

**Safety data sheet**  
according to OSHA Hazard Communication  
Standard (29 CFR 1910.1200)



Version: 1.0 (US)

Revision date: 01/08/2025

Print date: 01/08/2025

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## SECTION 1: Product and company identification

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### 1.1. Product Identifier

**Trade Name:** SBT-70

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Recommended uses:**

Production of rubber articles.

Industrial use.

**Uses advised against:**

This product must not be used for purposes other than those recommended without first seeking the advice of the supplier.

### 1.3. Details of the supplier of the safety data sheet

**Company and address:**

AVK GUMMI A/S

Mosegaardsvej 1

DK-8670 Laasby

Tel: +45 8695 1311

www.avkgummi.dk

**Contact person and e-mail:**

sds@avkgummi.dk

### 1.4. Emergency telephone number

Poison Control Center

1-800-222-1222

Use your national or local emergency number – See SECTION 4 “First aid measures”.

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## SECTION 2: Hazards identification

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### 2.1. Classification of the substance or mixture

**Classification according to GHS:**

Skin sensitization, category 1

Reproductive toxicity, category 1B

Chronic aquatic toxicity, category 2

H317: May cause an allergic skin reaction.

H360: May damage fertility or the unborn child.

H411: Toxic to aquatic life with long lasting effects.

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**2.2. Label elements**

**Labelling according to GHS:**

|                          |   |   |
|--------------------------|---|---|
| Hazard pictograms        | : |   |
| Signal word              | : | Danger  |
| Hazard statements        | : | H317 May cause an allergic skin reaction.<br>H360 May damage fertility or the unborn child.<br>H411 Toxic to aquatic life with long lasting effects.  |
| Precautionary statements | : | P201 Obtain special instructions before use.<br>P273 Avoid release to the environment.<br>P280 Wear protective gloves/protective clothing/eye protection/face protection.<br>P302 + P352 IF ON SKIN: Wash with plenty of water<br>P308 + P313 IF exposed or concerned: Get medical advice/attention.<br>P362 + P364 Take off contaminated clothing and wash it before reuse.<br>P391 Collect spillage.<br>P405 Store locked up. |

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**SECTION 3: Composition/information on ingredients**

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**3.1. Substances**

Not applicable.

**3.2. Mixtures**

This product is a mixture.

| Substance  | CAS-No.   | GHS-classification  | Content (%) | Note |
|--|-----------|---|-------------|------|
| Carbon black                                     | 1333-86-4 | -   | < 70        | 1    |
| Zinc oxide                                       | 1314-13-2 | Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410  | < 3         | 1    |
| N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine | 793-24-8  | Acute Tox. 4 (oral); H302<br>Skin Sens. 1; H317<br>Repr. 1B, H360<br>Aquatic Acute 1, H400 (M=10)<br>Aquatic Chronic 1, H410 (M=10) | < 1.2       | -    |
| N-cyclohexylbenzothiazole-2-sulfenamide          | 95-33-0   | Skin Sens. 1, H317<br>Aquatic Acute 1, H400 (M=1)<br>Aquatic Chronic 1, H410 (M=10)   | < 1         | -    |

1) The substance has a national exposure limit.

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For full text of H-statements, see SECTION 16.

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## SECTION 4: First-aid measures

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### 4.1. Description of first aid measures

**Inhalation:**

Seek fresh air.  
Seek medical advice if symptoms persist.

**Ingestion:**

Wash out mouth thoroughly and drink 1-2 glasses of water in small sips.  
Do NOT induce vomiting without medical advice.  
Never give anything by mouth to an unconscious person.  
Seek medical advice.

**Skin contact:**

Remove contaminated clothing.  
Wash the skin thoroughly with water.  
If skin irritation or rash occurs: Get medical advice/attention.  
If molten material comes in contact with the skin, cool under running stream of water. DO NOT attempt to remove the material from skin. Removal could result in severe tissue damage. Seek medical attention immediately.

**Eye contact:**

Remove contact lenses, if present and easy to do.  
Flush with water (preferably using eye wash equipment) until irritation subsides.  
Seek medical advice if symptoms persist.

**Additional information:**

When obtaining medical advice, show the safety data sheet or label.

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

Symptoms: May cause an allergic skin reaction. May cause slight irritation to the eyes.

