LG Chem

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# MSDS

(MATERIAL SAFETY DATA SHEET)

**Grade : 82TR**

**SAN RESIN**

| File Number | MSDS- SAN 82TR |
|---|---|
| Issue Date | 1997. 04. 12 |
| Revised Date | 2004. 12. 15 |
| Revised Item | |
| Page | 1/3 |

## 1. Chemical Product & Manufacturer's Information

| | | |
|---|---|---|
| a. | Chemical Product Name | Acrylonitrile Styrene Co-polymer |
| b. | Usage | Electronic Goods, Automotive Parts, Package, etc |
| c. | Chemical Type | Thermoplastics |
| d. | Manufacturer's Address | LG Chemical, 20, Yoido-dong, Youngdungpo-gu, Seoul, 150-721, Korea |
| e. | Prepared By | LG Chemical / ABS PS Division |

## 2. Ingredients

| | | CAS Number | Contents |
|---|---|---|---|
| a. | ABS (Acrylonitrile-Butadiene-Styrene) | 9003-54-7 | 98 - 100% |
| b. | Typical Antioxidants | | 0 - 1% |
| c. | Typical Lubricants | | 0 - 1% |

## 3. Physical & Chemical Character

| | | |
|---|---|---|
| a. | Appearance | Pellet |
| b. | Odor | Almost Odorless |
| c. | pH | Neutral |
| d. | Specific Gravity | 1.07 |
| e. | Evaporation Rate | Not applicable at standard condition |
| f. | Vapor Pressure | Not applicable at standard condition |
| g. | Vapor Density | Not applicable at standard condition |
| h. | Solubility in Water | insoluble |
| I | Solubility in other Solvent | Soluble in THF, Acetone and other Analogous Solvents |

## 4. Health Hazard Data

a. Threshold Limit

b. Effect of overexposure

| | | |
|---|---|---|
| - | Eye Contact | Solid or dust may cause irritation or corneal injury due to mechanical action |
| - | Skin Contact | Essentially nonirritating to skin, Mechanical injury only |
| - | Skin Absorption | Unlikely due to physical properties |
| - | Ingestion | Unlikely due to physical state. |
| - | Inhalation | Dust may cause irritation to respiratory<br>In case of breathing, fumes released from heated material may cause respiratory irritation |
| - | Chronic Effects | Not Available |
| - | Mutagenicity | Not Available |

## 5. First Aid Measures

| | | |
|---|---|---|
| a. | Eye Contact | Immediately rinse eyes with copious amount of running water and seek medical advice |
| b. | Skin Contact | Essentially nonirritating to skin but rinse with copious water |
| c. | Ingestion | If vomiting occurs, lower the head to ease vomiting and seek for medical advice |
| d. | Inhalation | In case of breathing, fumes released from heated material may cause respiratory irritation<br>In case of inhaling dense smoke, immediately remove a person to fresh air. If necessary, apply artificial respiration and seek medical attention immediately |
| e. | Mutagenicity | Not Available |

## 6. Fire & Explosion Hazard Data

| | | |
|---|---|---|
| a. | Flash Point | Not Applicable |
| b. | Flammability | 1/16" HB (UL-94, File No. E67171M) |
| c. | Auto Ignition Point | Not Applicable |
| d. | Extinguishing Media | Usually use water and use extinguishing media appropriate to surrounding conditions |
| e. | Special Fire Fighting Procedure | Cool Containers with water spray. In closed stores, provide fire fighter with self-contained breathing apparatus in positive pressure mode |
| f. | Usual Fire and Explosion Hazards | Irritating gases and dense smoke |

## 7. Reactivity Data

| | | |
|---|---|---|
| a. | Stability | Stable under normal condition |
| b. | Storage conditions to avoid | Avoid fire and heating above $60^{o}C$ |
| c. | Incompatibility | None known |
| d. | Hazardous decomposition products | Not applicable |
| e. | Hazardous polymerization | Not occur |

## 8. Spill or Leak Procedures

| | | |
|---|---|---|
| a. | Cleaning Method | Sweep, use vacuum cleaner, or shovel into intact packaging for waste disposal or possible re-use |
| b. | Waste Disposal Method | Reuse or transfer to an approved disposal area.<br>Observe all federal, state, or local regulations upon disposition |

