CHIMEI
奇美實業股份有限公司
CHI MEI CORPORATION

# Safety Data Sheet
**according to EC 1907/2006 (REACH) and 1272/2008 (CLP)**

Revision Date: January 1, 2020
Product name: **POLYLAC ® HH-ABS** Version 2 Print Date: January 1, 2020

## Section 1. Identification of the substance/ mixture and of the company/ undertaking

**1.1 Product identifier**
Product name: **POLYLAC ®**
This safety data sheet pertains to the following products:
PA-777E

**1.2 Relevant identified uses of the substance or mixture and uses advised against**
Relevant identified uses: Mixture used for the production of molded plastic articles

**1.3 Details of the supplier of the Safety Data Sheet**

| | |
|---|---|
| Supplier: | Chi Mei Corporation |
| Address: | 59-1, San Chia, Jen Te Village<br>Tainan County<br>Taiwan R.O.C. |
| Telephone: | +886 6 2663000 Ext. 1347 |
| Email: | service@mail.chimei.com.tw |

**1.4 Emergency telephone number**
Emergency telephone : +886 6 2663000 Ext. 2501

## Section 2. Hazards identification

**2.1 Classification of the substance or mixture**

Classification according to Directive 67/548/EEC or 1999/45/EC: Not classified as hazardous (polymeric state)

Classification according to Regulation (EC) N° 1272/2008 (CLP): Not classified as hazardous (polymeric state)

**2.2 Label elements**

Not labelled as hazardous

**2.3 Other hazards**
vPvB/PBT assessment: not available

## Section 3. Composition/information on ingredients

**3.1 Composition of the substance/ preparation**

Substance or Preparation Substance
Content

| CAS | Name | content |
|---|---|---|
| 9003-56-9 | Acrylonitrile-Butadiene-Styrene Copolymer | >75% |
| 31621-07-5 | N-Phenylmaleimide copolymer | <23% |
| - | Additives | ≦ 2 % |

Impurities Contributing to Hazard None

**3.2 Additional information:**

Preparation does not contain dangerous substances above limits that need to be mentioned in this section according to applicable legislation.
Reach Info:

| - | Registration No. |
|---|---|
| Acrylonitrile | 01-2119474195-34-0045 |
| Styrene | 01-2119457861-32-0006<br>01-2119457861-32-0007<br>01-2119457861-32-0057<br>01-2119457861-32-0065<br>01-2119457861-32-0081 |
| Buta-1,3-diene | 01-2119471988-16-0044 |
| N-phenylmaleimide | — |

**3.3 For full text of R- and H-phrases:** see section 16

## Section 4. First-aid measures

**4.1 Description of first aid measures**

General notes: Remove affected persons from the danger area, at the same time ensuring your own safety. Remove all contaminated clothing immediately

Following inhalation: In case of gases evolving from melted resin, move subject to fresh air. Treat symptomatically

Following skin contact: In case of pellets or powder, wash with water. In case of smelt, wash affected skin area and clothing with plenty of (soap and) water. Seek medical advice

Following eye contact: In case of pellets or powder, flush with plenty of water for at least 15 minutes. Seek medical advice if any dust particles still remain.
In case of gases evolving from melted resin of high temperature, flush with plenty of water for at least 15 minutes. Seek medical advice if necessary

Following ingestion: Induce vomiting. Rinse mouth with water. Seek medical advice if necessary

**4.2 Most important symptoms & effects both acute & delayed**

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

**4.3 Indication of any immediate medical attention and special treatment needed:** -

If burn is present, treat as any thermal burn, after decontamination. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

## Section 5. Fire-fighting measures

### 5.1 Extinguishing media

Suitable extinguishing agents: water spray, dry powder, foam, carbon dioxide
Dry chemical, carbon dioxide, regular foam extinguishing agent, spray

For safety reasons unsuitable extinguishing agents: High power water jet

### 5.2 Special hazards arising from the substance or mixture

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon dioxide. Carbon monoxide.

### 5.3 Advice for firefighters

Protective equipment: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Further measures: -

### 5.4 Additional information:

Hazchem-Code: -
Cool endangered containers with water jetspray.

## Section 6. Accidental release measures

### 6.1 Personal precautions, protective equipment & emergency procedures

Pellets or powder remained on ground may cause slipping
Wear protective equipment
Ensure adequate ventilation
Keep away from ignition sources
Keep unprotected persons away

### 6.2 Environmental precautions

Gather pellets and powder thoroughly to avoid birds or fishes taking from draining water.
Do not allow product to reach sewage system or water bodies. Inform respective authorities in case product reaches water, sewage system or soil

### 6.3 Methods and material for containment and cleaning up

Avoid generation of dust. Remove all sources of ignition.
Collect dry and place in appropriate containers for disposal. Subsequent cleaning.
Particular danger of slipping when spread on the ground.

