Revision Date: 10/27/2014

# AMODEL® AS-19XX

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

### 1.1. Identification of the substance or mixture

Product name : AMODEL® AS-19XX
Product grade(s) : Amodel® AS-1945 HS BK 324
Amodel® AS-1933 HS BK 324

### 1.2. Use of the Substance/Mixture

Recommended use : - For further information, please contact: Supplier

### 1.3. Company/Undertaking Identification

Address : SOLVAY SPECIALTY POLYMERS USA, LLC
4500 McGINNIS FERRY ROAD
ALPHARETTA GA 30005-3914
USA

### 1.4. Emergency and contact telephone numbers

**Emergency telephone number** : **1 (800) 621-4590 [Health Information]**
**1 (800) 424-9300 CHEMTREC ® (USA & Canada)**
**1 (800) 621-4557 [Other Product Information]**
**1 (770) 772-8880**

## SECTION 2. HAZARDS IDENTIFICATION

Although OSHA has not adopted the environmental portion of the GHS regulations, this document may include information on environmental classification/labeling.

### 2.1. Classification of the substance or mixture

***HCS 2012 (29 CFR 1910.1200)***

Combustible dust : May form combustible dust concentrations in air

### 2.2. Label elements

***HCS 2012 (29 CFR 1910.1200)***

Signal word : Warning

**Hazard statements:**

May form combustible dust concentrations in air

### 2.3. Other hazards which do not result in classification

This product as shipped is not a combustible dust, however if small particles are generated during further processing, handling or by other means, combustible dust concentrations may form in the air.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

Not applicable, this product is a mixture

### 3.2 Mixtures

| Chemical Name | Identification number | Concentration [%] |
|---|---|---|
| **Polyphthalamide** | CAS-No.: - | >= 45 - <= 70 % |
| **Block polymer** | CAS-No.: - | >= 2 - <= 7 % |
| **Fiber Glass (continuous filament, non-respirable)** | CAS-No.: 65997-17-3 | >= 30 - <= 47 % |
| **Carbon black** | CAS-No.: 1333-86-4 | >= 0 - <= 1 % |

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

## SECTION 4. FIRST AID MEASURES

### 4.1. Inhalation

- Remove to fresh air.
- If symptoms persist, call a physician.

### 4.2. Eye contact

- Flush eyes with running water for several minutes, while keeping the eyelids wide open.
- If eye irritation persists, consult a specialist.

### 4.3. Skin contact

- Wash off with soap and water.
- Wash contaminated clothing before re-use.
- If symptoms persist, call a physician.
- Cool skin rapidly with cold water after contact with hot polymer.
- Do not peel polymer from the skin.
- Obtain medical attention.

### 4.4. Ingestion

- Never give anything by mouth to an unconscious person.

- If a large amount is swallowed, get medical attention.

## SECTION 5. FIREFIGHTING MEASURES

**5.1. Suitable extinguishing media**

- powder
- Foam
- Water
- Water spray
- Carbon dioxide (CO2)

**5.2. Extinguishing media which shall not be used for safety reasons**

- None.

**5.3. Special exposure hazards in a fire**

- Combustible material
- In a fire, the polymer melts, producing droplets which may propagate fire.
- Once started, a fire will tend to self extinguish (see section 9).
- Heating can release hazardous gases.

**5.4. Hazardous decomposition products**

- Carbon monoxide
- Ammonia
- Aldehydes
- Nitriles
- Nitrogen oxides (NOx)
- The release of other hazardous decomposition products is possible.

**5.5. Special protective equipment for firefighters**

- In the event of fire, wear self-contained breathing apparatus.
- Fire fighters must wear fire resistant personnel protective equipment.

**5.6. Other information**

- Avoid dust formation.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

**6.1. Personal precautions, protective equipment and emergency procedures**

6.1.1. Advice for non-emergency personnel

- Refer to protective measures listed in sections 7 and 8.

6.1.2. Advice for emergency responders

- Sweep up to prevent slipping hazard.
- Avoid dust formation.
- Refer to protective measures listed in sections 7 and 8.