Risk: May damage fertility or the unborn child.

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

Treatment: Treat symptomatically and supportively.

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## SECTION 5: Fire-fighting measures

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### 5.1. Extinguishing media

Suitable extinguishing media: Powder, foam, carbon dioxide or water mist.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: Do not use high volume water jet.

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**5.2. Special hazards arising from the substance or mixture**

Exposure to decomposition products may cause a health hazard.  
Do not allow run-off from firefighting to enter drains or water courses.

**5.3. Advice for firefighters**

If there is a risk of exposure to vapour and flue gases, a self-contained breathing apparatus must be worn.

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**SECTION 6: Accidental release measures**

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**6.1. Personal precautions, protective equipment and emergency procedures**

See SECTION 8 for type of protective equipment.  
Avoid contact with skin, eyes and clothing.  
Ensure adequate ventilation.

**6.2. Environmental precautions**

Avoid release to the environment.  
Notify proper authorities in case of contamination of soil or aquatic environment or discharge to drains.

**6.3. Methods and material for containment and cleaning up**

Collect mechanically and dispose to suitable and properly labelled waste containers.  
See SECTION 13 for instructions on disposal.

**6.4. Reference to other sections**

See SECTION 7 for information on safe handling.  
See SECTION 8 for information on personal protection equipment.  
See SECTION 13 for instructions on disposal.

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**SECTION 7: Handling and storage**

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**7.1. Precautions for safe handling**

See SECTION 8 for information about precautions for use and personal protective equipment.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not eat, drink or smoke when using this product.  
Ensure adequate ventilation.  
Avoid contact with skin, eyes and clothing.  
Wash hands before breaks, before using restroom facilities, and at the end of work.  
Take off contaminated clothing and wash it before reuse.  
Contaminated work clothing should not be allowed out of the workplace.  
Avoid contact during pregnancy/while nursing.

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## 7.2. Conditions for safe storage, including any incompatibilities

The product should be stored safely, out of reach of children and away from food, animal feeding stuffs, medicines, etc.  
Store product in properly labelled and tightly sealed container.  
Keep in cool, dry, and ventilated area.  
Store locked up.

## 7.3. Specific end use(s)

See application SECTION 1.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits (US):

| Substance         | TWA (mg/m <sup>3</sup> ) | STEL (mg/m <sup>3</sup> ) |
|-------------------|--------------------------|---------------------------|
| Carbon black      |                          |                           |
| OSHA              | 3.5                      | -                         |
| NIOSH             | 3.5(1)                   | -                         |
| Zinc oxide (dust) |                          |                           |
| OSHA              | 15                       | -                         |
| NIOSH             | 5                        | 15(2)                     |

(1) in presence of PAHs: limit PAHs to 0.1 mg/m<sup>3</sup> TWA (detected as cyclohexane soluble extract)

(2) Ceiling limit value (15 min)

#### DNEL-values:

|  | Workers                | Consumers              |
|--|------------------------|------------------------|
| DNEL Carbon black                                    |                        |                        |
| Inhalation - Chronic Systemic                        | 2 mg/m <sup>3</sup>    | -                      |
| Inhalation - Chronic Local                           | 2 mg/m <sup>3</sup>    | -                      |
| DNEL N-1,3-dimethylbutyl-N'-phenyl-p-phenylendiamine |                        |                        |
| Inhalation - Chronic Systemic                        | 0.69 mg/m <sup>3</sup> | 0.10 mg/m <sup>3</sup> |
| Inhalation - Acute Systemic                          | 3.45 mg/m <sup>3</sup> | 0.50 mg/m <sup>3</sup> |
| Dermal - Chronic Systemic                            | 0.19 mg/kg bw/day      | 0.07 mg/kg bw/day      |
| Dermal - Acute Systemic                              | 0.95 mg/kg bw/day      | 0.35 mg/kg bw/day      |
| Oral - Chronic Systemic                              | -                      | 0.07 mg/kg bw/day      |
| Oral - Acute Systemic                                | -                      | 0.35 mg/kg bw/day      |
| DNEL N-cyclohexylbenzothiazole-2-sulphenamide        |                        |                        |
| Inhalation - Chronic Systemic                        | 11 mg/m <sup>3</sup>   | 2.8 mg/m <sup>3</sup>  |
| Inhalation - Acute Systemic                          | 11 mg/m <sup>3</sup>   | 2.8 mg/m <sup>3</sup>  |
| Inhalation - Chronic Local                           | 11 mg/m <sup>3</sup>   | 2.8 mg/m <sup>3</sup>  |
| Inhalation - Acute Local                             | 67 mg/kg bw/day        | 33 mg/kg bw/day        |
| Dermal - Chronic Systemic                            | 534 mg/kg bw/day       | 266 mg/kg bw/day       |
| Dermal - Acute Systemic                              | -                      | 0.8 mg/kg bw/day       |
| Oral - Chronic Systemic                              | -                      | 6.4 mg/kg bw/day       |