### 6.4 Reference to other sections

See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment.

## Section 7. Handling and storage

### 7.1 Precautions for safe handling

Protective measures: Provide adequate ventilation, and local exhaust as needed. Do not breathe dust. In the case of the formation of dust: Withdraw by suction. Molten material: Avoid contact with the substance.

Measures to prevent fire: Prevent from fire around handling area

Measures to prevent aerosol and dust generation: maintain good housekeeping standards to prevent accumulation of dust. To avoid dust explosion resulting from the existence of powder, electrostatics eliminators and grounding should be fixed to such equipment as air transferring pipes, bag filters and hoppers. Use electrically conductive filters for bag filters.

Measures to protect the environment: -

Advice on general occupational hygiene: -

### 7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions: Keep the material at a cool dry place. Protect from direct sunlight, rain and violent temperature fluctuation. Fire is inhibited around storage area.

Requirements for storage rooms and vessels: Store in a well-ventilated place. Keep container tightly closed. Protect against heat /sun rays.

Suitable materials and coating: -

Unsuitable materials or coatings: -

Further information on storage conditions: -

### 7.3 Specific end use(s)

Recommendations: See the recommended processing condition and technical data sheet on this product for further information.

## Section 8. Exposure controls/personal protection

### 8.1 Control parameters

Exposure Limits: Although some of the additives used in this product may have exposure guidelines, these additives are encapsulated in the product and no exposure would be expected under normal handling conditions.

### 8.2 Exposure control

Appropriate engineering controls: Install eyes washer and shower in the place of operation. Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits
Personal protection:

- Respiratory protection: Wear masks for cleaning molding machines
- Hand protection: Heat-insulting gloves when handling molten form
- Eye protection: Wear safety glasses for general purpose. Wear chemical goggles for cleaning molding machines
- Skin and body protection: Gloves necessary for handling melted resin
- Hygiene measures: Wash hands after handling

### 8.3 Environmental exposure controls

Product related measures to prevent exposure: None specific
Instruction measures to prevent exposure: None specific
Organizational measures to prevent exposure: None specific
Technical measures to prevent exposure: None specific
Environmental exposure controls: Do not allow product to reach sewage system or water bodies

## Section 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| Appearance | Physical state: solid, granulate |
| Odour | Odourless or negligible |
| Colour | Natural or off-white |
| Odour threshold | not determined |
| pH | Not applicable |
| Melting point / freezing point | not determined |
| Initial boiling point and boiling range | The substance / product decomposes therefore not determined. |
| Flash point | 404 °C |
| Evaporation rate (Butyl Acetate = 1) | Not applicable to solids |
| Flammability (solid, gas) | No |
| Upper/lower flammability or explosive limits | As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use. |
| Vapour pressure | Not applicable |
| Vapour density (air = 1) | Not applicable |
| Relative density ($H_2O$ = 1) | approx. 1.03 - 1.10 g/cm3 |
| Bulk density | not determined |
| Solubility in water (by weight) | Insoluble |
| Partition coefficient (n-octanol/water) | not applicable |
| Auto-ignition temperature | 466 °C |
| Decomposition temperature | > 300 °C |
| Viscosity | not relevant |
| Explosive properties | Not explosive |
| Oxidizing properties | Not oxidizing |

**9.2 Other safety information:** -

## Section 10. Stability and reactivity

**10.1 Reactivity:** Non-reactive under normal handling and storage conditions

**10.2 Chemical stability:** Stable under normal handling and storage conditions

**10.3 Possible hazardous reaction:** Polymerization will not occur.

**10.4 Conditions to avoid:** Avoid temperatures above 300 °C. Exposure to elevated temperatures can cause product to decompose.

**10.5 Incompatible materials:** Strong oxidizing agents, Gasoline, aldehydes, ketone

**10.6 Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Processing may release fumes and other decomposition products. At temperatures exceeding melt temperatures, polymer fragments can be released. Fumes can be irritating. Decomposition products can include and are not limited to: Combustible gases. In case of fire may be liberated: smoke, Styrene-Monomer, aldehydes and acids (organic), carbon monoxide and carbon dioxide ($CO_2$).

