

Material Safety Data Sheet ACRYLONITRILE BUTADIENE STYRENE

Section 1 - Product Identification

Synonyms : ABS
Chemical Formula : $(C_8H_8 \cdot C_4H_6 \cdot C_3H_3N)_n$
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Recommended use of the chemical
Plastic materials of synthetic resin

Section 2 – Composition/Information on Ingredients

Chemical Name	CAS No	Purity, %
2-Propenenitrile polymer with 1,3-butadiene and ethenylbenzene	9003-56-9	98~99
Ethylene Bis Stearamide	110-30-5	0.1~1
Additive		< 1

Section 3 – Hazards Identification

3.1 GHS Classification

Not applicable

3.2 GHS label elements

Hazard symbols

Not applicable

Signal words

Not applicable

Hazard statements

Not applicable

Precautionary statements

1) Prevention

Not applicable

2) Response

Not applicable

3) Storage

Not applicable

4) Disposal

Not applicable

3.3 Other hazards which do not result in classification : (NFPA Classification)

NFPA grade (0 ~ 4 level)

Health : 0, Flammability : 0, Reactivity : 0

Section 4 – First-Aid Measures

4.1 Eye contact

Do not rub your eyes.

Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.

4.2 Skin contact

Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Laundry enough contaminated clothing before reuse.

4.3 Inhalation contact

When exposed to large amounts of steam and mist, move to fresh air.

Take specific treatment if needed.

4.4 Ingestion contact

About whether I should induce vomiting Take the advice of a doctor.

Rinse your mouth with water immediately.

4.5 Delayed and immediate effects and also chronic effects from short and long term exposure

Not available

4.6 Notes to physician

Notify medical personnel of contaminated situations and have them take appropriate protective measures.

Section 5 – Fire Fighting Measures

5.1 Suitable (Unsuitable) extinguishing media

Dry chemical, carbon dioxide, regular foam extinguishing agent, spray

Avoid use of water jet for extinguishing

5.2 Specific hazards arising from the chemical

May Ignite by Heat, sparks, flames.

Easy to burn, but not easy to fire.

Irritating, or toxic gases may occur by fire.

Inhalation of materials may be harmful.

5.3 Special protective actions for firefighters

Move containers from fire area, if you can do without the risk.

Cool containers with water until well after fire is out.

Keep unauthorized personnel out.

Use appropriate extinguishing measure suitable for surrounding fire.

Keep containers cool with water spray.

Section 6 – Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Must work against the wind, let the upwind people to evacuate.
Do not touch spilled material. Stop leak if you can do it without risk.
Remove all sources of ignition.
Handling the damaged containers or spilled material after wearing protective equipment.

6.2 Environmental precautions

Prevent runoff and contact with waterways, drains or sewers.
If large amounts have been spilled, inform the relevant authorities.

6.3 Methods and materials for containment and cleaning up

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.

Section 7 – Handling and Storage

7.1 Precautions for safe handling

Get the manual before use.
Refer to Engineering controls and personal protective equipment.
Dealing only with a well-ventilated place.
Operators should wear antistatic footwear and clothing.

7.2 Conditions for safe storage, including any incompatibilities

Check regularly for leaks.
Do not use damaged containers.
Avoid direct sunlight.
Keep sealed when not in use.
Prevent static electricity and keep away from combustible materials or heat sources.

Section 8 – Exposure Controls/Personal Protection

8.1 Exposure limits

ACGIH TLV

Not available

8.2 Engineering controls

A system of local and/or general exhaust is recommended to keep employee exposures above the Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source.

Follow the appropriate engineering controls because unconfirmed gases for hazard among extrusion process may expose.

8.3 Personal protective equipment

Respiratory protection

Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.

Respiratory protection is ranked in order from minimum to maximum.

Consider warning properties before use.

Dust, mist, fume-purifying respiratory protection

Any air-purifying respirator with a corpuscle filter of high efficiency

Any respiratory protection with a electromotion fan(for dust, mist, fume-purifying)

Self-contained breathing apparatus with a corpuscle filter of high efficiency

For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

Eye protection

Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.

