



MSDS(Materials Safety Data Sheet)

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Materials Safety Data Sheet

Materials	FR-ABS	GRADE.	NH-0926
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1. PRODUCT AND COMPANY IDENTIFICATION

A. Material : ABS(Acrylonitrile-Butadiene-Styrene) CAS No.: 9003-56-9, RTECS No.: AT6970000

B. Chemical Name and Synonyms :

Acrylonitrile-Butadiene-Styrene Resin; Acrylonitrile-Butadiene-Styrene Copolymers; Acrylonitrile-1,3-butadiene-styrene polymer; Acrylonitrile, polymer with 1,3-butadiene-styrene resin, ABS; ABS copolymer, ABS plastic, ABS resin, ABS terpolymer

C. General Characteristics : Pellet in natural or compounded color

D. Toxicological Classification : Irritating material

2. COMPOSITION/INFORMATION ON INGREDIENTS

A. Acrylonitrile-Butadiene-Styrene	CAS# 9003-56-9	88-95%
B. Flame retardant Agent (Non Bromine, Non Chlorine Type)	CAS# 139189-30-3	1-10%
C. Other Additives		> 0.05-2.0%

The addition of flame resistant additives does not make this polymer non-combustible, but rather increases its resistance to ignition and reduces the rate of burning on minor fire sources.

E. Environmentally Hazardous Substances

None of ingredients contain environmentally prohibited elements such as cadmium, lead and other heavy metals. The possibilities of naturally existing portion of such substances are controlled by Cheil's internal tolerance limits to maintain high level of environmental safety

3. HAZARD IDENTIFICATION

A. NFPA Ratings : Health : 1, Fire : 1 Reactivity : 0

B. Emergency Overview

Physical Status : solid, granule, powder

Main health Effects : No major effect on target organs has been reported

Physical Danger : Airborne dust may form flammable or explosive mixture with air

C. Potential Health Effects :

Inhalation : Acute exposure : May cause irritation

Chronic exposure : No relevant information found

Skin : Acute exposure : May cause irritation

Chronic exposure : No relevant information found

Eye : Acute exposure : May cause irritation

Chronic exposure : No applicable information found

Ingestion : Acute exposure : No applicable information found

Chronic exposure : No relevant information found

D. Carcinogenicity

Occupational Safety and Health Administration (OSHA) : None

National Toxicology Program (NTP) : None

International Agency for Research on Cancer (IARC) : None

4. FIRST AID

A. Inhalation

Move person to fresh air. Assist breathing if necessary. Consult a physician.

B. Skin

Remove contaminated clothing.

Wash affected area with mild soap and water until chemicals are completely removed. (15-20minutes at least)

Get medical attention if necessary.

C. Eye

Immediately flush eyes with plenty of water while holding eyelids open.

Seek medical attention if irritation persists.

D. Ingestion

Material is not expected to be absorbed from the gastrointestinal tract.

Do not induce vomiting unless directed to do so by medical personnel.

5. FIRE FIGHTING MEASURES

A. Fire/Explosion Hazards

Airborne dust may form flammable or explosive mixture with air.

B. Flash Point : Not applicable

C. Auto Ignition : above 400°C (750 °F)

D. Upper Flammability Limits/Lower Flammability Limits : Not applicable

E. Extinguishing Media :

Dry chemical, carbon dioxide, water spray and foam or water fog.

F. Fire Fighting Instructions :

Keep people away. Isolate fire area and de unnecessary entry.

Cool surroundings with water to localize fire zone.

Soak thoroughly with water to cool and prevent re-ignition.

G. Hazardous Combustion Products

Toxic carbon compounds can be produced during combustion.

H. Fire Fighting Equipment

Protective fire fighting clothing (including fire fighting helmet, coat, pants, boots, and gloves),
positive-pressure self contained breathing apparatus (SCBA)

6. ACCIDENTAL RELEASE MEASURES

A. Protect People

Isolate area. Keep unnecessary personnel away.

B. Protect the Environment

Keep out of irrigation ditches, sewers, and water supplies.

Spills should be collected to prevent contamination of waterways.

C. Cleanup

Keep unnecessary personnel away. Sweep up.

7. HANDLING AND STORAGE

A. Handling Procedures

Good housekeeping and controlling dusts are necessary for safe handling of products.

Avoid friction and keep away from possible ignition sources. Earth the dust containers.

