

Material Safety Data Sheet

SKD-2

Astlett Rubber
Natural and Synthetic Rubber, Since 1885
Inc.

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JSC «Voronezhsynthetizkauchuk» urges the recipient of this Safety Data Sheet to study it carefully to become aware of hazards, if any, of the product involved. In the interest of safety you should (1) notify your employees, agents and contractors of the information on this sheet, (2) furnish a copy to each of your customers for the product, and (3) request your customers to inform their employees and customers as well.

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

Identification of the substance or preparation

Chemical name: Butadiene Synthetic Rubber SKD-2

2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	% weight	Exposure limits mg/m ³	Hazards
Butadiene 1,3	98	100	4
Antioxidant			
Agidol -1	0,4-1,0	50	4

3. HAZARDS IDENTIFICATION

Main hazards and effects:

Rubber SKD is non-dangerous product, according to its influence on the health. Skin contact does not cause any irritation. Does not contain nitrosamines or nitrosamine generated substances. At high temperature or during the processing method, rubber SKD may release the vapor of residual monomer – butadiene and hydrocarbon solvent, used at polymerization. In case of fire, the hazard must be identified by the present of carbon oxide.

4. FIRST AID MEASURES

Inhalation

In case of irritation: milk with mineral water. In case of emergency: remove to fresh air. In case of poisoning: tea, see the doctor

Eye contact

Immediately flush eyes with water. See the doctor

Skin contact

Immediately flush skin thoroughly with soap's solution in water. Symptomatic treatment as in case of burns.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable: - fire blanket
- foam
- powder
- carbon dioxide
- inert gas (in case of small fires)
- vapor
- air-mechanical foam
- water with wetting agents
- powders (in case of larger fires)

Special fire fighting procedures

Maintain the distance from the fire. Use the water for rubber bale's cooling.

Special protective equipment for firefighters

Use fireproofs clothing. Wear heat resistant clothing, self-contained breathing apparatus.

Unusual fire and explosion hazards

Rubber is a fire and explosive-proof product. By introduction in fire's source, the formation of fumes may cause the irritation of respiratory tract. Hazardous products are carbon oxide and carbon black.

Temperature of self ignition 332 °C

Temperature of ignition 292 °C

6. ACCIDENTAL RELEASE MEASURES

Main precaution

Maintain the storage, transportation, handling terms.

Eliminate sources of ignition. Use the equipment without ignition source.

Personal precaution

Wear heat resistant clothing, self-contained breathing apparatus.

Environmental precautions

Use fire-fighting media, anti-fumes systems. Control of hazard ingredients.

7. HANDLING AND STORAGE

HANDLING

Advice on safe handling

Handle only in room with ventilation. Air speed should be 0,5 m/sec.

Other precautions

Storage terms 1 year. Avoid any contamination and direct sunlight, storage temperature is no more than 30°C. Avoid storage with acids, organic solvents and any chemical materials.

Rubber, wrapped in polyethylene film and packed on the pallets, is stored in stacks in 3- layers.

Rubber, packed in polyethylene film and paper bags, is stored in stacks with height no more than 1,2 ?.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure limits

Ingredient type	Value	Hazard
Butadiene 1,3	100 mg/m ³	4
Toluene	150/50 mg/m ³	3

PERSONAL PROTECTION

Hand protection/protective gloves

Resistant protective gloves

Industrial hygiene measures

Do not smoke, eat and drink while working. Remove contaminated clothing and clean it.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state at 20 °C:	Hard, uniform elastic mass
Appearance:	Bales of pale color
Odor:	Absence
Density:	900-970 kg/m ³
Melting temperature:	No more than 160 °C
Degradation temperature:	No more than 300 °C
Self-ignition temperature:	332 °?
Organic solvent solubility:	Soluble at normal conditions only in organic solvents

10. STABILITY AND REACTIVITY

STABILITY

Product is stable in normal conditions

Conditions causing dangerous changes: Warming, direct sunlight over a long period of time, open fire.

Incompatible materials: Concentrated acids, oxidizers, and organic solvents.

Another information: Warming, oxygen, ozone, and direct sunlight cause butadiene-styrene rubber's structure changes with decrease of its physical-mechanical properties.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

In accordance with significant data with possible relevance, this rubber may be referred as a low-toxicity product. Rubber processing is characterized as low-toxic. Rubber toxicity is caused by the

possible respiration of butadiene and toluene vapor in amounts significantly lower as exposure limit during rubber processing and warming.

DL₅₀ – 20000 mg/kg, rats

? L₅₀ – not obtained

Inhalation hazards:

Non-dangerous product at processing and handling.

Skin contact:

Does not cause irritation with skin contact. At the same time it is recommended to keep precaution measures as outlined in sections 7 and 8 of this document.

Main effects as a result of short time and long-time influence:

There isn't information on the hazards and influence of butadiene-styrene rubber if all safety measures are kept.

Information about influence of some product ingredients on human body:

Butadiene

Lim_{IR} – 3,6 mg/m³

CL₅₀ – 4501 mg/m³ at 7 hours exposure for human being

Embriothropic, gonadothropic, mutagene, sensibilizing effects of butadiene was determined.

Toluene

DL₅₀ – 2600-7500 mg/kg, injection, rats

DL₅₀ – 1126 mg/kg, injection, mouse

CL₅₀ – 53600 mg/m³ at 4 hours exposure for rats

Lim_{IR} – 150 mg/m³, human being

Embriothropic, gonadothropic, mutagene, sensibilizing effects of toluene was determined.

12. ECOLOGICAL INFORMATION

Possible environment relevance:

The rubber properties do not change under the conditions of environmental influence. The product has poor biodegradable characteristics. Ground and water contamination may take place as a result of incorrect rubber waste disposal and air contamination as a result of incorrect waste incineration.

The most influential properties of substance on environment:

Hygienic norms: For rubbers are not determined; for residual monomer – butadiene and solvent

		Butadiene	Toluene
Air in populated areas:	Exposure limits	3 mg/m ³	0,6
	Exposure limits	1	0,6
	Hazards	4	3
Water	Exposure limits	0,05	0,5
	Hazards	4	4

Fish	Exposure limits	-	0,5
	Hazards	-	3
Ground	Exposure limits	-	0,3

13. UTILIZATION AND DISPOSAL CONSIDERATIONS

Safety measures on wastes handling formed during processing, storage, transportation etc.
Rubber waste treatment, suitable for further use must be done in rooms, supplied with suction and exhaust ventilation. Specific safety measures are not required.