KER®

grades: N-18, N-29, N-2960, N-33

Safety Data Sheet
According to Regulation (EC) 1907/2006 (REACH)
Date of compilation (version no.): 2013/05/10 (1)
Revision (revision no.): -(-)

SECTION 1. IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY

1.1. Product identifier
KER® N-18, N-29, N-2960, N-33 - butadiene-acrylonitrile rubber
1.2. Relevant identified uses of the mixture and uses advised against
Identified uses
Synthetic rubber processing (compounding, production of articles, production of technical articles resistant to oil and liquid fuels).
Outdoor and indoor use of rubber articles manufactured from the product by professional users.
Outdoor and indoor use of rubber articles manufactured from the product by consumers.
Uses advised against
None.
1.3. Details of the supplier of the safety data sheet
Synthos Dwory 7 spółka z ograniczoną odpowiedzialnością S.K.A.
ul. Chemikow 1
32-600 Oswiecim
Poland
Tel. + 48 33 844 18 21 ÷ 25
Fax + 48 33 842 42 18
e-mail: reachSD@synthosgroup.com
1.4. Emergency telephone number
+ 48 33 847 22 23 (the number is available 24/7)

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the mixture
2.1.1. Classification of the mixture in accordance with Directive 1999/45/EC

Xi	Irritant
R43	May cause sensitisation by skin contact
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

2.2. Label elements
The product needs not to be labelled in accordance with regulations on labelling of dangerous substances and mixtures as it presents no danger to human health by inhalation, ingestion or contact with the skin or to the aquatic environment in the form in which it is placed on the market (Item 9.3 of Annex VI of Commission Directive 2001/59/EC).
2.3. Other hazards
The product contains no substances that meet the criteria for PBT or vPvB in accordance with Annex XIII

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.
Information on components in accordance with requirements of Annex II to REACH Regulation:
1. mono- and/or di- and/or tri(1-phenylethyl) -m-cresol and p-cresol (CAS No.: not available, EC No.: 700-427-9, Index No.: not applicable, REACH Registration No.: 01-2119486764-23-0000, concentration: 1-2 %, classification in accordance with Directive 67/548/EEC: Xi; R43, classification in accordance with Regulation EC (No.) 1272/2008: Skin Sens. 1, H317).
2. 2,6-di-tert-butyl-p-cresol (CAS No.: 128-37-0, EC No.: 204-881-4, Index No.: N/A, REACH Registration No.: 01-2119555270-46-xxxx, concentration: >=0.25-<2.5 %, classification in accordance with Directive 67/548/EWG: N; R50/53, classification in accordance with Regulation 1272/2008: Aquatic Acute 1; H400; Aquatic Chronic 1; H410).

SECTION 4. FIRST AID MEASURES

The product presents no danger to human health by inhalation, ingestion or contact with the skin in the form in which it is placed on the market.

4.1. Description of first aid measures

4.1.1. Inhalation

In case inhalation of vapours released by/from melted product causes nausea go out to fresh air. Rinse throat with water. Consult a physician in case symptoms persist.

4.1.2. Skin contact

Wash skin with plenty of water and soap. In case allergic reaction of skin has developed, consult a physician.

In case of contact of melted product with skin, immediately cool down the melted plastic and surrounding skin with plenty of water. Do not attempt to remove material which has adhered to skin until it has been cooled down to ambient temperature. In case of thermal burns consult a physician.

4.1.3. Eye contact

Thoroughly rinse eyes with plenty of water for at least 15 minutes while lifting the eyelids. In case of contact of melted product with eyes, immediately cool down the melted plastic and continue rinsing eyes for at least 15 minutes. Check for and remove (if any and if possible) contact lenses (unless they adhered to eyes). Provide medical help.

4.1.4. Ingestion/swallow

Consult a physician

4.2. Most important symptoms and effects, both acute and delayed

The product may cause allergic reaction of skin. Symptoms cover rash, redness, eczema etc. Symptoms may appear several hours or even days after the exposure took place.

4.3. Indication of any immediate medical attention and special treatment needed

None.

SECTION 5. FIREFIGHTING MEASURES

5.1. Extinguishing media

5.1.1. Suitable extinguishing media

Extinguishing powders, carbon dioxide, foam, water spray.

5.1.2. Unsuitable extinguishing media

Water jet.

