SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
Product name: OKS 464

1.2 Relevant identified uses of the substance or mixture and uses advised against
Use of the Substance/Mixture: Grease
Recommended restrictions on use: Restricted to professional users.

1.3 Details of the supplier of the safety data sheet
Company: OKS Spezialschmierstoffe GmbH
Ganghoferstr. 47
D-82216 Maisach-Gernlinden
Tel.: +49 8142 3051 500
Fax.: +49 8142 3051 599

E-mail address of person responsible for the SDS: mcm@oks-germany.com
National contact:

1.4 Emergency telephone number
Emergency telephone number: +49 8142 3051 517

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification (REGULATION (EC) No 1272/2008)
Not a hazardous substance or mixture.

2.2 Label elements
Labelling (REGULATION (EC) No 1272/2008)
Not a hazardous substance or mixture.

Additional Labelling
EUH210 Safety data sheet available on request.

2.3 Other hazards
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.
### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

Chemical nature: Synthetic hydrocarbon oil
   lithium soap
   solid lubricant

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Classification</th>
<th>Concentration limits M-Factor Notes</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amines, C11-14-branched alkyl, mono-hexyl and dihexyl phosphates</td>
<td>80939-62-4</td>
<td>279-632-6</td>
<td>01-2119976322-36-XXXX</td>
<td>Skin Irrit.2; H315 Eye Irrit.2; H319 Aquatic Chronic2; H411</td>
<td>&gt;= 1 - &lt; 2.5</td>
<td></td>
</tr>
<tr>
<td>2,5-bis(tert-dodecyldithio)-1,3,4-thiadiazole</td>
<td>59656-20-1</td>
<td>261-844-5</td>
<td></td>
<td>Aquatic Chronic3; H412</td>
<td>&gt;= 1 - &lt; 2.5</td>
<td></td>
</tr>
</tbody>
</table>

**Substances with a workplace exposure limit:**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>215-609-9</td>
<td>01-2119384822-32-XXXX</td>
<td></td>
</tr>
<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>231-955-3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For explanation of abbreviations see section 16.
SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled: Remove person to fresh air. If signs/symptoms continue, get medical attention.
Keep patient warm and at rest.
If unconscious, place in recovery position and seek medical advice.
Keep respiratory tract clear.
If breathing is irregular or stopped, administer artificial respiration.

In case of skin contact: Take off all contaminated clothing immediately.
Wash off immediately with soap and plenty of water.
Get medical attention immediately if irritation develops and persists.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes.
If eye irritation persists, consult a specialist.

If swallowed: Move the victim to fresh air.
If unconscious, place in recovery position and seek medical advice.
Keep respiratory tract clear.
Do not induce vomiting without medical advice.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: No information available.
Risks: None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media: High volume water jet.
5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting: Fire may cause evolution of:
- Carbon oxides
- Metal oxides
- Nitrogen oxides (NOx)
- Oxides of phosphorus
- Sulphur oxides

5.3 Advice for firefighters

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment. In the case of respirable dust and/or fumes, use self-contained breathing apparatus. Exposure to decomposition products may be a hazard to health.

Further information: Standard procedure for chemical fires.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Evacuate personnel to safe areas. Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust). Avoid breathing dust. Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions

Environmental precautions: Try to prevent the material from entering drains or water courses. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up: Clean up promptly by sweeping or vacuum. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Advice on safe handling:
- Avoid contact with skin and eyes.
- For personal protection see section 8.
- Smoking, eating and drinking should be prohibited in the application area.
- Wash hands and face before breaks and immediately after handling the product.
- Do not get in eyes or mouth or on skin.
- Do not get on skin or clothing.
- Do not ingest.
- Do not repack.
- These safety instructions also apply to empty packaging which may still contain product residues.
- Keep container closed when not in use.

Hygiene measures:
- Wash face, hands and any exposed skin thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities
Requirements for storage areas and containers:
- Store in original container. Keep container closed when not in use. Keep in a dry, cool and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in accordance with the particular national regulations. Keep in properly labelled containers.

7.3 Specific end use(s)
Specific use(s):
- Consult the technical guidelines for the use of this substance/mixture.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>TWA</td>
<td>3.5 mg/m3</td>
<td>GB EH40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>7 mg/m3</td>
<td>GB EH40</td>
</tr>
<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>TWA (inhalable dust)</td>
<td>10 mg/m3</td>
<td>GB EH40</td>
</tr>
</tbody>
</table>

Further information:
For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust. The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m⁻³ 8-hour TWA of inhalable dust or 4 mg.m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and ex-
Exposure to these must comply with the appropriate limit. Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle.

HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3. Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>End Use</th>
<th>Exposure routes</th>
<th>Potential health effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black</td>
<td>Workers</td>
<td>inhalable fraction</td>
<td>Long-term systemic effects</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>2,5-bis(tert-dodecyldithio)-1,3,4-thiadiazole</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>4.408 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>6.25 mg/kg bw/day</td>
</tr>
</tbody>
</table>

### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Environmental Compartment</th>
<th>Value</th>
</tr>
</thead>
</table>
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006 - GB

OKS 464

<table>
<thead>
<tr>
<th></th>
<th>Fresh water</th>
<th>Marine water</th>
<th>Intermittent use/release</th>
<th>Microbiological Activity in Sewage Treatment Systems</th>
<th>Fresh water sediment</th>
<th>Marine sediment</th>
<th>Soil</th>
<th>Oral</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,5-bis(tert-dodecyl(dithio)-1,3,4-thiadiazole</td>
<td>0.041 mg/l</td>
<td>0.0041 mg/l</td>
<td>0.41 mg/l</td>
<td>8000 mg/l</td>
<td>380.62 mg/kg</td>
<td>38.06 mg/kg</td>
<td>308.98 mg/kg</td>
<td>6.67 mg/kg</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Engineering measures
Maintain air concentrations below occupational exposure standards.

Personal protective equipment

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye protection</td>
<td>Tightly fitting safety goggles</td>
</tr>
<tr>
<td>Hand protection</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>Nitrile rubber</td>
</tr>
<tr>
<td>Protective index</td>
<td>Class 1</td>
</tr>
<tr>
<td>Remarks</td>
<td>For prolonged or repeated contact use protective gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case.</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>Not required; except in case of aerosol formation.</td>
</tr>
<tr>
<td>Filter type</td>
<td>Filter type P</td>
</tr>
<tr>
<td>Protective measures</td>
<td>The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.</td>
</tr>
</tbody>
</table>

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>paste</td>
</tr>
<tr>
<td>Colour</td>
<td>black</td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</td>
</tr>
</tbody>
</table>
Odour Threshold : No data available

pH : No data available

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : Not applicable

Evaporation rate : No data available

Flammability (solid, gas) : Combustible Solids

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : ca. < 0.013 hPa (20 °C)

Relative vapour density : No data available

Density : 0.89 g/cm³

(20 °C)

Bulk density : No data available

Solubility(ies)

Water solubility : insoluble

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : No data available

9.2 Other information
SECTION 10: Stability and reactivity

10.1 Reactivity
No hazards to be specially mentioned.

10.2 Chemical stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions
Hazardous reactions: No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid
Conditions to avoid: No conditions to be specially mentioned.

10.5 Incompatible materials
Materials to avoid: No materials to be especially mentioned.

10.6 Hazardous decomposition products
No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:
Acute inhalation toxicity: Remarks: This information is not available.

Components:

Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:
Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity: LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

2,5-bis(tert-dodecylthio)-1,3,4-thiadiazole:
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006 - GB

OKS 464

Version 1.2
Revision Date: 27.03.2018
Date of last issue: 13.06.2016
Print Date: 27.03.2018
Date of first issue: 11.03.2014

Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity: LC50 (Rat): > 2.75 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration. Information given is based on data obtained from similar substances.

Acute dermal toxicity: LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Information given is based on data obtained from similar substances.

Carbon black:
Acute oral toxicity: LD50 (Rat): > 8,000 mg/kg
Method: OECD Test Guideline 401

Graphite:
Acute oral toxicity: LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity

Skin corrosion/irritation

Product:
Remarks: This information is not available.

Components:

Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:
Species: Rabbit
Assessment: Irritating to skin.
Method: OECD Test Guideline 404
Result: Irritating to skin.

2,5-bis(tert-dodecylthio)-1,3,4-thiadiazole:
Species: Rabbit
Assessment: No skin irritation
Method: OECD Test Guideline 404
Result: No skin irritation

**Carbon black:**
Species: Rabbit
Exposure time: 24 h
Assessment: No skin irritation
Method: OECD Test Guideline 404
Result: No skin irritation

**Graphite:**
Species: Rabbit
Assessment: No skin irritation
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: yes

**Serious eye damage/eye irritation**

**Product:**
Remarks: This information is not available.

**Components:**

**Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:**
Species: Rabbit
Assessment: Irritating to eyes.
Method: OECD Test Guideline 405
Result: Irritating to eyes.