### 6.2. Environmental precautions

- Should not be released into the environment.
- The product should not be allowed to enter drains, water courses or the soil.
- In case of accidental release or spill, immediately notify the appropriate authorities if required by Federal, State/Provincial and local laws and regulations.

### 6.3. Methods and materials for containment and cleaning up

- Sweep up and shovel into suitable containers for disposal.
- Avoid dust formation.
- Keep in properly labelled containers.
- Keep in suitable, closed containers for disposal.
- Treat recovered material as described in the section "Disposal considerations".

## SECTION 7. HANDLING AND STORAGE

### 7.1. Handling

- Take measures to prevent the build up of electrostatic charge.
- Ensure all equipment is electrically grounded before beginning transfer operations.
- Use only equipment and materials which are compatible with the product.
- To avoid thermal decomposition, do not overheat.

### 7.2. Storage

- Keep container closed.
- Keep away from heat and sources of ignition.

### 7.3. Other information

- Keep away from open flames, hot surfaces and sources of ignition.
- To avoid thermal decomposition, do not overheat.
- Avoid dust formation.
- Refer to protective measures listed in sections 7 and 8.
- Do not smoke.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Exposure Limit Values

- US. ACGIH Threshold Limit Values  2007
  time weighted average  = 3 mg/m3
  Remarks: as respirable particles
- US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)  02 2006
  Permissible exposure limit  = 5 mg/m3
  Remarks: respirable dust fraction, All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by the Particulates Not Otherwise Regulated (PNOR) limit which is the same as the inert or nuisance dust limit of Table Z-3.
- US. ACGIH Threshold Limit Values  2010

time weighted average = 10 mg/m3
Remarks: Inhalable fraction

- US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) 02 2006
  Permissible exposure limit = 15 mg/m3
  Remarks: Total dust, All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by the Particulates Not Otherwise Regulated (PNOR) limit which is the same as the inert or nuisance dust limit of Table Z-3.
- US. OSHA Table Z-3 (29 CFR 1910.1000) 2000
  time weighted average = 15 millions of particles per cubic foot of air
  Remarks: respirable dust fraction
- US. OSHA Table Z-3 (29 CFR 1910.1000) 2000
  time weighted average = 50 millions of particles per cubic foot of air
  Remarks: Total dust
- US. OSHA Table Z-3 (29 CFR 1910.1000) 2000
  time weighted average = 5 mg/m3
  Remarks: respirable dust fraction
- US. OSHA Table Z-3 (29 CFR 1910.1000) 2000
  time weighted average = 15 mg/m3
  Remarks: Total dust
- US. OSHA Table Z-1-A (29 CFR 1910.1000) 1989
  time weighted average = 5 mg/m3
  Remarks: respirable dust fraction
- US. OSHA Table Z-1-A (29 CFR 1910.1000) 1989
  time weighted average = 15 mg/m3
  Remarks: Total dust

**Fiber Glass (continuous filament, non-respirable)**

- US. ACGIH Threshold Limit Values 03 2013
  time weighted average = 5 mg/m3
  Remarks: Alveolar dust fraction
- US. ACGIH Threshold Limit Values 03 2013
  time weighted average = 1 fibers/cm3
  Remarks: fibres, Respirable fibres: length > 5 µm; aspect ratio >= 3:1

**Carbon black**

- US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) 02 2006
  Permissible exposure limit = 3.5 mg/m3
- US. OSHA Table Z-1-A (29 CFR 1910.1000) 1989
  time weighted average = 3.5 mg/m3
- US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A 06 2008
  time weighted average = 3.5 mg/m3
- US. ACGIH Threshold Limit Values 03 2013
  time weighted average = 3 mg/m3
  Remarks: Alveolar dust fraction

### 8.2. Engineering controls

- Provide local ventilation appropriate to the product decomposition risk (see section 10).
- Provide appropriate exhaust ventilation at places where dust is formed.

- Refer to protective measures listed in sections 7 and 8.