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Oral - Acute Systemic

**PNEC-values:**

|  |                         |
|--|-------------------------|
| PNEC Carbon black                                  |                         |
| Freshwater   | 5 mg/L                  |
| Marine water                                       | 5 mg/L                  |
| PNEC Zinc oxide                                    |                         |
| Freshwater   | 17.9 µg/L               |
| Marine water                                       | 9 µg/L                  |
| Microorganisms in sewage treatment plants (STP)    | 124.5 µg/L              |
| Freshwater sediments                               | 182.8 mg/kg sediment dw |
| Marine sediments                                   | 201.9 mg/kg sediment dw |
| Soil (agricultural)                                | 103.4 mg/kg soil dw     |
| PNEC N-1,3-dimethylbutyl-N'-phenyl-p-phenyldiamine |                         |
| Freshwater   | 0.37 µg/L               |
| Marine water                                       | 0.037 µg/L              |
| Freshwater sediments                               | 0.11 mg/kg sediment dw  |
| Marine sediments                                   | 0.011 mg/kg sediment dw |
| Soil (agricultural)                                | 1.64 mg/kg soil dw      |
| PNEC N-cyclohexylbenzothiazole-2-sulphenamide      |                         |
| Freshwater   | 0.001 mg/L              |
| Marine water                                       | 0 mg/L                  |
| Microorganisms in sewage treatment plants (STP)    | 100 mg/L                |
| Freshwater sediments                               | 0.183 mg/kg sediment dw |
| Marine sediments                                   | 0.018 mg/kg sediment dw |
| Soil (agricultural)                                | 3.16 mg/kg soil dw      |
| Food chain (predators)                             | 26.4 mg/kg food         |

**8.2. Exposure controls**

There are no exposure scenarios for this product.

**Appropriate engineering controls:**

Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines.

Refer to protective measures listed in SECTION 7.

**Personal protective equipment:**

Hand protection: Protective gloves made of nitrile rubber.

Other skin protection: Protective work clothing.

Eye/face protection: Safety glasses.

Respiratory protection: Ensure adequate ventilation.  
Avoid breathing process fumes.

**Environmental exposure controls:**

Ensure compliance with local regulations for emissions.

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## SECTION 9: Physical and chemical properties

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### 9.1. Information on basic physical and chemical properties

|  |                                     |
|--|-------------------------------------|
| Physical state:  | Solid                               |
| Colour:  | Black                               |
| Odour:   | -                                   |
| Melting point/ Freezing Point (°C):                            | -                                   |
| Boiling point or initial boiling point and boiling range (°C): | -                                   |
| Flammability:  | -                                   |
| Lower and upper explosion limit (vol-%):                       | -                                   |
| Flash point (°C):  | -                                   |
| Auto-ignition temperature (°C):                                | -                                   |
| Decomposition temperature (°C):                                | -                                   |
| pH:  | Not applicable (Insoluble in water) |
| Kinematic viscosity (mm <sup>2</sup> /s):                      | -                                   |
| Solubility:  | Practically insoluble               |
| Partition coefficient n-octanol/water (log value):             | -                                   |
| Vapour pressure:   | -                                   |
| Density and/or relative density:                               | 1.14 ± 0.01 g/mL                    |
| Relative vapour density:                                       | -                                   |
| Particle characteristics:                                      | -                                   |

### 9.2. Other information

None.

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## SECTION 10: Stability and reactivity

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### 10.1. Reactivity

No data.

