


 <p>National Petrochemical Company(NPC)</p>	Material Safety Data Sheet (MSDS) <i>According to the Directives 91/155/CEE-2001/58/CE-ISO 11014-1</i>	Page: 1 of 8 Revision Number: 1
	Product Name: SBR Styrene Butadiene Rubber	 Reactivity Flammability Health

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/ UNDERTAKING

Identification of the substance or preparation:	Styrene butadiene copolymer (rubber) (Chemical Family: Synthetic Rubber, Crumb Form)
Country of origin:	Iran (Islamic Republic of Iran)
CAS Number:	9003-55-8
Synonyms:	Synthetic Butadiene-Alpha-Methyl-Styrene Rubber, SKMS-30-ARKM-15, SKMS-30-ARKM-15P, SBR-1500, SBR-1502.
Company/undertaking identification	National Petrochemical Company Iran Petrochemical Commercial Company (IPCC)
Manufacturer subcontractor:	None
Emergency phone number:	00982188881735
Contact email:	msds@petrochem-ir.net
Fax:	00982188839511
Association/Organization:	None
Use of the substance/Preparation:	rubber

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous substances:	The rubber contains antioxidant of amine, phenol or amino-phenol types to prevent destruction during storage, transporting and at first stages of processing. The rubber also contains non-polymerized α -methyl styrene. At normal safe conditions these substances are not harmful. The antioxidants are dangerous only when the rubber is produced. In case of fire polymer combustion products - carbon oxides, carbon black may be dangerous.
Hazardous label(s):	
Toxicological characteristics:	Synthetic Butadiene- α -Methyl-Styrene Rubber is a substance of little danger. At elevated temperatures and when processed the rubber has a weak odor of residual monomer -alpha-methyl-styrene.
Substances present at a concentration below the minimum danger:	The content of nonpolymerized monomer in the rubber is 0,05%max, and it is not harmful when industrial hygiene is observed.
Other component:	

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3. IDENTIFICATION OF HAZARDS

Risk phrases:	Inhalation, skin contact (in a melted state), eyes.
Skin contact:	Direct contact of the rubber with unprotected skin causes no pathological changes. Hot product may cause burns.
Eye contact:	The rubber may scratch eyeballs.
Inhalation :	The rubber is a product of low volatility, it is not irritant. At elevated temperatures butadiene and alpha-methyl styrene may be isolated, which are irritant for eyes and respiratory system.
If swallowed:	Sickness
Other information:	

4. FIRST AID MEASURES



As a general rule, in case of doubt or if symptoms persist, always call a doctor

NEVER induce swallowing in an unconscious person.

Skin contact :	Skin contact with the rubber is not dangerous. Hot rubber may cause burns- in this case wash the skin with plenty of cold water and with soap; apply aseptic bandage. Call ambulance if necessary.
In case of exposure by inhalation:	Not possible in normal conditions. Poisoning with decomposition products- fresh air, warmth. In case of fainting, put victim horizontally with lowered head. Give ammonia to breathe in. In case of breath stop artificial breathing. Call ambulance.
In case of splashes or contact with eyes:	Remove from eye, wash with plenty of water. Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes.
In case of swallowing:	Drink plenty of water.
Note of physician:	

5. FIRE FIGHTING MEASURES

Flammable class:	Class A
Suitable extinguishing media:	Small fire: extinguishing media Chemical powders, carbonic acid fire extinguisher, asbestos fabric, sand, earth. Fire extinguishing media: Air-mechanical and chemical foams, water spray, water steam.

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Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:

Special protective equipment for fire fighting :

Other information:

SBR Polymers would be considered 'ordinary combustibles' (NFPA defined Class A). Carbon dioxide is not generally recommended for use on Class A fires as a lack of cooling capacity may result in re-ignition. Move container from fire area if you can do it without risk. Do not scatter spilled material with high-pressure water streams. Will burn if involved in a fire. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Personal protection measures: Protective fire fighting clothing, breathing equipment. Avoid breathing smoke, fumes, and decomposition products. As in any fire, wear self-contained breathing apparatus pressure-demand MSHA/NIOSH (approved or equivalent) and full protective gear. None

6. ACCIDENTAL RELEASE MEASURES



Personal precautions:

Environmental precautions:

Methods for cleaning up and disposal:

Other information:

Pressurized hermetically sealed equipment and communications, ventilation of production premises, Local suck off means, automatic machinery. Sound and light signaling, indicators of dangerously explosive Concentrations. If excessive dust is created, wear dust mask or respirator to keep exposure below the Permissible Exposure Level for particulate matter. Follow environmental protection recommendations: hermetically sealed equipment, prohibited sewage into natural water reservoirs. Treat or dispose of waste material in accordance with all local, state/provincial, and national requirements. Rubber wastes should be processed in production premises with ventilation system. The rubber that is not suitable for further processing must be buried or burned In an appropriate, safe place. None

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7. HANDLING AND STORAGE

The regulations relating to storage premises apply to workshop where the product is handled

Handling:

Storage:

Other information:

Observe all federal, state and local regulations when storing this substance. Store away from incompatible substances.

Use with adequate ventilation. Minimize dust generation and accumulation. Wash hands thoroughly after handling. Avoid extreme temperatures. Store in a cool place in original container and protect from sunlight. After work, before smoking or eating, wash the hands well, and gargle. Avoid extreme temperatures. Store in a cool place in original container and protect from sunlight. The rubber is packed in wooden or metal containers and stored in piles containing 3-4 palettes. The rubber packed in paper bags is stored in piles no more than 1, 2 meters high. The rubber must be kept in premises at temperature max 40°C. Guaranteed storage time –1 year. Avoid near UV-emitting lights such as the incandescent lamps and mercury lamps. Avoid aromatic solvents, chlorine derivatives. Avoid open fire.

