                                                                                                                                                                                                                                              |
| respiratory system protection | If the vapor concentration exceeds the occupational exposure limit or when symptoms such as irritation occur, use a full-face multi-function gas mask. (US) or AXBEK (EN 14387) gas mask barrel.                                                                                                                                                                                                                                                                                                                 |
| Skin and physical protection  | Wear flame retardant and anti-static protective clothing and anti-static protective boots.                                                                                                                                                                                                                                                                                                                                                                                                                       |

## 9 Physical and chemical properties

### Physicochemical properties

|                                             |                                                   |
|---------------------------------------------|---------------------------------------------------|
| Appearance and Character                    | Colorless to yellowish transparent viscous liquid |
| smell                                       | Irritating taste                                  |
| Odor threshold                              | No data                                           |
| PH value                                    | 7(neutral)                                        |
| Melting Point/Solidification Point (C)      | No data                                           |
| Initial Boiling Point and Boiling Range (C) | No data                                           |
| Flash point (closed cup, C)                 | 59.5                                              |
| Evaporation rate                            | No data                                           |
| Flammability                                | inflammable                                       |
| Upper/lower explosion limit [(v/v)]         | Upper limit: no data; lower limit: no data        |
| Vapor pressure                              | 4 mmHg (20 C)                                     |
| Vapor density (air = 1)                     | No data                                           |
| Relative density (water = 1)                | 1.04(25 degrees Celsius)                          |
| Solubility (mg/L)                           | Insoluble in water                                |
| Octanol/water partition coefficient         | No data                                           |
| Spontaneous Combustion Temperature (?)      | No data                                           |



|                           |         |
|---------------------------|---------|
| Decomposition temperature | No data |
| Viscosity (mm2/s)         | No data |

10 Stability and reactivity

|                                    |                                                                                              |
|------------------------------------|----------------------------------------------------------------------------------------------|
| Reactivity                         | Decomposition or other chemical reactions may occur in contact with incompatible substances. |
| chemical stability                 | It is stable under the correct use and storage conditions.                                   |
| Possibility of dangerous reactions | Contact with oxidizer is prone to ignition or explosion.                                     |
| Conditions for avoiding contact    | Incompatible substances, heat, flame and sparks.                                             |
| Prohibited substance               | Oxidants, chloroform, bromoform and other organic solvents.                                  |
| Dangerous decomposition products   | Under normal storage and use conditions, there will be no dangerous decomposition products.  |

1 Toxicological information

Stability and reactivity

|                                        |                                                                                             |
|----------------------------------------|---------------------------------------------------------------------------------------------|
| Reactivity                             | Contact with incompatible substances may lead to decomposition or other chemical reactions. |
| Chemical stability                     | Stable under correct use and storage conditions.                                            |
| The possibility of dangerous reactions | Contact with oxidants prone to fire or explosion.                                           |
| Avoid contact with conditions          | Incompatible substances, heat, flame and sparks.                                            |
| Forbidden                              | Oxidants, chloroform, bromoform and other organic solvents.                                 |
| Hazardous decomposition products       | Do not produce hazardous decomposition products under normal storage and use conditions.    |

acute toxicity

| Component | Cas No. | LD50 (via mouth) | LD50 (percutaneous) | LC50 (inhalation, 4h) |
|-----------|---------|------------------|---------------------|-----------------------|
| DBE       |         | 191 mg/kg (rat)  | 250mg/kg (rabbit)   | 11 mg/L (rat)         |

carcinogenicity

| ID | Cas No.      | Component name                               | IARC         | NTP          |
|----|--------------|----------------------------------------------|--------------|--------------|
| 1  | Trade Secret | Saturated polyester                          | Not included | Not included |
| 2  | mixture      | DBE                                          | Not included | Not included |
| 3  | 64742-94-5   | Naphtha solvent (petroleum), light aromatics | Not included | Not included |