B. Storage

Store in cool, dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Guidelines

No guidelines are enacted by OSHA, ACGIH or NIOSH.

B. Ventilation

Provide supplementary local ventilation to control airborne levels.

C. Eye Protection

Use safety glasses if there is a potential for exposure to particles.

Provide eye washer near workplace.

D. Skin Protection

Clean body-covering clothing should be needed.

E. Protective Gloves

Wear chemical-resist gloves.

F. Respiratory Protection

When respiratory protection is required for certain operations, use approved air-purifying respirator.

ACGIH = American Conference of Governmental Industrial Hygienists

NIOSH = National Institute for Occupational Safety and Health

9. PHYSICAL AND CHEMICAL PROPERTIES

A. Physical State and Appearance

Pellet in natural or compounded color

B. Odor : minimal

C. Boiling Point : Not applicable

D. Melting Point : Not applicable

E. Specific Gravity or Density : 1.05 ~ 1.10

F. Molecular Weight : 60,000 ~ 200,000

G. Chemical Formula : $(C_8-H_8.C_4-H_4.C_3-H_3-N)_x$

H. Vapor Pressure : Not applicable

I. Vapor Density : Not applicable

J. Solubility : Insoluble

K. pH : Not applicable

L. Evaporation Rate : Not applicable

M. Solvent Solubility

Soluble : acetone, methyl-ethyl ketone, dichloromethane

Insoluble : alcohol, aliphatic compound solvents, mineral oil

10. STABILITY AND REACTIVITY

A. Chemical Reactivity : stable

B. Conditions to avoid

Avoid heat, flame, spark and other ignition sources.

Avoid contact with incompatible materials.

C. Incompatibility with Other Materials

Acids, flammable materials, base, halogenated carbon compounds, oxidizing materials.

D. Hazardous Decomposition Products

Upon heating, cyanides, ammonia, acrylonitrile, styrene, carbon oxides, nitrogen.

E. Hazardous Polymerization

Not likely occurs.

11. TOXICOLOGICAL INFORMATION

- A. Acute Oral Toxicity :** LD50 has not been determined.
- B. Acute Inhalation Toxicity :** LC50 has not been determined.
- C. Semi-acute Toxicity :** No relevant information found.
- D. Chronic Toxicity :** No relevant information found.
- E. Mutagenicity :** No relevant information found.
- F. Carcinogenicity :** No relevant information found.
- G. Other Toxicity :** No relevant information found.

12. ECOLOGICAL INFORMATION

- A. Mobility :** This product has not been found to migrate through soils.
- B. Persistence/Degradability :** No relevant information found.
- C. Bioaccumulation :** No relevant information found.

13. DISPOSAL CONSIDERATIONS

- A. Regulatory Information :** None
- B. Disposal Method :**

All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations.

14. TRANSPORTATION INFORMATION

- A. U.S. Department of Transportation (D.O.T.) Information**
Not regulated as a hazardous material for transportation.
- B. Canadian TDG Information**
Not regulated as a hazardous material for transportation.
- C. International Air Transport Association (IATA) Regulation**
Not regulated as a hazardous material for transportation.
- D. International Maritime Dangerous Goods (IMDG) Code**
Not regulated as a hazardous material for transportation.

15. REGULATORY INFORMATION

A. U.S Regulations

TSCA : on the list

TSCA 12(b) export notice : not on the list

CERCLA 103 (40 CFR 302.4) : on the list

Acrylonitrile : 100 lbs rq

Butadiene, inhibited : 10 lbs rq

Styrene : 1000 lbs rq

SARA 302 (40 CFR 355.30) : on the list

Acrylonitrile : 10000 lbs rq

SARA 304 (40 CFR 355.40) : on the list

Acrylonitrile : 100 lbs rq

SARA 313 (40 CFR 372.65) : not on the list

SARA Hazard Category, SARA 311/312 (40 CFR 370.21) : Not to have met any hazard category

OSHA Hazard Communication Standard (29 CFR 1910.119) :

This product is not a "Hazardous Chemical" as defined by the OSHA

Hazard Communication Standard 29 CFR 1910.119

TSCA = Toxic Substance Control Act

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act

SARA = Superfund Amendments and Reauthorization Act

16. OTHER INFORMATION

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Responsibility for use, storage, handling and disposal of the products described herein, whether alone or in combination with any other substance, is that of the purchaser and/or end user.

This is the end of MSDS #FR-ABS NH-0926