None

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values:

Exposure controls:

Personal protective equipment:

Eye protection:

Not limited.

Special storage conditions and incompatible products:

Aromatic solvents, chlorine derivatives. Avoid open fire.

The rubber is packed in wooden or metal containers and



Stored in piles containing 3-4 palettes. The rubber packed in paper bags is stored in piles no more than 1, 2 meters high.

The rubber must be kept in premises at temperature max 40°C. Guaranteed storage time –1 year.

Strict observance of industrial hygiene and sanitary norms. Prophylactic medical examination of personnel.

Where contact with this material is likely, eye protection is recommended.

Employee must wear splash-proof or dust

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Respiratory protection:

resistant safety goggles to prevent eye contact with this substance. Provide an eye wash fountain within the immediate work area for emergency use.

Not needed in normal conditions. In emergency situations and during repair works inside polymerizes use filter gas masks. If airborne concentrations exceed the OSHA TWA, a NIOSH approved dust mask is recommended.

Hand protection:

Employee should wear appropriate protective gloves to prevent contact with this substance.

Skin and body protection:

For brief contact, normal work attire should be sufficient. Wash hands thoroughly after handling. Special cotton clothing, leather boots.

Health measures:

Hermetically sealed, grounded equipment and communications, good ventilation system, fire-protected machinery.

Environmental exposure controls:

Provide local exhaust ventilation. Ventilation equipment should be explosion-proof if explosive concentrations of dust, vapor or fume are present.

9. PHYSICAL AND CHEMICAL PROPERTIES

General information:

Appearance (at 20°C):

Colour:

Rubber-like material.

Rubber-like material. solid

Colour depends on the antioxidant used.

White or light yellow

Odour:

Weak. slight odour

PH (at 20°C):

No data available.

Boiling point/range (°C):

NA

Flash point (°C):

- 285°C

Flammability:

ordinary combustibles'

Auto-ignition temperature:

NA

Explosive properties:

Not explosive

Oxidising properties:

It isn't oxidising

Vapour pressure (at 20°C):

NA

Density (at 20°C):



BULK DENSITY: NA

SPECIFIC GRAVITY : 0.91 - 0.96 (Water = 1)

Solubility (at 20°C):

water solubility: Not

solubility in fats: Not

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Viscosity (40°C):	Not. It is solid
Evaporation rate:	NA
Other information:	None

10. STABILITY AND REACTIVITY

Stability:	Stable under normal temperatures and pressure.
Conditions to avoid:	May burn but does not ignite readily. Avoid contact with strong oxidizers, excessive heat, sparks, or open flame.
Material to avoid:	Avoid contact with strong oxidizers
Hazardous decomposition products:	Carbon monoxide and Carbon oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	- LD ₅₀ , oral, rat (mg.kg ⁻¹): NE - LD ₅₀ , oral, mouse (mg.kg ⁻¹): NE - LD ₅₀ , dermal (mg.kg ⁻¹): NE
Sub chronic – chronic toxicity:	The rubber is not irritant or toxic. Decomposition products (a-methyl-styrene) irritate eyes, skin, and respiratory system. Butadiene –1,3 is carcinogenic (Group 2A)
Sensibilization:	Industrial products may contain trace impurities and additives which may cause toxic effects or allergic reactions.
Carcinogenicity:	No data available.
Reproductive effects:	There is no toxicology information on this material; however, the components possess irritancy potential.
Human experience:	- Inhalation: Acute exposure: Dusts may cause mild irritation and cough. Fumes may cause irritation and toxic effects. Chronic exposure : There is insufficient data available to evaluate the toxic effects of styrene-butadiene rubber. - Skin contact: Acute exposure: No data available. Chronic exposure: No data available. - Eye contact: Acute exposure: Dusts may cause mild irritation. High Concentrations of

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fumes may also cause irritation and toxic Effects.
 500mg applied to rabbit eyes for 24 hours resulted in mild irritation.
 - Ingestion: Acute exposure: No data available.
 None

Other information:

12. ECOLOGICAL INFORMATION

Ecotoxicity:

At normal conditions the rubber does not contaminate air, water reservoirs, soil. Alpha-methyl-styrene.

Practical perception threshold: pour of water -0,2 mg/l,

Taste of water- 0, 14 g/l.

Bio accumulative potential:

Not studied for the rubber.

Mobility:

It is solid and hasn't mobility.

Persistence and degradability:

The rubber does not transform. At elevated temperatures may contaminate the environment.

Other adverse effects:

None

13. DISPOSAL CONSIDERATIONS

Disposal of product:

Rubber wastes should be processed in production premises with ventilation system. The rubber that is not suitable for further processing must be buried or burned in an appropriate, safe place.

Disposal of packaging:

Wooden containers, paper bags are used only once.
 Metal containers may be re-used.

14. TRANSPORT INFORMATION

Land transport:

Over the substance with sheets in order to prevent mingling of foreign matters, wetting, and exposure to the direct sun rays. In case of bulk cargoes, in order to prevent crumbling, keep the height as low as possible, and fix it firmly in place.

ADR/RID:

N/A

Packaging group:



N/A

Maritime transport:

Like land transport.

Air transport:

Like land transport.

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15. REGULATORY INFORMATION

Hazardous label(s):

Non-Hazardous

Safety phrases:

Wear suitable protective clothing, gloves and eye / face protection.

Risk phrases:

Irritating to eyes, respiratory system and skin.

16. OTHER INFORMATION

None

The contents and format of this MSDS are in accordance with EEC Commission Directive 2001/58/EC

Disclaimer of liability:

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