## Section 11. Toxicological information

### 11.1 Information on toxicological effects

Toxicological effects:

- Acute toxicity (oral): Based on available data, the classification criteria are not met. Mild acute toxicity
- Acute toxicity (dermal): Based on available data, the classification criteria are not met. Mild acute toxicity
- Acute toxicity (inhalative): Based on available data, the classification criteria are not met. Mild acute toxicity
- Skin corrosion/irritation: Lack of data.
- Eye damage/irritation: Lack of data.
- Sensitisation to the respiratory tract: Lack of data. The chemical structure does not suggest a specific alert for such an effect.
- Skin sensitisation: Based on available data, the classification criteria are not met. Not sensitizing
- Germ cell mutagenicity/Genotoxicity: Lack of data. The chemical structure does not suggest a specific alert for such an effect.
- Carcinogenicity: Based on available data, the classification criteria are not met.
- Reproductive toxicity: Lack of data. The chemical structure does not suggest a specific alert for such an effect.
- Effects on or via lactation: Lack of data.
- Specific target organ toxicity (single exposure): Lack of data.
- Dusts: Can cause skin, eye and respiratory tract irritation.
- Specific target organ toxicity (repeated exposure): Lack of data.
- Processing, thermal hazards: Vapours: Can cause skin, eye and respiratory tract irritation.

Symptoms

- Dust:Can cause skin, eye and respiratory tract irritation.
- The melted product can cause severe burns.
- Irritating to eyes, respiratory system and skin.
- In case of ingestion: Swallowing may cause gastrointestinal irritation and pain of guts.

## Section 12. Ecological information

### 12.1 Toxicity

Not expected to be acutely toxic, but material in pellet or bead form may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

### 12.2 Persistence and degradability

Further details:

- Biodegradation: Product is not readily biodegradable.
- Degradation at UV-radiation/sunlight
- Environmental half-life period: >=100 days (estimated)
- The product is likely to persist in the environment.

Effects in sewage plants:

- In sewage treatment plants it may be separated mechanically.
-

### 12.3 Bioaccumulative potential

To avoid bioaccumulation plastics should not be disposed in the sea or in other water environments.

**12.4 Mobility in soil**
In the terrestrial environment, material is expected to remain in the soil., In the aquatic environment, material will sink and remain in the sediment.

**12.5 Results PBT & vPvB assessment**
This mixture has not been assessed for persistence, bioaccumulation and toxicity (PBT).

**12.6 Other adverse effects:**
General information: Do not allow to enter into ground-water, surface water or drains.

**12.7 Additional information: -**

## Section 13. Disposal considerations

**13.1 Waste treatment methods**

Product / Packaging disposal: Dispose in accordance with the current local regulations.
Waste codes according to European Waste Catalogue: -
Waste treatment-relevant information: Inadequate incineration may generate toxic gases such as CO, HCN, AN and SM
Sewage disposal-relevant information: -
Other disposal recommendations: -

## Section 14. Transport information

**ADR/RID**
**14.1 UN number**
Not applicable
**14.2 UN proper shipping name**
Proper Shipping Name: NOT REGULATED
**14.3 Transport hazard class(es)**
Not applicable
**14.4 Packing Group**
Not applicable
**14.5 Environmental hazards**
Not considered environmentally hazardous based on available data
**14.6 Special precautions for user**
Special Provisions: no data available
Hazard identification No:no data available

**ADNR / ADN**
**14.1 UN number**
Not applicable
**14.2 UN proper shipping name**
Proper Shipping Name: NOT REGULATED
**14.3 Transport hazard class(es)**
Not applicable
**14.4 Packing Group**
Not applicable
**14.5 Environmental hazards**
Not considered environmentally hazardous based on available data

**14.6 Special precautions for user**
no data available

### IMDG

**14.1 UN number**
Not applicable
**14.2 UN proper shipping name**
Proper Shipping Name: NOT REGULATED
**14.3 Transport hazard class(es)**
Not applicable
**14.4 Packing Group**
Not applicable
**14.5 Environmental hazards**
Not considered environmentally hazardous based on available data
**14.6 Special precautions for user**
EMS Number: Not applicable
**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**
Not applicable

### ICAO/IATA

**14.1 UN number**
Not applicable
**14.2 UN proper shipping name**
Proper Shipping Name: NOT REGULATED
**14.3 Transport hazard class(es)**
Not applicable
**14.4 Packing Group**
Not applicable
**14.5 Environmental hazards**
Not considered environmentally hazardous based on available data
**14.6 Special precautions for user**
no data available

## Section 15. Regulatory information

**15.1 Safety, health and environmental regulations /legislation specific for the substance or mixture**

Authorization and / or restrictions on use: None
Other EU regulations: The following substances are under European Seveso regulation:

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

This product is a polymer according to the definition in Directive 92/32/EEC (7th Amendment to Directive 67/548/EEC) and all of its starting materials and intentional additives are listed in the European Inventory of Existing Commercial Chemical Substances (EINECS) or in compliance with European (EU) chemical inventory requirements.

Other national regulations: -

**15.2 Chemical Safety Assessment**

For this substance a chemical safety assessment is not yet required.