### 8.3. Personal protective equipment

8.3.1. Respiratory protection

- In case of insufficient ventilation, wear suitable respiratory equipment.
- When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- Use only respiratory protection that conforms to international/ national standards.
- Use NIOSH approved respiratory protection.
- Respirator with combination filter for vapour/particulate (EN 141).

8.3.2. Hand protection

- When handling hot material, use heat resistant gloves.

8.3.3. Eye protection

- Safety glasses with side-shields
- Dust proof goggles, if dusty.

8.3.4. Skin and body protection

- Long sleeved clothing

8.3.5. Hygiene measures

- When using, do not eat, drink or smoke.
- Wash hands before breaks and at the end of workday.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. General Information

| | | |
|---|---|---|
| **Appearance** | : | pellets |
| **Colour** | : | black |
| **Odour** | : | odourless |

### 9.2. Important health safety and environmental information

| | | |
|---|---|---|
| **pH** | : | *Remarks*: Not applicable |
| **Boiling point/boiling range** | : | *Remarks*: Not applicable |
| **Flash point** | : | *Remarks*: Not applicable |
| **Flammability** | : | *Upper explosion limit*:<br>*Remarks*: No data available<br>*Lower explosion limit*:<br>*Remarks*: No data available |

| | | |
|---|---|---|
| | | *Remarks*: The product is not flammable. |
| **Explosive properties** | : | *Explosion danger*:<br>*Remarks*: No data available |
| **Vapour pressure** | : | *Remarks*: Not applicable |
| **Relative density / Density** | : | *Remarks*: No data available |
| **Solubility(ies)** | : | Water<br>*Remarks*: negligible |
| **Partition coefficient: n-octanol/water** | : | *Remarks*: Not applicable |

### 9.3. Other data

| | | |
|---|---|---|
| **Melting point/range** | : | 313 °C ( 595 °F ) |
| **Decomposition temperature** | : | 420 °C ( 788 °F )<br>*Remarks*: Extended period of exposure (ca. 1 hour). |

## SECTION 10. STABILITY AND REACTIVITY

### 10.1. Stability

- Stable under normal conditions.
- Hazardous Polymerisation/Polymerization: no

### 10.2. Conditions to avoid

- Heat, flames and sparks.
- To avoid thermal decomposition, do not overheat.
- Avoid dust formation.
- Avoid accumulations of molten masses of Amodel in excess of 50 lbs (22.5 kilograms), which may result in excessive pressure buildup from thermal degradation of the product.

### 10.3. Materials to avoid

- If polyacetal and polyoxymethylene resin is molded or handled in your equipment, this material can rapidly decompose at the temperatures used to process this resin. Inadvertent contamination of this resin with polyacetal resin from the material handling system of other equipment can result in a rapid, possibly violent, release of decomposition fumes when the contaminated material is brought to molding temperature. To avoid, thoroughly clean molding equipment with purging compound prior to product changeover and prevent cross contamination of material handling systems.

### 10.4. Hazardous decomposition products

- Carbon monoxide, Ammonia, Aldehydes, Nitriles, Nitrogen oxides (NOx), The release of other hazardous decomposition products is possible.

## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1. Acute toxicity

Acute oral toxicity

- No data available

Acute inhalation toxicity

- No data available

Acute dermal toxicity

- No data available

### 11.2. Skin corrosion/irritation

- No data available

### 11.3. Serious eye damage/eye irritation

- No data available,

### 11.4. Sensitisation

- No data available

### 11.5. Mutagenicity

- No data available

### 11.6. Carcinogenicity

- Dust causes lung tumours in rats., Lung tumors observed in rat following long-term inhalation exposure to poorly soluble particles of low toxicity are the result of a species-specific mechanism known as “lung overload”. The formation of tumors is not observed in other species under similar exposure conditions and is considered not predictive of the effects in humans., Not classifiable as a human carcinogen., Note: IARC Classification: Group 2B (Carbon black)
- Not classified as a carcinogen according to GHS criteria: the mechanism or mode of action of tumour formation is considered not relevant for humans., The product is not considered to be carcinogenic

### 11.7. Toxicity for reproduction

- No data available

### 11.8. Repeated dose toxicity

### 11.9. Other information

- The product is biologically inert.
- Because the components are encapsulated in the resin and may not be bioavailable in the body, they may not exert the above mentioned health effects.
- Description of possible hazardous to health effects is based on experience and/or toxicological characteristics of several components.