### 10.2. Chemical stability

The product is stable when used in accordance with the supplier's directions.

### 10.3. Possibility of hazardous reactions

None known.

### 10.4. Conditions to avoid

None known.

### 10.5. Incompatible materials

None known.

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**10.6. Hazardous decomposition products**

No special precautions regarding contact with other materials at the recommended storage conditions.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

This product has not been tested. Judgements on the expected toxicity of this product have been made based upon consideration of its components.

**Acute toxicity:**

Product

Based on available data, the classification criteria are not met.

Components

| <b>Substance</b>                               | <b>Test (species)</b> | <b>Result</b>          | <b>Guideline</b> |
|--|-----------------------|------------------------|------------------|
| Carbon black                                   | Oral                  | >8000 mg/kg            | OECD 401         |
|  | Inhalation            | >4.6 mg/m <sup>3</sup> | OECD 403         |
| Zinc oxide                                     | Oral                  | >2000 mg/kg            | OECD 401         |
|  | Dermal                | >2000 mg/kg            | OECD 402         |
|  | Inhalation            | >5.7 mg/L              | OECD 403         |
| N-1,3-dimethylbutyl-N'-phenyl-p-phenylendiamin | Oral                  | 893 mg/kg              | OECD 401         |
|  | Dermal                | >3000 mg/kg            | Other            |
| N-cyclohexylbenzothiazole-2-sulphenamide       | Oral                  | >5300 mg/kg            | Other            |
|  | Dermal                | >7940 mg/kg            | Other            |

**Skin corrosion/irritation:**

Product

May slightly irritate the skin.

Components

| <b>Substance</b>                        | <b>Assessment:</b>  |
|---|---------------------|
| N-cyclohexylbenzothiazole-2-sulfenamide | Slightly irritating |

**Serious eye damage/irritation:**

Product

May slightly irritate the eyes.

Components

| <b>Substance</b>                                | <b>Assessment:</b>  |
|---|---------------------|
| N-1,3-dimethylbutyl-N'-phenyl-p-phenylendiamine | Slightly irritating |
| N-cyclohexylbenzothiazole-2-sulfenamide         | Slightly irritating |

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**Respiratory or skin sensitisation:**

Product

May cause an allergic skin reaction.

Components

Contains N-1,3-dimethylbutyl-N'-phenyl-p-phenylendiamine and N-cyclohexylbenzothiazole-2-sulfenamide. May produce an allergic reaction.

**Germ cell mutagenicity:**

Based on available data, the classification criteria are not met.

**Carcinogenicity:**

Based on available data, the classification criteria are not met.

**Reproductive toxicity:**

Product

May damage fertility or the unborn child.

Components

**Substance**

N-1,3-dimethylbutyl-N'-phenyl-p-phenylendiamine

**Assessment:**

May damage fertility or the unborn child.

**STOT-single exposure:**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure:**

Based on available data, the classification criteria are not met.

**Aspiration hazard:**

Based on available data, the classification criteria are not met.

**11.2. Information on other hazards**

Test data are not available.

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**SECTION 12: Ecological information**

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**12.1. Toxicity**

Product

Toxic to aquatic life with long lasting effects.

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Components

| Substance  | Test        | Result      |
|--|-------------|-------------|
| Carbon black                                     |             |             |
| Daphnia  | EC50 (24 h) | >5600 mg/L  |
| Algae  | EC50 (72 h) | >10000 mg/L |
| Fish   | LC0 (96 h)  | >1000 mg/L  |
| Zinc oxide                                       |             |             |
| Daphnia  | EC50 (48 h) | >7.5 mg/L   |
| Algae  | EC50 (24 h) | >2.57 mg/L  |
| Fish   | LC50 (96 h) | >1.793 mg/L |
| N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine |             |             |
| Daphnia  | EC50 (48 h) | 0.23 mg/L   |
| Algae  | EC50 (72 h) | 2.6 mg/L    |
| Fish   | LC50 (96 h) | 0.028 mg/L  |
| N-cyclohexylbenzothiazole-2-sulphenamide         |             |             |
| Daphnia  | EC50 (48 h) | >0.79 mg/L  |
| Algae  | EC50 (96 h) | >0.15 mg/L  |
| Fish   | LC50 (96 h) | >5.4 mg/L   |

**12.2. Persistence and degradability**

Product

Test data are not available for the complete mixture.