5.2. Special hazards arising from the mixture

The product decomposes on burning producing toxic, irritating and/ or flammable vapours. At high temperature product decomposes evolving butadiene and its derivatives, nitrogen compounds, carbon monoxide and dioxide.

Extinguishing of the burning rubber is difficult.

5.3. Advice for fire-fighters

Evacuate personnel from the endangered area immediately

Fire-fighters should wear full bunker gear and SCBA approved by relevant authorities.

Extinguished rubber should be soaked thoroughly with water to cool it down and prevent re-ignition.

5.4. Other information

Dispose of fire debris and contaminated extinguishing water in accordance with regulations in force. Collect contaminated extinguishing water separately, do not allow it to reach sewage or effluent systems.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Avoid contact with the product. Follow advice and instructions of emergency responders.

6.1.2. For emergency responders

Avoid contact with the product. Wear work clothing and personal protective equipment.

6.2. Environmental precautions
Cover drains, grates and manholes in order to prevent the product from entering the sewage or effluent systems. Do not allow the product to enter surface and ground waters.
6.3. Methods and material for containment and cleaning up
6.3.1. Methods and material for containment
Not applicable the product is a solid of low mobility.
6.3.2. Methods and material for cleaning up
Collect the product to a labelled container. Use gloves, and/or broom and shovel. Use or dispose of the material in accordance with regulations in force.
6.4. Reference to other sections
Not applicable.

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling
Observe basic regulations on occupational health, safety and hygiene as well as operating instructions at the workplace.
Do not eat and drink when handling the product.
Wear proper working clothing. If necessary, use personal protection equipment.
Avoid direct contact with the product.
Avoid contact with eyes.
Ensure proper ventilation of the workplace.
7.2. Conditions for safe storage, including any incompatibilities
The product should be stored in ventilated rooms at temperature not exceeding 30°C.
Protect against humidity, light and weather conditions.
Keep away from the sources of heat and ignition.
Do not store together with organic solvents.
It is recommended to store the rubber in warehouses of humidity at 65 ± 10 %.
In case of wooden 1.0 t pallets storage of the product in 2 (two) or more layers (stacking) is not recommended.
For conditions to avoid and incompatible materials see Section 10 of this Safety Data Sheet.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters
8.1.1. Occupational exposure limits
None have been established.
8.1.2. DN(M)EL levels
8.1.2.1. DN(M)EL levels – workers
Mono- and/or di- and/or tri(1-phenylethyl) -m-cresol and p-cresol:

Exposure pattern	Route of exposure	Descriptor	DNEL / DMEL	Critical endpoint	Remarks
Acute – systemic effects	Dermal				
	Inhalation				
Acute – local effects	Dermal	DNEL	4.67 µg/cm²	skin sensitisation	
	Inhalation				
Long-term – systemic effects	Dermal				
	Inhalation				
Long-term – local effects	Dermal				
	Inhalation				

8.1.2.2. DN(M)EL levels – general population

Mono- and/or di- and/or tri(1-phenylethyl) -m-cresol and p-cresol:

Exposure pattern	Route of exposure	Descriptor	DNEL / DMEL	Critical endpoint	Remarks
Acute – systemic effects	Dermal				
	Inhalation				
	Oral				
Acute – local effects	Dermal	DNEL	2.33 µg/cm²	skin sensitisation	
	Inhalation				
Long-term – systemic effects	Dermal				
	Inhalation				
	Oral				
Long-term – local effects	Dermal				
	Inhalation				

8.1.3. PNEC levels

Data not available

8.2. Exposure controls

Information on appropriate engineering controls, individual protection measures (such as personal protective equipment) and environmental exposure controls which are deemed adequate for the indicated identified uses are given in exposure scenarios included in the Appendix to this Safety Data Sheet.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

a) Appearance	solid (bales) of pale creamy to yellow colour
b) Odour	characteristic
c) Odour threshold	data not available
d) pH	not applicable
e) Melting point/freezing point	data not available
f) Initial boiling point and boiling range	not applicable – decomposes
g) Flash point	data not available
h) Evaporation rate	not applicable
i) Flammability (solid, gas)	Combustible.
j) Upper/lower flammability or explosive limits	not applicable
k) Vapour pressure	not applicable
l) Vapour density	not applicable
m) Relative density	ca. 1 g/cm^3
n) Solubility	water - insoluble other solvents - most organic solvents
o) Partition coefficient: n-octanol/water	not applicable
p) Auto-ignition temperature	not applicable
q) Decomposition temperature	ca. 200^{o}C
r) Viscosity	not applicable
s) Explosive properties	not applicable
t) Oxidising properties	not applicable

