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: June 1, 2018

Product name: **POLYLAC ® FR-ABS** Version 2 Print Date: June 1, 2018

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

1.1 Product identifier
Product name: **POLYLAC ®**
Article number: PA-764G

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
Tainan County
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	＞65%
135229-48-0	Brominated Epoxyoligomer	＜18%
1309-64-4	Antimony Trioxide	＜6%

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 01-2119457861-32-0007 01-2119457861-32-0057 01-2119457861-32-0065 01-2119457861-32-0081
Buta-1,3-diene	01-2119471988-16-0044
Diantimony trioxide	—

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

Acute effects: None Known
Delayed effects: Suspected of causing cancer. May cause an allergic skin reaction.

4.3 Indication of any immediate medical attention and special treatment needed

Exposures require specialized first aid with contact and medical follow-up.
Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing agents: alcohol foam, carbon dioxide, dry chemical, regular foam extinguishing agent, or water spray when fighting fires involving this material.
For safety reasons unsuitable extinguishing agents: High power water jet

5.2 Special hazards arising from the substance or mixture

May Ignite by heat, sparks, flames.
Some of these materials may burn, but none ignite readily.
Non-combustible, substance itself does not burn but may decompose upon heating, then produce corrosive and/or toxic fumes.
Inhalation of materials may be harmful.

5.3 Advice for firefighters

Protective equipment:
Self-contained breathing apparatus
Using unattended water devices in case of large fire and leave alone to burn if you do not imperative.

Further measures:
Avoid inhalation of materials or combustion by-products.
Do not access if the tank on fire.
Use appropriate extinguishing measure suitable for surrounding fire.
Keep containers cool with water spray.
Rescuers should put on appropriate protective gear.
Evacuate area and fight fire from a safe distance.
Substance may be transported in a molten form.
Some may be transported hot.
Dike fire-control water for later disposal; do not scatter the material.
Move containers from fire area if you can do it without risk.
Fire involving Tanks; Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
Fire involving Tanks; Cool containers with flooding quantities of water until well after fire is out.
Fire involving Tanks; Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
Fire involving Tanks; Always stay away from tanks engulfed in fire.
Fire involving Tanks; For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

5.4 Additional information: -

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

Absorb spills with inert material (e.g., dry sand or earth), then place in a chemical waste container.
Absorb the liquid and scrub the area with detergent and water.
Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
Notification to central government, local government. When emissions at least of the standard amount
Dispose of waste in accordance with local regulation.
Appropriate container for disposal of spilled material collected.
Small liquid state spills: Appropriate container for disposal of spilled material collected.
For disposal of spilled material in appropriate containers collected and clear surface.
Spilled material should be treated as a potential risk of waste collected.

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:
Dealing only with a well-ventilated place.

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:
Contaminated work clothing should not be allowed out of the workplace.
Since emptied containers retain product residue(vapor, liquid, solid) follow all MSDS and label warnings even after container is emptied.

Advice on general occupational hygiene:
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Use carefully in handling/storage.
Loosen closure cautiously before opening.
Avoid prolonged or repeated contact with skin.
Do not enter storage area unless adequately ventilated.
Please note that there are materials and conditions to avoid.
Be careful to high temperature.

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. Do not apply any physical shock to container.

Requirements for storage rooms and vessels:
Keep in the original container.
By specifying a storage area for carcinogenic substances. Store locked up.
Collected them in sealed containers.

Suitable materials and coating: -

Unsuitable materials or coatings: -

Further information on storage conditions:
Empty drums should be completely drained, properly bunged, and promptly returned to a drum reconditioner, or properly disposed of.

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	Off-white pellet
Odour	faint specific odour
Colour	Off-white
Odour threshold	None
pH	Not applicable
Melting point / freezing point	Not applicable
Initial boiling point and boiling range	Not applicable
Flash point	404 °C
Evaporation rate	Not applicable
Flammability (solid, gas)	Not available
Upper/lower flammability or explosive limits	45 g/m³ (open cup, powder)
Vapour pressure	Not applicable
Vapour density	Not applicable
Relative density (H_2O=1)	1.165 - 1.195 g/cm³
Bulk density	Not available
Solubility(ies)	Not soluble
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	466 °C
Decomposition temperature	> 300 °C
Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	Not oxidizing

9.2 Other safety information: No test data available

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:

Hazardous Polymerization will not occur.
Containers may explode if heated..
Easy to burn, but not easy to fire.
Irritating, or toxic gases may occur by fire.
Inhalation of materials may be harmful.
Non-combustible, substance itself does not burn but may decompose upon heating, then produce corrosive and/or toxic fumes

10.4 Conditions to avoid:

Avoid excessive heat, flames and all sources of ignition.
Avoid contact with incompatible materials and condition

10.5 Incompatible materials: Combustible materials, irritating, toxic gases

10.6 Hazardous decomposition products: Not available

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.
- Acute toxicity (dermal): Based on available data, the classification criteria are not met.
- Acute toxicity (inhalative): Based on available data, the classification criteria are not met.
- Skin corrosion/irritation: No information available
- Eye damage/irritation: No information available
- Sensitisation to the respiratory tract: No information available
- Skin sensitisation: Based on available data, the classification criteria are not met. Not sensitizing
- Germ cell mutagenicity/Genotoxicity: No information available
- Carcinogenicity: No information available
- Reproductive toxicity: Based on available data on the constituents the classification criteria are not met.
- Effects on or via lactation: No information available
- Specific target organ toxicity (single exposure): No information available
- Dusts: Can cause skin, eye and respiratory tract irritation.
- Specific target organ toxicity (repeated exposure): No information available

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

Short-term aquatic toxicity: No information available

Long-term aquatic toxicity: No information available

Oxicity to terrestrial plants: No information available

12.2 Persistence and degradability

Hydrolysis: No information available
Phototransformation in air: No information available
Biodegradation in water: No information available

12.3 Bioaccumulative potential

No information available

12.4 Mobility in soil

No information available

12.5 Results PBT & vPvB assessment

According to the revised Annex XIII of regulation (EC) 1907/2006 and (EC) 253/2011: No information available on the product as such

12.6 Other adverse effects:

General information: Do not allow to enter into ground-water, surface water or drains.

12.7 Additional information: No information available

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.