Provide an emergency eye wash station and quick drench shower in the immediate work area.

Hand protection

Wear appropriate glove.

Skin protection

Wear appropriate clothing.

Others

Not available

Section 9 – Physical and Chemical Properties

A. Appearance	Solid(Pellets)
B. Odor	Odourless
C. Odor threshold	Not applicable
D. pH	Not applicable
E. Melting point/Freezing point	Not applicable
F. Initial Boiling Point/Boiling Ranges	Not applicable
G. Flash point	Not applicable
H. Evaporation rate	Not applicable
I. Flammability(solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	Not applicable
L. Solubility	Insolubility (Solubility in water)
M. Vapour density	Not applicable
N. Specific gravity	1.05 ~ 1.1
O. Partition coefficient of n-octanol/water	Not applicable
P. Autoignition temperature	Over 400°C
Q. Decomposition temperature	Not available
R. Viscosity	Not applicable
S. Molecular weight	60,000-200,000 (main substance)

Section 10 – Stability and Reactivity

10.1 Chemical stability

This material is stable under recommended storage and handling conditions.

This material is stable under conditions at room temperature and normal pressure.

10.2 Possibility of hazardous reactions

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.

10.3 Conditions to avoid

Avoid contact with incompatible materials and condition.

Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces

10.4 Incompatible materials

Combustible materials, irritating, toxic gases

10.5 Hazardous decomposition products

Not available

Section 11 – Toxicological Information

11.1 Information on the likely routes of exposure

(Respiratory tracts)

Not available

(Oral)

Not available

(Eye-Skin)

Not available

11.2 Delayed and immediate effects and also chronic effects from short and long term exposure

Acute toxicity

Oral

Not available

Dermal

Not available

Inhalation

Not available

Skin corrosion/irritation

Not available

Serious eye damage/irritation

Not available

Respiratory sensitization

Not available

Skin sensitization

Not available

Carcinogenicity

IARC

Not available

OSHA

Not available

ACGIH

Not available

NTP

Not available

EU CLP

Not available

Germ cell mutagenicity

Not available

Reproductive toxicity

Not available

STOT-single exposure

Not available

STOT-repeated exposure

Not available

Aspiration hazard

Not available

Section 12 – Ecological Information

12.1 Ecotoxicity

Fish

[2-Propenenitrile polymer with 1,3-butadiene and ethenylbenzene] : LC50 11.5 mg/l 96 hr Pimephales promelas

Crustaceans

Not available

Algae

Not available

12.2 Persistence and degradability

Persistence

Not available

Degradability

Not available

12.3 Bioaccumulative potential

Bioaccumulative potential

Not available

Biodegradation

Not available

12.4 Mobility in soil

Not available

12.5 Other adverse effects

Not available

Section 13 – Disposal Considerations

13.1 Disposal methods

Since more than two kinds of designaed waste is mixed, it is difficult to treat seperatly, then can be reduction or stabilization by incineration or similar process.

If water separation is possible, pre-process with Water separation process.

Dispose by incineration.

13.2 Special precautions for disposal

The user of this product must disposal by oneself or entrust to waste disposer or person who other's waste recycle and dispose, person who establish and operate waste disposal facilities.

Dispose of waste in accordance with all applicable laws and regulations.

Section 14 – Regulatory Information

14.1 National and/or international regulatory information

POPs Management Law

Not applicable

Information of EU Classification

Classification

Not applicable

Risk Phrases

Not applicable

Safety Phrase

Not applicable

U.S. Federal regulations

OSHA PROCESS SAFETY (29CFR1910.119)

Not applicable

CERCLA Section 103 (40CFR302.4)

Not applicable

EPCRA Section 302 (40CFR355.30)

Not applicable

EPCRA Section 304 (40CFR355.40)

Not applicable

EPCRA Section 313 (40CFR372.65)

Not applicable

Rotterdam Convention listed ingredients

Not applicable

Stockholm Convention listed ingredients

Not applicable

Montreal Protocol listed ingredients

Not applicable

Section 15 : Additional Information

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