9.2. Other information

u) Heat of combustion	ca. 45 MJ/kg
v) Polymerization heat	not applicable

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity
See Section 10.3 of this Safety Data Sheet.
10.2. Chemical stability
The product is stable under given herein conditions of use and storage.
10.3. Possibility of hazardous reactions
None.
10.4. Conditions to avoid
High temperature, direct sunlight.
10.5. Incompatible materials
Organic solvents, strong oxidizers.
10.6. Hazardous decomposition products
Thermal decomposition of the product starts at ca. 200°C and is accompanied by formation and subsequent release of butadiene and its derivatives, nitrogen compounds, carbon monoxide and dioxide

SECTION 11. TOXICOLOGICAL INFORMATION

No data on toxicological properties of the product as such is available. Hazards which the product creates to the human health and life have been assessed in accordance with rules applicable for mixtures (see also Section 2 of this Safety Data Sheet).
In the form in which it is placed on the market the product presents no danger to human health by inhalation, ingestion or contact with the skin.
11.1. Information on toxicological effects
11.1.1. Acute toxicity
Based on available data, the classification criteria are not met. Contained in the product mono- and/or di- and/or tri(1-phenylethyl) -m-cresol and p-cresol is not classified as dangerous with respect to acute toxicity. Contained in the product 2,6-di-tert-butyl-p-cresol is not classified as dangerous with respect to acute toxicity.
11.1.2. Skin corrosion/irritation
Based on available data, the classification criteria are not met. Contained in the product mono- and/or di- and/or tri(1-phenylethyl) -m-cresol and p-cresol is not classified as dangerous with respect to skin corrosion/irritation. Contained in the product 2,6-di-tert-butyl-p-cresol is not classified as dangerous with respect to skin corrosion/irritation.
11.1.3. Serious eye damage/irritation
Based on available data, the classification criteria are not met. Contained in the product mono- and/or di- and/or tri(1-phenylethyl) -m-cresol and p-cresol is not classified as dangerous with respect to serious eye damage/irritation. Contained in the product 2,6-di-tert-butyl-p-cresol is not classified as dangerous with respect to serious eye damage/irritation.
11.1.4. Respiratory or skin sensitisation
Contained in the product mono- and/or di- and/or tri(1-phenylethyl) -m-cresol and p-cresol is classified as skin sensitizer. Contained in the product 2,6-di-tert-butyl-p-cresol is not classified as dangerous with respect to respiratory or skin sensitisation.
Based on available data, the classification criteria for skin sensitisation are met.
11.1.5. Germ cell mutagenicity
Based on the conventional method outlined in Article 6(1)(a) of Directive 1999/45/EC, and relevant information for the substances listed under Section 3 (if any) the product is not classified as mutagenic.
11.1.6. Carcinogenicity
Based on the conventional method outlined in Article 6(1)(a) of Directive 1999/45/EC, and relevant information for the substances listed under Section 3 (if any) the product is not classified as carcinogenic.

11.1.7. Reproductive toxicity
Based on the conventional method outlined in Article 6(1)(a) of Directive 1999/45/EC, and relevant information for the substances listed under Section 3 (if any) the product is not classified as toxic to reproduction.
11.1.8. STOT-single exposure
Based on available data, the classification criteria are not met. Contained in the product mono- and/or di- and/or tri(1-phenylethyl) -m-cresol and p-cresol is not classified as dangerous with respect to STOT after single exposure. Contained in the product 2,6-di-tert-butyl-p-cresol is not classified as dangerous with respect to STOT after single exposure.
11.1.9. STOT-repeated exposure
Based on available data, the classification criteria are not met. Contained in the product mono- and/or di- and/or tri(1-phenylethyl) -m-cresol and p-cresol is not classified as dangerous with respect to STOT after repeated exposure. Contained in the product 2,6-di-tert-butyl-p-cresol is not classified as dangerous with respect to STOT after repeated exposure.
11.1.10. Aspiration hazard
Based on available data, the classification criteria are not met. Contained in the product mono- and/or di- and/or tri(1-phenylethyl) -m-cresol and p-cresol is not classified as dangerous with respect to aspiration hazard. Contained in the product 2,6-di-tert-butyl-p-cresol is not classified as dangerous with respect to aspiration hazard.
11.2. Information on likely routes of exposure
Dermal, inhalation.
11.3. Symptoms related to the physical, chemical and toxicological characteristics
The product may cause allergic reaction of skin. Its symptoms cover rash, redness, eczema etc. Symptoms may appear several hours or even days after the exposure took place.
11.4. Delayed and immediate effects as well as chronic effects from short and long-term exposure
Upon direct contact with skin the product may cause allergic reaction of skin.