Components

| Substance  | Biodegradability          | Result     | Guideline  |
|--|---------------------------|------------|------------|
| N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine | Not readily biodegradable | 28 days 2% | OECD 301 C |
| N-cyclohexylbenzothiazole-2-sulfenamide          | Not readily biodegradable | 28 days 0% | Other      |

**12.3. Bioaccumulative potential**

Product

Test data are not available for the complete mixture.

Components

| Substance  | Potential bioaccumulation | LogPow |
|--|---------------------------|--------|
| N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine | Yes                       | 4.68   |
| N-cyclohexylbenzothiazole-2-sulphenamide         | Yes                       | 5      |

**12.4. Mobility in soil**

Test data are not available.

**12.5. Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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**12.6. Endocrine disrupting properties**

Test data are not available.

**12.7. Other adverse effects**

Test data are not available.

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**SECTION 13: Disposal considerations**

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**13.1. Waste treatment methods**

Product:

Dispose of in accordance with Federal, State, and local regulations on waste and hazardous waste.  
Store waste in containers provided for this purpose.  
Do not dump in drains, water sheets or the ground.

Contaminated packaging:

Packaging that cannot be cleaned are to be disposed of in the same manner as the product.  
Empty packaging and residues can be disposed with household waste.

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**SECTION 14: Transport information**

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**14.1. UN number or ID number**

UN 3077

**14.2. UN proper shipping name**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide; N-1,3-dimethylbutyl-N'-phenyl-p-phenyldiamine; N-cyclohexylbenzothiazole-2-sulfenamide)

**14.3. Transport hazard class(es)**

9

**14.4. Packing group**

III

**14.5. Environmental hazards**

Marine pollutant: Yes

**14.6. Special precautions for user**

See SECTION 8 for type of protective equipment.  
Shipping in package sizes of less than 5 kg may lead to a non-regulated classification.

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

Not relevant.

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## SECTION 15: Regulatory information

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

National and local regulations must be observed.  
Follow regulations for pregnant workers.  
Follow regulations for young workers.

### 15.2. Chemical safety assessment

None.

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## SECTION 16: Other information

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According to OSHA Hazard Communication Standard (29 CFR 1910.1200).

### Other information:

#### Full text of H-phrases as mentioned in SECTION 2+3:

H317            May cause an allergic skin reaction.  
H360            May damage fertility or the unborn child.  
H411            Toxic to aquatic life with long lasting effects.

### Classification of mixtures and used evaluation methods according to GHS:

| Classification                             | Evaluation method  |
|--|--------------------|
| Skin sensitization, category 1; H317       | Calculation method |
| Reproductive toxicity, category 1B; H360   | Calculation method |
| Chronic aquatic toxicity, category 2; H411 | Calculation method |

### Abbreviations and acronyms used in the safety data sheet:

ADR: Agreement concerning the International Carriage of Dangerous Goods by Road  
bw: Body weight  
CAS-Number: Chemical Abstracts Service number.  
DNEL: Derived No Effect Level.  
dw: Dry weight  
EC50: The effective concentration of substance that causes 50% of the maximum response.  
GHS: Globally Harmonized System  
IMDG: International Maritime Dangerous Goods  
IMO: International Maritime Organization  
LC0: Lethal Concentration to 0 % of a test population.  
LC50: Lethal Concentration to 50 % of a test population.  
LD50: Lethal Dose to 50% of a test population (Median Lethal Dose).  
NIOSH: National Institute for Occupational Safety and Health  
OSHA: Occupational Safety and Health Administration  
PBT: Persistent, Bioaccumulative and Toxic.  
PNEC(s): Predicted No Effect Concentration(s).  
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals; Regulation (EC) No 1907/2006.

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STEL: Short Term Exposure Limit  
STOT: Specific Target Organ Toxicity.  
TSCA: Toxic Substances Control Act  
TWA: Time-Weighted Average  
vPvB: Very Persistent and Very Bioaccumulative.

**Further information:**

Contact Point: AVK GUMMI A/S

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information applies only to this specific product (mentioned in SECTION 1) and may not be valid if used in combination with other chemicals/products.