## SECTION 12. ECOLOGICAL INFORMATION

### 12.1. Ecotoxicity effects

Acute toxicity

- Remarks: No data available

Chronic toxicity

- Remarks: No data available

### 12.2. Mobility

- Remarks: No data available

### 12.3. Persistence and degradability

Abiotic degradation

- Result: No data available

Biodegradation

- Remarks: No data available

### 12.4. Bioaccumulative potential

- Result: No data available

### 12.5. Other adverse effects

- No data available

### 12.6. Remarks

- Ingestion of solids may cause harm to wildlife due to intestinal mechanical blockage or starvation from false feeling of satiation.

## SECTION 13. DISPOSAL CONSIDERATIONS

### 13.1. Waste from residues / unused products

- Do not dump into any sewers, on the ground, or into any body of water. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations.
- Waste characterizations and compliance with applicable laws and regulations are the responsiblity of the waste generator.

### 13.2. Packaging treatment

- Empty containers.
- Dispose of as unused product.
- For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: recycler, reclaimer, incinerator or other thermal destruction device or industrial landfill.

### 13.3. RCRA Hazardous Waste

- Listed RCRA Hazardous Waste (40 CFR 302) - No

## SECTION 14. TRANSPORT INFORMATION

- Sea (IMO/IMDG)
- not regulated
- Air (ICAO/IATA)
- not regulated
- U.S. Dept of Transportation
- not regulated
- It is recommended that ERG Guide number 111 be used for all non-regulated material.
- Canadian Transportation of Dangerous Goods
- not regulated

## SECTION 15. REGULATORY INFORMATION

### 15.1. Inventory Information

| | | |
|---|---|---|
| **USA. Toxic Substances Control Act (TSCA)** | : - | In compliance with inventory. |
| **EU. European Registration, Evaluation, Authorisation and Restriction of Chemical (REACH)** | : - | If product is purchased from Solvay in Europe it is in compliance with REACH, if not please contact the supplier.. |
| **Japan. Inventory of Existing & New Chemical Substances (ENCS)** | : - | In compliance with inventory. |
| **Australia. Inventory of Chemical Substances (AICS)** | : - | In compliance with inventory. |
| **Korean Existing Chemicals List (ECL)** | : - | In compliance with inventory. |
| **Canada. Domestic Substances List (DSL)** | : - | In compliance with inventory. |
| **Philippine. Inventory of Chemicals and Chemical Substances (PICCS)** | : - | In compliance with inventory. |
| **Inventory of Existing Chemical Substances (China) (IECS)** | : - | In compliance with inventory. |

### 15.2. Other regulations

**US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)**

- not regulated.

**US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required**

- not regulated.

**US. EPA CERCLA Hazardous Substances (40 CFR 302)**

- not regulated.

**US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)**

| Components | CAS-No. | Concentration |
|---|---|---|
| Carbon black | 1333-86-4 | **>= 0.0 - <= 1.0 %** |

**US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)**

| Components | CAS-No. | Concentration |
|---|---|---|
| Carbon black | 1333-86-4 | **>= 0.0 - <= 1.0 %** |

## SECTION 16. OTHER INFORMATION

**Further information**

- Update
- Date prepared 10/27/2014

Material Safety Data Sheets contain country specific regulatory information; therefore, the MSDS's provided are for use only by customers of the company mentioned in section 1 in North America. If you are located in a country other than Canada, Mexico or the United States, please contact the Solvay Group company in your country for MSDS information applicable to your location.

The previous information is based upon our current knowledge and experience of our product and is not exhaustive. It applies to the product as defined by the specifications. In case of combinations or mixtures, one must confirm that no new hazards are likely to exist. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and integrity of the work environment. (Unless noted to the contrary, the technical information applies only to pure product).

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