**2,5-bis(tert-dodecylthio)-1,3,4-thiadiazole:**
Species: Rabbit
Assessment: No eye irritation
Method: OECD Test Guideline 405
Result: No eye irritation

**Carbon black:**
Species: Rabbit
Exposure time: 24 h
Assessment: No eye irritation
Method: OECD Test Guideline 405
Result: No eye irritation

**Graphite:**
Species: Rabbit
Assessment: No eye irritation
Method: OECD Test Guideline 405
Result: No eye irritation
GLP: yes
Respiratory or skin sensitisation

Product:
Remarks: This information is not available.

Components:

Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:
Species: Guinea pig
Assessment: Did not cause sensitisation on laboratory animals.
Result: Did not cause sensitisation on laboratory animals.

2,5-bis(tert-dodecyldithio)-1,3,4-thiadiazole:
Test Type: Buehler Test
Species: Guinea pig
Assessment: Did not cause sensitisation on laboratory animals.
Method: OECD Test Guideline 406
Result: Did not cause sensitisation on laboratory animals.

Carbon black:
Test Type: Buehler Test
Species: Guinea pig
Assessment: Does not cause skin sensitisation.
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.

Graphite:
Species: Mouse
Assessment: Does not cause skin sensitisation.
Method: OECD Test Guideline 429
Result: Does not cause skin sensitisation.
GLP: yes

Germ cell mutagenicity

Product:
Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

Components:

Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:
Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Species: Rodent cell line
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

2,5-bis(tert-dodecyldithio)-1,3,4-thiadiazole:
Genotoxicity in vitro
Method: OECD Test Guideline 473
Result: negative
Remarks: Information given is based on data obtained from similar substances.

Germ cell mutagenicity- Assessment
Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carbon black:
Genotoxicity in vitro
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo
Species: Rat
Application Route: Inhalation
Result: Positive results were obtained in some in vivo tests.

Germ cell mutagenicity- Assessment
Animal testing did not show any mutagenic effects.

Carcinogenicity
Product:
Remarks: No data available

Components:
2,5-bis(tert-dodecyldithio)-1,3,4-thiadiazole:
Carcinogenicity - Assessment
Not classifiable as a human carcinogen.

Carbon black:
Carcinogenicity - Assessment
Not classifiable as a human carcinogen.
Carcinogenicity classification not possible from current data.

Reproductive toxicity
Product:
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006 - GB

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Version 1.2  Revision Date: 27.03.2018  Date of last issue: 13.06.2016  Print Date: 27.03.2018

Effects on fertility : Remarks: No data available
Effects on foetal development : Remarks: No data available

Components:

Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:
Effects on foetal development : Species: Rat
Application Route: Oral
Method: OECD Test Guideline 422
Result: No effects on fertility and early embryonic development were detected.

Reproductive toxicity - Assessment : No toxicity to reproduction

2,5-bis(tert-dodecyldithio)-1,3,4-thiadiazole:
Effects on fertility : Species: Rat
Application Route: Oral
General Toxicity - Parent: NOAEL: 1,000 mg/kg body weight
General Toxicity F1: NOAEL: 1,000 mg/kg body weight
Method: OECD Test Guideline 421
Remarks: Information given is based on data obtained from similar substances.

Reproductive toxicity - Assessment : No toxicity to reproduction
Animal testing did not show any effects on foetal development.

Carbon black:
Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility.
Animal testing did not show any effects on foetal development.

STOT - single exposure

Components:

Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

2,5-bis(tert-dodecyldithio)-1,3,4-thiadiazole:
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

Carbon black:
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.
exposure.

**Graphite:**
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

**STOT - repeated exposure**

**Components:**

**Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:**
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**2,5-bis(tert-dodecyldithio)-1,3,4-thiadiazole:**
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Carbon black:**
Exposure routes: Inhalation
Target Organs: Lungs
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Graphite:**
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Repeated dose toxicity**

**Product:**
Remarks: This information is not available.

**Components:**

**Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:**
Species: Rat
LOAEL: 10 mg/kg
Application Route: Oral
Method: OECD Test Guideline 422

**2,5-bis(tert-dodecyldithio)-1,3,4-thiadiazole:**
Species: Rat
NOAEL: 250 mg/kg
Application Route: Oral
Method: OECD Test Guideline 421
Remarks: Information given is based on data obtained from similar substances.
Carbon black:
Species: Rat
Application Route: Inhalation
Test atmosphere: dust/mist
Exposure time: 90 d
Target Organs: Lungs

Aspiration toxicity

Product:
This information is not available.

Components:
Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:
No aspiration toxicity classification

Carbon black:
No aspiration toxicity classification

Graphite:
No aspiration toxicity classification

Further information

Product:
Remarks: Information given is based on data on the components and the toxicology of similar products.

Components:
Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:
Remarks: Ingestion causes irritation of upper respiratory system and gastrointestinal disturbance.