Other information

| Polyester resin solution                                        |                                                                                |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------|
| Skin corrosion/irritation                                       | According to the available data, it does not meet the classification criteria. |
| Serious eye injury/irritation                                   | According to the available data, it does not meet the classification criteria. |
| Skin sensitization                                              | According to the available data, it does not meet the classification criteria. |
| Respiratory sensitization                                       | According to the available data, it does not meet the classification criteria. |
| Reproductive toxicity                                           | According to the available data, it does not meet the classification criteria. |
| Specific target organ systemic toxicity-single contact          | According to the available data, it does not meet the classification criteria. |
| Systemic Toxicity of Specific Target Organs - Recurrent Contact | According to the available data, it does not meet the classification criteria. |
| Inhalation hazard                                               | According to the available data, it does not meet the classification criteria. |
| Germ cell mutagenicity                                          | According to the available data, it does not meet the classification criteria. |
| Additional Reproductive Toxicity Hazards                        | According to the available data, it does not meet the classification criteria. |

12 Ecological information

Acute aquatic

| Toxicity Component | Cas No. | Fish           | Crustaceans | Algae/aquatic plants |
|--------------------|---------|----------------|-------------|----------------------|
| DBE                | Mixture | LC: 18-24 mg/L | No data     | No data              |

Chronic aquatic toxicity

|                          |         |
|--------------------------|---------|
| Chronic aquatic toxicity | No data |
|--------------------------|---------|

Persistence and degradation

|                             |         |
|-----------------------------|---------|
| Persistence and degradation | No data |
|-----------------------------|---------|

Bioconcentration or bioaccumulation

| Component                                    | Cas No.    | Bioconcentration | Remarks |
|----------------------------------------------|------------|------------------|---------|
| Naphtha solvent (petroleum), light aromatics | 64742-94-5 | low              | BCF=159 |

Mobility in Soil

|                  |         |
|------------------|---------|
| Mobility in Soil | No data |
|------------------|---------|



Evaluation of PBT and PvB results

| Component                                    | Cas No.      | PBT/vPvB Evaluation Results (Based on (EC) No 1907/2006) |
|----------------------------------------------|--------------|----------------------------------------------------------|
| Saturated polyester                          | Trade secret | Not belonging to PBT/vPvB                                |
| DBE                                          | mixture      | Not belonging to PBT/vPvB                                |
| Naphtha solvent (petroleum), light aromatics | 64742-94-5   | Not belonging to PBT/vPvB                                |

13 Disposal considerations

Waste disposal

|                                     |                                                                                                                                                                           |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste chemicals                     | The relevant national and local regulations should be consulted before disposal. It is suggested that incineration be used.                                               |
| Contaminated packaging              | Residue hazards may still exist after the packaging is emptied. It should be kept away from heat and fire sources and be returned to suppliers for recycling if possible. |
| Abandoned matters needing attention | See 13.1 and 13.2.                                                                                                                                                        |

14 Transport information

Labels and labels

|                   |                                                                                     |
|-------------------|-------------------------------------------------------------------------------------|
| Transport label   |  |
| Marine pollutants | nothing                                                                             |

Maritime Danger Regulations (IMDG-CODE)

|                                                |                           |
|------------------------------------------------|---------------------------|
| United Nations Dangerous Goods Number (UN No.) | 1866                      |
| Correct United Nations transport name          | Resin solution, flammable |
| Major dangerous categories of transport        | 3                         |
| Secondary dangerous categories of transport    | nothing                   |
| Packaging category                             | III                       |
| Special provisions on transport                | 223 955                   |
| Limited quantity                               | 5L                        |
| Exceptional quantity                           | E1                        |
| Marine pollutants (yes/no)                     | no                        |



