

SAFETY DATA SHEET

Acrylonitrile Butadiene Styrene

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: ABS

Product name: Recycled Acrylonitrile Butadiene Styrene Copolymer (ABS)

1.2 Relevant identified uses of the substance or mixture and uses advised against

The uses of the chemical: Recycled plastic granulate/flakes for manufacturing of plastic products.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:	Aage Vestergaard Larsen A/S
CVR:	DK34228914
Street address:	Klostermarken 3
Postcode:	DK-9550, Mariager
Telephone nr.:	+45 98541655
Email address:	info@avl.dk

1.4 Emergency telephone number

The general emergency number.

National poison contact number.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

This product is not classified as hazardous according to Regulation (EC) no 1272/2008 and its amendments.

2.2 Label elements

Not a hazardous substance or mixture.

2.3 Other hazards

The product burns but is not classified as flammable. Dust/nanoforms from the product gives a potential risk for dust/nanoforms explosion. This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.

It is to the best knowledge and belief of Aage Vestergaard Larsen A/S that the substance does not contain any endocrine disrupters or nanoforms in concentrations that should be taken into account acc. to EU regulations, if handled under normal conditions.



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SECTION 3: Composition/Information on ingredients

Chemical name: Acrylonitrile-butadiene-styrene

CAS	Component	Weight procent
9003-56-9	Acrylonitrile Butadiene Styrene	NA
NA	Additives	NA

This product is a processed material which contain raw material from various sources and can thus contain various Acrylonitrile Butadiene Styrene grades. May also contain additives and pigments from original use and manufacturing. The quantity of original additives prior to recycling is unknown, and therefore not recorded.

SECTION 4: First aid measures**4.1 Description of first aid measures**

Inhalation: If fumes from processing has been inhaled, remove victim to fresh air. Get medical attention if symptoms occur.

Skin contact: At room temperature, does not need to take any measures. If molten material gets on the skin, cool rapidly with cool water for at least 20 minutes. Do not attempt to remove material from the skin. Obtain medical treatment for thermal burn.

Eye contact: Promptly rinse eyes with plenty of clean water while lifting the eyelids. Continue to rinse for at least 15 minutes. Remove contact lenses from the eyes if easy to do and continue rinsing. Get medical attention if any discomfort or irritation persists. If molten material gets on eyes, cool rapidly with cool water for at least 20 minutes. Do not attempt to remove material. Obtain medical treatment for thermal burn.

Ingestion: Do not induce vomiting. Never make an unconscious person vomit or drink fluids. Get medical attention if any discomfort continues. The product is biologically inert and is not absorbed /accumulated to the body. Passes through the digestive system without effects.

4.2 Most important symptoms and effects, both acute and delayed.

Inhalation of dust/nanoforms may irritate the respiratory tract. Prolonged inhalation of high doses of decomposition products may give headache or irritation of the respiratory tract.

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4.3 Indication of any immediate medical attention and special treatment needed.

No specific instructions.

SECTION 5: Firefighting measures

5.1 Suitable extinguishing media:

Water spray, foam, dry chemicals, powder or carbon dioxide.

Unsuitable extinguishing agents: Do not use a jet of water as an extinguisher, as this may spread the fire.

5.2 Special hazards during firefighting

During processing, heating or fire, toxic or harmful fumes/gases (carbon monoxide, carbon dioxide, styrene, acrylonitrile, hydrogen cyanide and ethylbenzene) may be formed.

5.3 Protective equipment for firefighters

Wear self-contained breathing apparatus and full protective clothing. Avoid fire-fighting water access to water courses or sewage system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment, and emergency procedures

Provide adequate ventilation. Avoid breathing dust/nanoforms or fumes. Keep unauthorized people away from the danger zone. Wear protective clothing (see section 8). Spilled product may cause a slipping hazard.

6.2 Environmental precautions

Prevent product from entering environment and drains.

6.3 Methods and material for containments and cleaning up.

Granulates/flakes: Sweep up and place into clearly labelled containers for recovery or disposal (see section 13). Avoid generation and spreading of dust/nanoforms.

Hot/molten material: Let it cool/solidify and collect mechanically into clearly labelled containers for recovery or disposal.

6.4 Reference to other sections

Safe handling and storage (see section 7). Exposure controls and personal protection (see section 8). Disposal considerations (see section 13).



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SECTION 7: Handling and storage

7.1 Precautions for safe handling

When handling the product follow the usual precautions and good industrial hygiene. Avoid spilling, skin and eye contact of hot, molten material. Avoid inhalation of dust/nanoforms, gases, and vapors. Avoid breathing process fumes. Avoid handling which leads to dust/nanoforms formation. Take precautionary measures against static discharges when there is a risk of dust/nanoforms explosion. Wash hands after use.

7.2 Conditions for safe storage, including any incompatibilities.

Store at room temperature in a dry and well-ventilated place. Keep packaging closed and in good condition to avoid contamination and / or spillage. Protect from direct sunlight. Keep away from heat and ignition sources. Avoid building static electricity. Incompatible material: see section 10.5.

7.3 Specific end use(s)

Not known.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.1.1 National occupational exposure limit values

No suitable exposure limit values known.

8.1.2 Other limit values

Not known.

8.1.3 Limit values in other countries

Not known.

8.1.4 DNEL

No chemical safety assessment has been carried out.

8.1.5 PNEC

No chemical safety assessment has been carried out.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure adequate ventilation, local exhaust ventilation if necessary.

8.2.2 Personal protection

8.2.2.1 Respiratory protection

Normally not needed. If ventilation is insufficient or dust/nanoforms/fumes are produced use suitable respiratory protection (CE approved air-purifying respirator with particle/gas filter (organic gases) AP2).

8.2.2.2 Hand protection



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Normally not needed. When handling the hot product, use heat-resistant gloves.

8.2.2.3 Eye/face protection

Normally not needed. If dust/nanoparticles is generated during handling or there is a splash risk when handling the molten material, wear tightly fitting safety goggles conforming to EN166.

8.2.2.4 Skin protection

Normally not needed. Remove any clothing that becomes contaminated and wash it before reuse.

8.2.3 Environmental exposure controls

Do not allow spilled material to enter drains or water courses.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Solid, granulate/flakes
Odour	Not determined
Odour threshold	Not determined
pH	Not determined
Melting point/freezing point	>110 °C
Initial boiling point and boiling range	Not determined
Flash point	Not determined
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	Not determined
Vapor pressure	Not determined
Vapor density	Not determined
Relative density	Not determined
Solubility(ies)	Not soluble in water
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature	Not determined
Decomposition temperature	Not determined
Viscosity	Not determined
Explosive properties	Not explosive
Oxidizing properties	Not oxidizing

9.2 Other information

Not known



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SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under normal conditions of storage and use.

10.2 Chemical stability

Stable under normal conditions of storage and use.

10.3 Possibility of hazardous reactions

No hazardous reactions known.

10.4 Conditions to avoid.

Avoid heat and other sources of ignition. Protect from direct sunlight. Avoid overheating. Avoid prolonged heating or heating above the recommended process temperature (220°C). Avoid excessive moisture levels in the material. Take precautionary measures against static discharges.

10.5 Incompatible materials

Avoid oxidizing agents.

10.6 Hazardous decomposition products

During processing, heating, or fire, toxic or harmful fumes/gases (Carbon monoxide, carbon dioxide, styrene, acrylonitrile, hydrogen cyanide and ethylbenzene) may be formed.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity: This product is not classified as acute toxic. No toxicological data available for the product itself.

Skin corrosion/irritation: This product is not classified as corrosive/irritant to skin. High concentration of dust/nanoforms may cause skin irritation.

Serious eye damage/irritation: This product is not classified as corrosive/irritant to eyes. High concentration of dust/nanoforms may cause eye irritation. Hot fumes from processing may irritate the eyes.

Respiratory or skin sensitization: This product is not classified as sensitizer.

Germ cell mutagenicity: This product is not classified as mutagenic.

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Carcinogenicity: This product is not classified as carcinogenic.

Reproductive toxicity: This product is not classified as toxic for reproduction.

STOT-single exposure: This product is not classified as toxic. High concentration of dust/nanoforms may cause respiratory irritation. Hot fumes from processing may irritate respiratory system.

STOT-repeated exposure: This product is not classified as toxic for repeated exposure.

Aspiration hazard: This product is not classified as hazardous with aspiration.

Other information: May cause discomfort and/or blockage in the gastrointestinal system if large amounts are swallowed. Contact with molten material can cause thermal burns.

It is to the best knowledge and belief of Aage Vestergaard Larsen A/S that the substance does not contain any endocrine disrupters or nanoforms in concentrations that should be taken into account acc. to EU regulations, if handled under normal conditions.

SECTION 12: Ecological information

12.1 Toxicity

12.1.1 Toxicity to aquatic organisms

This product is not classified as environmentally hazardous. No ecotoxicological data available for the product itself.

12.1.2 Toxicity to other organisms

This product is not classified as environmentally hazardous.

12.2 Persistence and degradability

12.2.1 Biological degradability

The product is not readily biodegradable.

12.2.2 Chemical degradability

Not known.

12.3 Bio accumulative potential

No data available.

12.4 Mobility in soil

The product is not soluble in water.



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12.5 Results of PBT and vPvB assessment

No chemical safety assessment has been carried out.

12.6 Other adverse effects

Avoid release to the environment. Plastic pellets may accumulate in the digestive systems of birds and aquatic organisms, possibly causing injury and/or starvation.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Reuse or recycle if not contaminated. The product is not hazardous waste. Do not throw the material in the sewer or in the nature. Dispose in accordance with local regulations.

SECTION 14: Transport information

14.1 UN number

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.2 UN proper shipping name

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14.3 Transport hazard class(es)

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14.4 Packing group

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14.5 Environmental hazards

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SECTION 15: Regulatory information

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

The synthetic polymer microparticles supplied are subject to conditions laid down by entry 78 of Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council.

15.2 Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

This product should only be handled by properly trained personnel, with access to ventilated process equipment, as well as protective equipment.

Disclaimer: The information set forth herein is of a mainly generic type and has partially been gathered from standard reference materials and/or supplier test data. It is to the best knowledge and belief of *Aage Vestergaard Larsen A/S* accurate and reliable. Such information is offered solely for your consideration, investigation, and verification. It is not guaranteed that the hazard precautions or procedures mentioned are the only ones that exist. *Aage Vestergaard Larsen A/S*. makes no warranties, expressed or implied, with respect to the use of the specific material identified, herein in combination with any other material or process, and assumes no responsibility, therefore.