## 9. Special Protection Information

| | | |
|---|---|---|
| a. | Eye | Safety goggles |
| b. | Hands | Protective gloves |
| c. | Respirator | Chemical protect respirator (fumes released from heated material) |
| d. | Others | If necessary, use protective equipment handling this product |

## 10. Handling & Storage

| | | |
|---|---|---|
| a. | Handling | Avoid formation of dust<br>Keep bags always closed / Keep container lightly closed<br>Avoid pellets / bags from getting wet |
| b. | Storage | Keep bags / containers in a well-ventilated place<br>Avoid pellets / bags from getting wet |

## 11. Other Information

Product should be handled, stored, and used in accordance with the generally accepted industrial hygiene practices and in conformity with all the applicable legal regulations. The information provided herein is based on the knowledge possessed at this present time from the view point of safety requirements.
It should, therefore, not be construed as guaranteeing specific properties.

# Material Safety Data Sheet(MSDS)

## 1. PRODUCT AND COMPANY IDENTIFICATION

| | |
|---|---|
| Product Name: | PP(Polypropylene) |
| Other Name: | - |
| Recommended use : | May be used to produce molded or extruded particles or as a component of other industrial products. |
| Manufacturer or supplier: | Shanghai SECCO Petrochemical Company Limited<br>4/30F,A Building, Far East International Plaza<br>No.319, Xian Xia Road,Shanghai 200051 P.R. China |
| Emergency phone/fax : | +86-21-52574688 |

## 2. HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4) : HEALTH=1 FIRE=1 REACTIVITY=0
EC CLASSIFICATION (CALCULATED) : No classification assigned.

**EMERGENCY OVERVIEWS :**
Solid pellets with slight or no odor. Spilled pellets create slipping hazard.
Can burn in a fire creating dense toxic smoke. Molten plastic can cause severe thermal burns.
Fumes produced during melt processing may cause eye, skin and respiratory tract irritation.
Secondary operations, such as grinding, sanding or sawing, can producs dust which may present an explosion or respiratory hazard.

**POTENTIAL HEALTH EFFECTS :**
**EYE :** Product may cause irritation or injury due to mechanical action.
**SKIN :** Pellets not likely to cause skin irritation.
**INGESTION :** Not acutely toxic.
**INHALATION :** Pellet inhalation unlikely due to physical form.
**CHRONIC / CARCINOGENICITY :**
**NTP :** Not Tested **OSHA :** Not Regulated **IARC :** Not Listed

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| **Chemical Name** | Cont nt (%) | **CAS Number** | Exposure Limits In Air | | |
|---|---|---|---|---|---|
| | | | ACGIH TLV-TWA | ACGIH TLV-STEL | IDLH |
| Polyolefin | 99.25wt% | 9010-79-1 | 10mg/m3 (inhalable fraction) | NA | NA |
| Proprietary additives | ≦0.75wt% | mixture | - | - | - |

## 4. FIRST AID MEASURES

**MEDICAL RESTRICTIONS :**
**EYE :** Remove contract lenses at once. Immediately flush eyes well with copious quantities of water or normal saline for at least 15-20 minutes. If irritation persists, seek medical attention.
**SKIN :** seek medical attention if rash or burn occurs.
**INGESTION :** Not probable. If a large amount is swallowed, seek medical attention.
**INHALATION :** Not Likely to be inhaled due to physical form.

**MELT PROCESSING :**
For molten plastic skin contact, cool rapidly flush water and immediately seek medical attention. Do not attempt removal of plastic without medical assistance. Do not use solvent for removal.
For processing fume inhalation irritation, leave contaminated area and breathe fresh air. If coughing,difficult breathing or any other symptoms develop seek medical attention at once, even if symptomsdevelop at a later time.
For skin contact with fume comdiesate, immediately eash thoroughly with soap and water. If irritation develops seek medical attention.