| EmS No.                                                                                        | F-E, S-E                   |
|------------------------------------------------------------------------------------------------|----------------------------|
| <b>Air Transport (ICAO/IATA-DGR)</b>                                                           |                            |
| United Nations Dangerous Goods Number (UN No.)                                                 | 1866                       |
| Correct United Nations transport name                                                          | Resin solution, flammable  |
| Major dangerous categories of transport                                                        | 3                          |
| Secondary dangerous categories of transport                                                    | nothing                    |
| Packaging category                                                                             | III                        |
| Exceptional quantity                                                                           | E1                         |
| Guidance on Limited Quantity Packaging for Passenger and Freight Transportation                | Y344                       |
| Maximum Net Weight of Limited Quantity Transport Documents for Passenger and Freight Transport | 10 L                       |
| Guidelines for Passenger and Freight Packaging                                                 | 355                        |
| Maximum Net Weight of Passenger and Freight Documents                                          | 60 L                       |
| Guidelines for Freight Packaging                                                               | 366                        |
| Maximum Net Weight of Freight Documents                                                        | 220 L                      |
| Special provisions on transport                                                                | A3                         |
| <b>Road Transport (UN-ADRERG) Code</b>                                                         | 3L                         |
| United Nations Dangerous Goods Number (UN No.)                                                 | 1866                       |
| Correct United Nations transport name                                                          | Resin solution, flammable  |
| Major dangerous categories of transport                                                        | 3                          |
| Secondary dangerous categories of transport                                                    | nothing                    |
| Packaging category                                                                             | III                        |
| Special regulations                                                                            | 640E                       |
| Limited quantity                                                                               | 5 L                        |
| Exceptional quantity                                                                           | E1                         |
| Packaging specification                                                                        | P001   IBC03   LP01   R001 |
| Special Packaging Regulations                                                                  | PP1                        |
| Regulations on Mixed Packaging                                                                 | MP19                       |
| Specification for portable tanks and bulk containers                                           | T2                         |
| Special requirements for portable tanks and bulk containers                                    | TP1                        |
| ADR tank code                                                                                  | LGBF                       |
| Special Regulations for ADR Tanks                                                              | -                          |
| Vehicles transported in tanks                                                                  | FL                         |
| Transportation Classification (Tunnel Traffic Limitation Code)                                 | 3 (D/E)                    |



|                                                           |     |
|-----------------------------------------------------------|-----|
| Special provisions for transport (packaging)              | V12 |
| Special provisions for transport (medium bulk containers) | -   |
| Special provisions for transport (handling and operation) | -   |
| Special provisions for transport (operations)             | S2  |
| Hazard Recognition Code                                   | 30  |
| Remarks                                                   | -   |

**Other information**

|                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Packaging method                         | Open steel drum. Ordinary wooden cases outside ampoules. Threaded glass bottles, iron cap pressure glass bottles, plastic bottles or metal barrels (cans) outside the ordinary wooden box, etc. Packing according to the method recommended by the manufacturer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Transportation matters needing attention | Vehicle exhaust pipes for carrying this article must be equipped with fire retardants. It is forbidden to use mechanical equipment and tools which are prone to sparks for loading and unloading. During transportation, it should be protected from sunshine, rain and high temperature. The trough (tank) car used in transportation should have a grounding chain, and a hole separator can be installed in the trough to reduce the static electricity generated by the shock. It is strictly forbidden to mix with oxidants, acids, food and food additives. It is strictly forbidden to transport in bulk by wooden or cement vessels. Transportation vehicles should be equipped with firefighting equipment of corresponding varieties and quantities and emergency treatment equipment for leakage. Before transportation, check whether the packing container is complete and sealed. Dangerous signs and announcements shall be posted on the means of transport in accordance with the relevant transport requirements. |

**15 Regulatory information****International Chemicals List**

| Component                                    | EINECS | TSCA | DSL | IECSC | NZIoC | PICCS | KECI | AICS | ENCS |
|----------------------------------------------|--------|------|-----|-------|-------|-------|------|------|------|
| Saturated polyester                          | X      |      | X   |       | X     | X     |      |      | X    |
| dbe                                          |        |      |     |       |       |       |      |      |      |
| Naphtha solvent (petroleum), light aromatics |        |      |     |       |       |       |      |      | X    |

[EINECS] List of Existing Chemicals in Europe

TSCA Chemicals List

[DSL] Canadian Chemicals List

[IECSC] List of Chemicals Existing in China

[NZIoC] List of Current Temporary Chemicals in New Zealand

[PICCS] Philippine Chemicals and Chemicals List

KECI List of Chemicals Existing in Korea

[AICS] List of Chemicals Existing in Australia

[ENCS] List of Existing and New Substances in Japan

**China Chemicals Management List**

| Component                                    | A | B | C | D | E | F | G | H |
|----------------------------------------------|---|---|---|---|---|---|---|---|
| Saturated polyester                          | X | X | X | X | X | X | X | X |
| dbe                                          | I | X | X | X | X | X | X | X |
| Naphtha solvent (petroleum), light aromatics | X | X | X | X | X | X | X | X |