## Section 16. Other information

### 16.1 Indication of changes

Version 1: First issue according to Regulations (EC) 1907/2006 (REACH) & 1272/2008 (CLP)

### 16.2 Abbreviations and acronyms

| | | | |
|---|---|---|---|
| AGS | Ausschuss für Gefahrstoffe | LoW | List of Waste |
| AF | Assessment Factor | MARPOL | MARine POLlution |
| BCF | BioConcentration Factor | MIE | Minimum Ignition Energy |
| CAS | Chemical Abstract Service | N°EC | European Commission number |
| CMR | Carcinogenic, Mutagenic and Reprotoxic | NFPA | National Fire Protection Association |
| CSR | Chemical Safety Report | NIOSH | National Institute of Occupational Safety and Health |
| DFG | German Research Foundation | NOEC | No Obseved Effect Concentration |
| DNEL | Derived No Effect Level | NOELR | No Observed Effect Loading Rate |
| EC | European Commission | OECD | Organisation for Economic Co-operation and Development |
| EC50 | Effective Concentration (required to induce a 50% effect) | OEL | Occupational Exposure Limit |
| EEC | European Economic Community | OSHA | Occupational Safety and Health Administration |
| EWC | European Waste Catalogue Code | PBT | Persistant Bioaccumulable Toxique |
| IDLH | Immediately Dangerous to Life or Health | PNEC | Previsible Non Effect Concentration |
| IBC | International Bulk Chemical | QSAR | Quantitative Structure-Activity Relationship |
| Koc | Soil/Water Partition Coefficient | STOT | Specific Target Organ Toxicity |
| Kow | Octanol/Water Partition Coefficient | TCLo | Toxic Concentration Low |
| LC50 | Lethal Concentration 50 | TDLo | Toxic Dose Low |
| LD50 | Lethal Dose 50 | UN | United Nations |
| LEL | Lower Explosive Limit | UVCB | Unknown or Variable Composition Complex Reaction Products, or Biological Materials |
| LL100 | Lethal Loading | vPvB | very Persistent, very Bioaccumulative |
| LOEC | Lowest Observed Effect Concentration | | |

### 16.3 Key literature references and sources for data

http://esis.jrc.ec.europa.eu/
http://echa.europa.eu/
http://gestis-en.itrust.de

### 16.4 Relevant R-phrases and/or H-statements (number and full text):

| | |
|---|---|
| H220 | Extremely flammable gas |
| H225 | Highly flammable liquid and vapour |
| H226 | Flammable liquid and vapour |
| H301 | Toxic if swallowed |
| H311 | Toxic in contact with skin |
| H315 | Causes skin irritation |
| H317 | May cause an allergic skin reaction |
| H318 | Causes serious eye damage |
| H319 | Causes serious eye irritation |
| H331 | Toxic if inhaled |
| H332 | Harmful if inhaled |
| H335 | May cause respiratory irritation |
| H340 | May cause genetic defects |
| H350 | May cause cancer |
| H351 | Suspected of causing cancer |
| H400 | Very toxic to aquatic life |
| H411 | Toxic to aquatic life with long lasting effects |

| | |
|---|---|
| R10 | Flammable |
| R11 | Highly flammable |
| R12 | Extremely flammable |
| R20 | Harmful by inhalation |
| R23/24/25 | Toxic by inhalation, in contact with skin and if swallowed |
| R36 | Irritating to eyes |
| R37 | Irritating to respiratory system |
| R38 | Irritating to skin |
| R40 | Limited evidence of a carcinogenic effect |
| R41 | Risk of serious damage to eyes |
| R43 | May cause sensitisation by skin contact |
| R45 | May cause cancer |
| R46 | May cause inheritable genetic damage |
| R50/53 | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment |
| R51/53 | Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment |

**16.5 Training advice:** -

**16.6 Further information:** According to the guidance version 2.0 for monomers and polymers from the European Chemicals Agency dated as of April 2012, the classification of the polymer takes into account the classification of all its constituents, such as unreacted monomers. These constituents in fact should be taken into account for classification of the polymer. This means that the same classification methods as for mixture should be applied to polymer substances.
In order to determine a classification for the studies about the water soluble fraction as well as the absorption should be performed on the polymer as such.

*To the best of our knowledge and belief, the information contained herein is accurate and obtained from sources believed to be reliable. No representation is made that the information is complete or the material is suitable for all purposes. The final determination as to the suitability of the user's intended use of the material is the sole responsibility of the user. All materials may present unknown hazards even when used in common applications and accordingly, it is the sole responsibility of the user to understand and address all potential hazards, including those identified herein. The information set forth in Sections 11 and 12 reflects data available as of the date hereof. It is anticipated that such data will be updated.*