## 5. FIRE FIGHTING MEASURES

### FIRE FIGHTING :

Approved pressure demand breathing apparatus and pritective clothing should be used for all fires. Water spray is the preferred extinguishing medium. This product will melt but will not be carried on the surface for water.

### EXTINGUISHING MEDIA :

Water spray and foam, Water is the best extinguishing medium. Carbon dioxide and dry chemical are not generally recommended because their lack of cooling capacity may permit re-ignition.

### HAZARDOUS COMBUSTION PRODUCTS :

Hazardous combustion products may include intense heat, dense black smoke, carbon monoxide, carbon dioxide, oxides of phosphorus, hydrogen xyanide, hydrocarbon fragments, hydrogen fluoride, carbonyl fluoride and fluorocarbon fragments.
**FLASH POINT:** Not Applicable
**LOWER FLAMMABLE LIMIT :** Not Established
**UPPER FLAMMABLE LIMIT :** Not Established
**AUTOIGNITION :** Not Established
**FLAMMABILITY CONDITIONS :** Requires a continuous flame source to ignite and sustain combustion.
**EXPLOSION DATA :** Not Established
**IMPACT SENSITIVITY :** Not sensitive to mechanical impact.
**STATIC DISCHARGE :** Not sensitive to static discharge. (See Section 7)

## 6. ACCIDENTAL RELEASE MEASURES

GENERAL :Sweep or gather up material and place in preper container for disposal or recovery. (See Section 13)

## 7. HANDLING AND STORAGE

### HANDLING :

Follow recommendations on label and in processing guide. Prevent contact with skin and eyes. Use good industrial hygiene proctices. Provide adequnte ventilation. Secondary operations such as grinding, sanding or sawing may produce a dust explosion hazard. Use aggressive housekeeping activities to prevent dust accumulation; employ bonding, grounding, venting and explosion relief provisions in accordance with accepted engineering practices.

### STORAGE :

Store in a dry place away from moisture, excessive heat and sources of ignition.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS :**
A continuous supply of fresh air to the workplace together with removall of processing fumes through exhaust systems is recommended. Processing fume condensate may be a fire hazard and toxic;remove periodically from exhaust hoods, duct work amd othwr suricaces using appropriate personal protection. For piwders and residual dusts refer to Section 7.

**PERSONAL PROTECTION :**
**EYE/FACE :** Wear safety glasses with side shields or chemical goggles. In addition, use full face shield when cleanning processing fume condensates from hoods,ducts and other surfaces.
**RESPIRATORY :** When handling fumes are not adequstely controlled, use respirator approved for protection from organic vapors and acid gases. When dust or powder from secondary operations, such as grinding, sanding or sawing, are not adequately controlled use respirator approved for protection from dust.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL STATE :** Solid
**COLOR AND APPEARANCE :** Plastic pellet with slight odor
**BOILING POINT :** Not Applicable
**MELTING POINT (℃) :** 160 170
**VAPOR PRESSURE (mmHg) :** Negligible
**VAPOR DENSITY (Air=1) :** Not Applicable
**SPECIFIC GRAVITY :** 1.40 1.60
**WATER SOLUBILITY :** Insoluble
**SOLVENT SOLUBILITY :** Slightly soluble in strong polar slovent or chlorinated solvents
**% VOLATITLES :**Negligible
**pH :**Not Applicable

**ODOR THRESHOLD :**Not Established
**EVAPORATION RATE :**Negligible
**EVAPORATION RATE :**Negligible
**COEFFICIENT WATER / OIL DISTRIBUTION :** Not Established
**COMMENT:** This product does not exhibit a sharp melting point, but softens gradually over a wide temperature range.

## 10. STABILITY AND REACTIVITY

**STABILITY :** Stable under recommended conditions of Section 7
**REACTIVITY :** Not reactive under recommended conditions of handling, storage, processing and use.
**CONDITIONS TO AVOID :**
Do not exceed melt temperature recommendations in product literature.
In order to avoid autolgnition/hazardous decomposition of hot thick meases of plastic, purgings should be collected in small, flat shapes or thin strands to allow for rapid cooling and quenching in water.
Do not allow product to remain in barrel at elevated temperatures for extended periods of time ; purge with a general purpose resin. (See Section 8 for respiratory protection advice)
**HAZARDOUS DECOMPOSITION :**
Major decomposition gases are oxidized hydrocarbons (probably carbon monoxide) and steam. Minor components in decomposition gas may be aldehyde, phenolic compounds, etc.