[A] Catalogue of Hazardous Chemicals (2015 Edition). Announcement No. 5 of the General Administration of Safety and Supervision, 2015  
 [B] Catalogue of Hazardous Chemicals for Key Environmental Management, No. 33 of the General Office of the Ministry of Environmental Protection, 2014

[C] List of Toxic Chemicals Strictly Restricted in China, Announcement No. 74 of the Ministry of Environmental Protection, 2017

[D] Catalogue of Narcotic Drugs and Psychotropic Substances (2013 edition). Circular No. 230 of the General Administration of Food and Drugs, 2013

[E] List of Hazardous Chemicals under Key Supervision (batches 1 and 2). Circular No. 95 of 2011 and No. 12 of 2013 of the General Administration of Safety and Supervision

[F] List of Controlled Ozone-depleting Substances Imported and Exported in China (batches 1-6). Announcement Series of Ministry of Environmental Protection 2000-2012

[G] List of Preventive Explosive Hazardous Chemicals (2017 Edition). Announcement of the Ministry of Public Security on May 11, 2017

[H] Catalogue of High Toxic Substances, Circular No. 142 of the Ministry of Health, 2003

notes

"" means that the substance is included in the regulations

"XX" means that there is no information or regulations for the time being.

## 16 Other information

### Revised information

|                       |            |
|-----------------------|------------|
| Date of establishment | 2019/02/27 |
| Revision date         | 2023/01/01 |
| Reasons for revision  | -          |

### Reference

[1] International Programme for Chemical Safety: International Chemical Safety Card (ICSC), at <http://www.ilo.org/dyn/icsc/showcard.home>.

[2] International Agency for Research on Cancer, <http://www.iarc.fr/>.

[3] OECD Global Chemicals Information Platform, web site:

[http://www.echemportal.org/echemportal/index?PageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?PageID=0&request_locale=en).

[4] CAMEO Chemical Substances Database, USA, at <http://cameochemicals.noaa.gov/search/simple>.

[5] American Medical Library: Chemical Identification Database, web site: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>.

[6] EPA: Integrated Hazard Information System, <http://cfpub.epa.gov/iris/>.

[7] U.S. Department of Transportation: Emergency Response Guidelines, at <http://www.phmsa.dot.gov/hazmat/library/erg>.

[8] GESTIS-Hazardous Substances Database, Germany, at <http://gestis-en.itrust.de/>.

### Abbreviation

CAS - Chemical Abstracts No. TSCA - List of Chemical Substances of TSCA, USA

PC-STEL-Short-term Permissible Contact Concentration PC-TWA-Time Weighted Average

DNEL - Derived Influenceless Level IARC - International Agency for Cancer Research

RPE-PNEC-Predicted Invalid Response Concentration of Respiratory Protection Equipment

LC50-50% lethal concentration LD50-50% lethal dose

EC - Effective Concentration EC50 - 50%



PBT-persistence, bioaccumulation, toxicity POW-octanol/water partition coefficient

BCF - Bioconcentration Factor (BCF) vPvB - Persistence, Bioaccumulation

CMR - Carcinogenic, Teratogenic and Reproductive Toxic Chemicals

IMDG - International Maritime Organization ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

UN - United Nations

NFPA - American Fire Protection Association

ACGIH - American Conference  
on Industrial Health

OECD - Organization for  
Economic Cooperation and  
Development

### **Disclaimer**

This safety specification meets the requirements of GB/T 16483 and GB/T 17519 in China. The data comes from authoritative international databases and data submitted by enterprises. The other information is based on the knowledge that the company currently possesses. We try our best to ensure the correctness of all the information, but due to the diversity of information sources and the limitations of our knowledge, this document is only for users' reference. Users of safety technical specifications should judge the rationality of relevant information according to the purpose of use. We are not liable for any damage caused by the operation, storage, use or disposal of the product.

