

Material Safety Data Sheet
Synthetic rubber SBR 2545-M27
(DSSK-2545, DSSK-2545-M27)

Astlett Rubber
Natural and Synthetic Rubber, Since 1885
Inc.

JSC «Voronezhsynthetikauchuk» 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: styrene-butadiene synthetic rubber DSSK-2545, DSSK-2545-M27

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	% weight	Exposure limits mg/ m ³	Hazards
Styrene		30/10	3
Cyclohexane		80	4
Solvent		300/100	4
Oil		5	

3. HAZARDS IDENTIFICATION

Main hazards and effects:

Rubbers DSSK-2545, DSSK-2545-M27 are non-dangerous products, 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 DSSK-2545, DSSK-2545-M27 may release the vapor of residual monomer – styrene 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 water for rubber bale's cooling.

Special protective equipment for firefighters

Use fireproof clothing. Wear heat resistant clothing and 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 400°C

Temperature of ignition 315°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
Styrene	30/10 mg/m ³	3
Cyclohexane	80 mg/m ³	4
Solvent	300/100 mg/m ³	4
Oil	5 mg/m ³	3

PERSONAL PROTECTION

Hand protection/protective gloves

Resistant protective gloves

Industrial hygiene measures

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state at 20°C	Hard, uniform elastic mass
Molecular weight	200000-260000
Odor	Slight odor of organic compounds
Density	930-940 kg/m ³
Self-ignition temperature	400°?
Organic solvent solubility	Soluble at normal conditions only in organic solvents

10. STABILITY AND REACTIVITY

STABILITY

Product is stable in normal conditions

Conditions caused 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, 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 low-toxicity product. Rubber processing is characterized as low-toxic. Rubber toxicity is caused by the possible monomer, solvent and oil's rest in amount significantly lower as exposure limit during rubber processing and warming.

Inhalation hazards

Non-dangerous product at processing and handling.

Skin contact

Do not cause irritation with skin contact. At the same time it is recommended to keep precaution measures, designed in 7, 8.

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

There are no hazards related to the influence of butadiene-styrene rubber if all safety measures are kept.

Information about influence of some product ingredients on human body

Styrene

DL₅₀–5000 mg/kg, injection, rats

DL₅₀–316 mg/kg, injection, mouse

CL₅₀–11800 mg/m³at 4 hours exposure for rats

CL₅₀–9,1 mg/m³at 96 hours exposure for fish

Embriothropic, gonadotropic, mutagene, sensibilizing effects of styrene was determined.

12. ECOLOGICAL INFORMATION

Possible environment relevance

The rubber properties do not change under the influence of environmental conditions. The product is not easily biodegradable. 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 important influence properties of substance on environment:

Hygienic norms	for rubbers are not determined; for residual monomer – butadiene and solvent
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	Styrene	Cyclohexane	
Air in populated areas	exposure limits	0,04 mg/m ³	1,4
	exposure limits	0,002	-
	hazards	2	4
Water	exposure limits	0,02	0,1
	hazards	1	2
Fish	exposure limits	0,1	0,01
	Hazards	3	-
Ground	exposure limits	0,1	-

13. UTILIZATION AND DISPOSAL CONSIDERATIONS

Safety measures on handling wastes 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.

Wastes impracticable for further treatment must be disposed in special areas or incinerated in ovens at controlled conditions.

Packing utilization

Paper sacks are intended for secondary treatment. Polyethylene packing wastes must be disposed in places intended for this purpose.

14. TRANSPORT INFORMATION

Safety measures during product transportation

Transfer in covered transportation facilities in accordance with regulations, used for given transport facility. Labeling, according to GOST 14192-96 with indication of warning: «Keep off moisture», «Keep away from sun light» and danger symbol, according to GOST 19433-88. Code of emergency measures for automobile transportation is not applicable.

Dangerous cargo classification

Cargo with a low hazard's degree

Class: 9

Subclass: 9,1

Code of classification: 9133

Number UN – 1345

Hazard's class – 4,1