## 11. TOXICOLOGICAL INFORMATION

Not Available

## 12. ECOLOGICAL INFORMATION

Not expected to present any significant ecological problems

## 13. DISPOSAL CONSIDERATIONS

**RCRA HAZARDOUS WASTE :**
Products is not a RCRA hazardous waste.
**WASTE DISPOSAL :**
Recycling is encouraged. Landfill or incinerate in accourdance with federal, state and local requirements. Collected processing fume condensates and incinerator ash should be tested to determine waste classification.

## 14. TRANSPORT INFORMATION

**DOT HAZARD CLASS:** Not Regulated
**PROPER SHIPPING NAME:** Not Regulated
**IDENTIFICATION NUMBER:** Not Listed
**TDGA:** Not Listed

## 15. REGULATORY INFORMATION

Listed below are chemical substances subject to supplier notification requirements.
**U.S. REQULATIONS :**
**TSCA INVENTORY STATUS :** This product complies with the Chemical Substance Inventory requirements of the US EPA TSCA.
**CERCLA SECTION 103 (40CFR302 :** Not Listed
**SARA SECTION 313 (40CFR372.65:** Not Listed
SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21)
**ACUTE:** Not Listed
**CHRONIC:** Not Listed
**FIRE:** Not Listed
**REACTIVE:** Not Listed
**SUDDEN RELEASE :** Not Listed
**STATE REQULATIONS :**
**California Proposition 65 :** Not Listed
**EUROPEAN REGULATIONS :**
**EC NUMBER:** Not assigned

## 16. OTHER INFORMATION

None

CHIMEI
奇美實業股份有限公司
CHI MEI CORPORATION

# Safety Data Sheet

**according to EU 1907/2006 (REACH) and 1272/2008 (CLP)**

Revision Date: June 1,2015

Product name: **POLYLAC ® ABS** Version 1 Print Date: November 30, 2015

## 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-707, PA-709, PA-709A, PA-709N, PA-709P, PA-709S, PA-709K, PA-709H ,PA-716, PA-717C, PA-726, PA-726M, PA-727, PA-737, PA-746, PA-746H, PA-747, PA-747F, PA-747H, PA-747R, PA-747S, PA-749, PA-749S,PA-756, PA-756S, PA-756H, PA-757, PA-757N, PA-757H,PA-757F

**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

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**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 | ＞98 % |
| - | Additives | ≦2 % |

Impurities Contributing to Hazard None

**3.2 Additional information:**

Reach Info:

| | Pre-registration No. | Registration No. |
|---|---|---|
| Acrylonitrile | 05-2117149456-38-0000 | 01-2119474195-34-0045 |
| Styrene | 05-2117149462-45-0000 | 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 | 05-2117149467-35-0000 | 01-2119471988-16-0044 |

**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

Self-protection of the first aider: -

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

Dust: Skin irritation, eye irritations and redness

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

Treat symptomatically.
(Decontamination, vital functions)

## Section 5. Fire-fighting measures

**5.1 Extinguishing media**

Suitable extinguishing agents: Water, foam, dry chemical powder

For safety reasons unsuitable extinguishing agents: -

**5.2 Special hazards arising from the substance or mixture:** -

**5.3 Advice for firefighters**

Protective equipment: Self-contained breathing apparatus

Further measures: -

**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**

Recovery if not contaminated or disposal

**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: -

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: -

Suitable materials and coating: -

Unsuitable materials or coatings: -

Further information on storage conditions: -

**7.3 Specific end use(s)**

Recommendations: -

## Section 8. Exposure controls/personal protection

**8.1 Control parameters**

Exposure Limits:None established

**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 | None |
| pH | Not applicable |
| Melting point / freezing point | not determined |
| 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) | 1.03 - 1.10 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:** -

## 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:** -

**10.4 Conditions to avoid:** Avoid excessive heat, flames and all sources of ignition

**10.5 Incompatible materials:** not applicable

**10.6 Hazardous decomposition products:** not applicable

## Section 11. Toxicological information

### 11.1 Information on toxicological effects

Toxicological effects:

- Acute toxicity (oral): Lack of data.
- Acute toxicity (dermal): Lack of data.
- Acute toxicity (inhalative): Lack of data.
- Skin corrosion/irritation: Lack of data. May cause irritations.
- Eye damage/irritation: Lack of data. May cause irritations.
- Sensitisation to the respiratory tract: Lack of data. Not to be expected
- Skin sensitisation: Lack of data. Not to be expected
- Germ cell mutagenicity/Genotoxicity: Lack of data. Not to be expected
- Carcinogenicity: Lack of data. Not to be expected
- Reproductive toxicity: Lack of data. Not to be expected
- Effects on or via lactation: Lack of data.
- Specific target organ toxicity (single exposure): Lack of data.
- Dusts: Irritating to eyes, respiratory system and skin.
- Specific target organ toxicity (repeated exposure): Lack of data.

Other information

Styrene:

- Harmful if inhaled. Causes damage to organs through prolonged or repeated exposure.
- lung damages
- May be fatal if swallowed and enters airways.
- Causes serious eye irritation. Causes skin irritation.

Acrylonitrile:

- Toxic by inhalation, in contact with skin and if swallowed.
- May cause cancer. Suspected of damaging the unborn child.
- Causes skin irritation. May cause an allergic skin reaction. Causes serious eye
- damage.

1,3-Butadiene:

- May cause cancer. May cause genetic defects.

Symptoms

- Dust:Can cause skin, eye and respiratory tract irritation.
- The melted product can cause severe burns.
- Thermal treatment, Processing:
- 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

| Method | Results | Reference |
|---|---|---|
| **Short-term aquatic toxicity** | | |
| Based on available data on the constituents the classification criteria are not met<br>$LC(50)_{mixture}$ = 5.78 mg/l (additivity and summation method, toxicity information available for 92,5 % of the mixture) | | |
| **Long-term aquatic toxicity** | | |
| Based on available data on the constituents the classification criteria are met and the mixture is therefore classified as Aquatic Chronic 1<br>$NOEC_{mixture}$ = 0.0079 mg/l (additivity and summation method, toxicity information available for 78 % of the mixture) | | |

### 12.2 Persistence and degradability

Further details:

- Biodegradation: Product is not readily biodegradable.
- 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

no data 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

### 12.5 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:

| Substance | Seveso category | Other Seveso categories | Seveso concentrations | Categories |
|---|---|---|---|---|
| Acrylonitrile | 2 | 9ii<br>7b | 10 % ≤ C < 20 % | 2 |
| Buta-1,3-diene | 0 | 8 | - | - |
| Styrene | 6 | - | C ≥ 12,5 % | - |

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 | R10 | Flammable |
| H225 | Highly flammable liquid and vapour | R11 | Highly flammable |
| H226 | Flammable liquid and vapour | R12 | Extremely flammable |
| H301 | Toxic if swallowed | R20 | Harmful by inhalation |
| H311 | Toxic in contact with skin | R23/24/25 | Toxic by inhalation, in contact with skin and if swallowed |
| H315 | Causes skin irritation | | |
| H317 | May cause an allergic skin reaction | R36 | Irritating to eyes |
| H318 | Causes serious eye damage | R37 | Irritating to respiratory system |
| H319 | Causes serious eye irritation | R38 | Irritating to skin |
| H331 | Toxic if inhaled | R40 | Limited evidence of a carcinogenic effect |
| H332 | Harmful if inhaled | R41 | Risk of serious damage to eyes |
| H335 | May cause respiratory irritation | R43 | May cause sensitisation by skin contact |
| H340 | May cause genetic defects | R45 | May cause cancer |
| H350 | May cause cancer | R46 | May cause inheritable genetic damage |
| H351 | Suspected of causing cancer | R50/53 | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment |
| H400 | Very toxic to aquatic life | | |
| H411 | Toxic to aquatic life with long lasting effects | 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.