SECTION 12. ECOLOGICAL INFORMATION

No data on ecotoxicological properties of the product as such is available. Hazards which the product creates to the environment have been assessed in accordance with rules applicable for mixtures (see also Section 2 of this Safety Data Sheet).
12.1. Toxicity
Based on 2,6-di-tert-butyl-p-cresol content the product is classified as dangerous to the environment with assigned phrase R52/53. Contained in the product 2,6-di-tert-butyl-p-cresol is classified as dangerous to the environment.
Mono- and/or di- and/or tri(1-phenylethyl) -m-cresol and p-cresol contained in the product:

Fish (*Oncorhynchus mykiss)*	LC50	96 h	> 100 mg/l (WAF)
Daphnids (*Daphnia magna*)	EC50	48 h	> 100 mg/l (WAF)
Algae (*Pseudokirchnerella subcapitata)*	EC50	72 h	> 100 mg/l (WAF)

12.2. Persistence and degradability
Results of study conducted in accordance with OECD 301 B indicate that contained in the product mono- and/or di- and/or tri(1-phenylethyl) -m-cresol and p-cresol is a readily biodegradable substance. Contained in the product 2,6-di-tert-butyl-p-cresol is not readily biodegradable substance.
12.3. Bioaccumulative potential
Value of n-octanol/water partition coefficient which has been determined for contained in the product mono- and/or di- and/or tri(1-phenylethyl) -m-cresol and p-cresol indicates that this substance may undergo bioaccumulation.
12.4. Mobility in soil
Data not available
12.5. Results of PBT and vPvB assessment
The product contains no substances which have been identified as PBT/vPvB.
12.6. Other adverse effects
Data not available.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Primary, product wastes should be recovered. Wastes, which could not be recovered should be biologically, chemically or physically transformed or stored on landfill.
Landfilling should be performed only for those wastes, destruction of which is technically impossible or ecologically or economically unjustified.
Recovery or destruction of product wastes has to be performed in accordance with regulations in force, in special assigned facility and/or equipment meeting the appropriate requirements.
Waste code: the product itself: 07 02 13 or 07 02 99.

13.2. Waste packagings

Bales of the product are wrapped with a polyethylene film and placed on flat or box-pallets.
The film is the unit packaging and an integral part of the product.
Returnable packaging may be reused after decontamination.
Disposable packaging has to be disposed of according to existing national, international and/or local disposal regulations.
Example waste code: used containers, rigorously scraped out and containing dried residues of the supplied product:
15 01 02 plastic packaging.
15 01 04 metal packaging.
"Rigorously scraped out" means removing the maximum amount of product from the container by physical or mechanical means (draining or scraping) to leave a residue or contamination that cannot be removed by such means.
These codes have been assigned based on the actual composition of the product both as supplied and as dried residues. If mixed with other wastes, the waste codes quoted may not be applicable.

SECTION 14. TRANSPORT INFORMATION

Transport and packaging of the product are not subject to regulations on transport of hazardous goods (ADR, RID, IATA DGR, IMDG).
Transport the product using covered means of transport.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Not applicable.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

SECTION 15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the mixture

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (including any amendments/adaptations to technical progress).
REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (including any amendments/adaptations to technical progress).

DIRECTIVE 2008/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 November 2008 on waste and repealing certain Directives (including any amendments/adaptations to technical progress).

15.2. Chemical safety assessment

Chemical safety assessment has been carried out for the relevant components of the mixture and Chemical Safety Report has been prepared.

SECTION 16. OTHER INFORMATION

16.1. Revised sections

Not applicable – new version.

16.2. List of relevant R phrases, hazard statements, safety phrases and/or precautionary statements given under Sections 2 to 15 and (if applicable) full text of any statements which are not written out in full under the aforementioned Sections

R43
H317 - May cause an allergic skin reaction
R52/53

R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects