SAFETY DATA SHEET Acrylonitrile Butadiene Styrene

Document Date: 1/31/2019

Revision: A

1.) Identification of the Substance and of the Company

Product indentifier

Name of substance: Acrylonitrile Butadiene Styrene

Trade Name: Certene 740

SDS Information Pertains To Manufacture Lot: 12240431

Recommended uses and restriction on use:

General use:

Plastic materials of synthetic resin

Restricton on use:

Do not use without advised use

Details of the supplier of the safety data sheet:

Company Name: Channel Prime Alliance Address: 1803 Hull Avenue

Des Moines, IA 50313

Website Address: www.channelpa.com

Information: 1-800-247-8038

Emergency telephone number:

Emergency Contact: ChemTrec: (800) 424-9300

2.) Hazard Identification

GHS Classification:

Not applicable

GHS Label Elements:

Hazard Symbol(s):

• Not applicable

Signal Word(s):

Not applicable

Hazard Statement(s):

• Not applicable

Precautionary statement(s):

1.) Prevention:

Not applicable

2.) Response:

• Not applicable

3.) Storage:

Not applicable

4.) Disposal:

Not applicable

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

NFPA grade (0 - 4 level)

• Health: 0, Flammability: 0, Reactiviy: 0

3.) Composition/Information on Ingredients

Chemical Name	emical Name Trade Name and Synonyms		Content(%)	
2-Propenenitrile polymer				
with 1,3-butadiene and				
ethenylbenzene	ABS resin	9003-56-9	98 - 99	
Octadecyl 3-(3,5-di-t-Butyl-				
4-hydrixy				
phenyl)propionate	_	2082-79-3	0.05 - 0.5	
Ethylene bis stearoamide	-	110-30-5	0.3 - 3	
Additive	_	_	< 2	

^{*} Other ingredients which do not contribute to classification of the product.

4.) First Aid Measures

Eye Contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.

Skin Contact:

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

Inhalation Contact:

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.

Inaestion Contact:

- About whether I should induce vomiting: Take the advice of a doctor.
- Rinse your mouth with water immediately.

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

Not available

Notes to physician:

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

5.) Fire Fighting Measures

Suitable (Unsuitable) extinguishing media:

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
- · Avoid use of water jet for extinguishing

Special 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.

${\it Special protective actions for firefighters:}$

- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Use unattended and water devices in case of large fire and leave alone to burn is imperative.
- Avoid inhalation of materials or combustion by-products.
- Do not access if the tank is on fire.
- Use appropriate extinguishing measure suitable for surrounding fire.
- Keep containers cool with water spray.

6.) Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:

- Ventilate closed spaces before entering.
- Do not touch spilled material. Stop leak if you can do it without risk.
- Handling the damaged containers or spilled material after wearing protective equipment.

Environmental precautions:

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

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.

7.) Handling and Storage

Precautions for safe handling:

- Wash thoroughly after handling.
- Avoid direct physical contact.
- Since emptied containers retain product residue (vapor, liquid, solid) follow all (M)SDS and label warnings even after container is emptied.

• Comply with all applicable laws and regulations for handling.

Conditions for safe sotrage, including any incompatibilities:

- Save in cool, dry and well ventilated place.
- Do not apply direct heat.
- Do not apply any physical shock to container.
- Keep in the original container.
- Please pay attention to incompatible materials and conditions to avoid.

8.) Exposure Controls/Personal Protection

Exposure Limit:

ACGIH TLV:

Not available

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.

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

Hand protection:

Wear appropriate gloves.

Skin protection:

Wear appropriate clothing.

Others:

Not available

9.) Physical and Chemical Properties

9.1 Information on basic physical and chemical properties:

A. Appearance:	
Appearance	Solid (Pellets)
• Color	Based on customer requested color.
B. Odor:	Odorless
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 applicable
J. Upper/Lower Flammability or Explosive Limits:	Not applicable
K. Vapor Pressure:	Not applicable
L. Solubility	Insolubility (solubility in water)
M. Vapor Density	Not applicable
N. Specific Gravity	1.02 - 1.12
O. Partition coefficient of n-octanol/water	Not applicable
P. Autoignition Temperature	Not applicable
Q. Decomposition Temperature	Over 400°C

R. Viscosity	Not applicable
S. Molecular Weight	50,000 - 250,000 (main substance)

10.) Stability and Reactivity

Chemical stability:

- This material is stable under recommended storage and handling conditions.
- This material is stable under conditions at room temperature and normal pressure.

Possiblity 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.

Conditions to avoid:

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, heating, flames and hot surfaces.

Incompatible materials:

• Combustible materials, irritating, toxic gases

Hazardous decomposition products:

• Not available

11.) Toxicological Information

Information on the likely routes of exposure:

Respiratory tracts:

Not available

Oral:

Not available

Eye·Skin:

Not available

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/irriatation:

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	-rone	hate	exposu	ro.

Not available

Aspiration hazard:

Not available

12.) Ecological Information

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

Persistence and degradability:

Persistence:

Not available

Degradability:

• Not available

Bioaccumulative potential:

Bioaccumulative potential:

Not available

Biodegration:

Not available

Mobility in soil:

Not available

Other adverse effects:

Not available

13.) Disposal Considerations

Disposal methods:

- Since more than two kinds of designated waste is mixed, it is difficult to treat seperately, 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.

Special precautions for disposal:

- The user of this product must dispose by oneself or entrust to waste disposer or person who preforms waste recycle
 and disposal to a company/person who establishes and operates waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

14.) Transport Information

UN number:

Not available

Proper shipping name:

Not available

Hazard class:

Not available

Packing group:

Not available

Marine pollutant:

Not applicable

Special precautions for user related to transport or transportation measures:

- Local transport follows in accordance with Dangerous Goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : Not available
- EmS SPILLAGE SCHEDULE : Not available

- ADR/RID: Not regulated as dangerous goods.
- IATA: Not regulated as dangerous goods.
- IMDG: Not regulated as dangerous goods.

15.) Regulatory Information

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 (29 CFR 1910.119):

Not applicable

CERLCA Section 103 (40 CFR 302.4):

Not applicable

EPCRA Section 302 (40 CFR 355.30):

Not applicable

EPCRA Section 302 (40 CFR 355.40):

Not applicable

EPCRA Section 313 (40 CFR 372.65):

Not applicable

Rotterdam Convention listed ingredients:

Not applicable

Stockholm Convention listed ingredients:

Not applicable

Montreal Protocol listed ingredients:

Not applicable

16.) Other Information

References:

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product
 for purpose of hazard communication. It is not intended to constitute performance information concerning the
 product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with
 respect to the product or the information contained herein.
- ACGIH(American Conference of Governmental Industrial Hygienists)
- CCRIS(Chemical Carcinogenesis Information)
- ChemIDplus(Chemical Identification/Dictionary)
- CICADs(Concise International Chemical Assessment Documents)
- CPDB(Carcinogenic Potency Database)
- CRC Handbook
- CTD(Comparative Toxicogenomics Database)
- ECHA Registered Substance(REACH)
- e-ChemPortal
- Environmental Health Criteria (EHC) Monographs
- ERG(emergency response guidebook)
- ESIS(European chemical Substances Information System)
- Harmonization Project Publications
- HSDB(Hazardous Substances Data Bank)
- International Agency for Research on Cancer (IARC) Summaries and Evaluations
- International Chemical Safety Cards (ICSCs)
- IPCS INCHEM(International Programme on Chemical Safety)
- IPCS/CEC Evaluation of Antidotes Series
- IRIS(Integrated Risk Information)
- IUCLID(International Uniform Chemical Information Database)
- Joint Expert Committee on Food Additives (JECFA) Monographs and Evaluations
- NLM(National Library of Medicine)
- NTP(National Toxicity Program)
- Pesticide Documents (PDs)
- Poisons Information Monographs Archive (PIMs, 1989-2002)
- Screening Information Data Set (SIDS) for High Production Volume Chemicals
- The Merek Indes 13th Ed.
- UK Poison Information Documents (UKPID)

- UN RTDG
- Globally Harmonized System of Classification and Labeling of Chemicals
- Chemicals Information System (NCIS)
- National Emergency Management Agency / Korea dangerous material iventory management system
- Korea Occupational Safety & Health Agency (KOSHA)

Further information:

- This (M)SDS is prepared according to the Globally Harmonized System (GHS).
- The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors
 determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by
 reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be
 considered.
- This information is based on documentation received from our supplier and is intended to describe the product for the purposes of health, safety and environmental requirements only.
- It should not therefore be construed as guaranteeing any specific property of the product.
- Information given herein is offered in good faith as accurate, but without guarantee. The conditions of use and
 suitability of the product for an application is beyond our control. All risks of use of the product are therefore assumed
 by the user and we expressly disclaim all warranties of every kind of nature, including warranties of merchantability
 and fitness for a particular purpose in respect to the use or suitability of this product. Appropriate warnings and safe
 handling procedures should be provided to handlers and users.