Carbon black:
Remarks: Information given is based on data on the components and the toxicology of similar products.
SECTION 12: Ecological information

12.1 Toxicity

**Product:**
- Toxicity to fish: Remarks: No data available
- Toxicity to daphnia and other aquatic invertebrates: Remarks: No data available
- Toxicity to algae: Remarks: No data available
- Toxicity to microorganisms: Remarks: No data available

**Components:**

**Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:**
- Toxicity to fish: LC50 (Oncorhynchus mykiss (rainbow trout)): 5.5 mg/l
  Exposure time: 96 h
  Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 1.2 mg/l
  Exposure time: 48 h
  Method: OECD Test Guideline 202
- Toxicity to algae: EC50 (Selenastrum capricornutum (green algae)): > 10 mg/l
  Exposure time: 72 h
  Method: OECD Test Guideline 201
- Toxicity to microorganisms: EC50 (activated sludge): > 100 mg/l
  Exposure time: 3 h

Ecotoxicology Assessment
- Acute aquatic toxicity: Toxic to aquatic life.
- Chronic aquatic toxicity: Toxic to aquatic life with long lasting effects.

**2,5-bis(tert-dodecylidithio)-1,3,4-thiadiazole:**
- Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): > 1,000 mg/l
  Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 41 mg/l
  Exposure time: 48 h
  Method: OECD Test Guideline 202
- Toxicity to algae: EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
  Exposure time: 72 h
  Test Type: Growth inhibition
Ecotoxicology Assessment

Acute aquatic toxicity: Harmful to aquatic life.

Chronic aquatic toxicity: Harmful to aquatic life with long lasting effects.

Carbon black:
Toxicity to fish: LC50 (Danio rerio (zebra fish)): > 1,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): > 5,600 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae: EC50 (Scenedesmus capricornutum (fresh water algae)): 10,000 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

Toxicity to microorganisms: EC50 (Bacteria): > 800 mg/l
Exposure time: 3 h

Graphite:
Toxicity to fish: LC50 (Danio rerio (zebra fish)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae: EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes

12.2 Persistence and degradability

Product:
Biodegradability: Remarks: No data available

Physico-chemical removability: Remarks: No data available
Components:

Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:
Biodegradability: Result: Not rapidly biodegradable
Biodegradation: 12 %
Method: OECD Test Guideline 301B

2,5-bis(tert-dodecyldithio)-1,3,4-thiadiazole:
Biodegradability:
Test Type: Primary biodegradation
Inoculum: activated sludge
Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301C

Carbon black:
Biodegradability: Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Product:
Bioaccumulation: Remarks: This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).
This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

Components:

Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:
Partition coefficient: n-octanol/water: log Pow: < 2.3 (23 °C)
PpH: 7

2,5-bis(tert-dodecyldithio)-1,3,4-thiadiazole:
Bioaccumulation: Species: Fish
Bioconcentration factor (BCF): 3.16
Partition coefficient: n-octanol/water: log Pow: 8 (20 °C)

12.4 Mobility in soil

Product:
Mobility: Remarks: No data available
Distribution among environmental compartments: Remarks: No data available
12.5 Results of PBT and vPvB assessment

**Product:**
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..

**Components:**

2,5-bis(tert-dodecyldithio)-1,3,4-thiadiazole:

Carbon black:
Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Graphite:

12.6 Other adverse effects

**Product:**
Additional ecological information : No information on ecology is available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

**Product** : The product should not be allowed to enter drains, water courses or the soil.

Waste codes should be assigned by the user based on the application for which the product was used.

**Contaminated packaging** : Empty containers can be landfilled, when in accordance with the local regulations.

SECTION 14: Transport information

14.1 UN number
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006 - GB

OKS 464

1.2 Version: 1.2
Revision Date: 27.03.2018
Date of last issue: 13.06.2016
Date of first issue: 11.03.2014
Print Date: 27.03.2018

ADR : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.2 UN proper shipping name
ADR : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.3 Transport hazard class(es)
ADR : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.4 Packing group
ADR : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA (Cargo) : Not regulated as a dangerous good
IATA (Passenger) : Not regulated as a dangerous good

14.5 Environmental hazards
ADR : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA (Passenger) : Not regulated as a dangerous good
IATA (Cargo) : Not regulated as a dangerous good

14.6 Special precautions for user
No special precautions required.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : This product does not contain substances of very high concern (Regu-
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006 - GB

OKS 464

Version 1.2
Revision Date: 27.03.2018
Date of last issue: 13.06.2016
Print Date: 27.03.2018

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants: Not applicable


Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Remarks: Not applicable

15.2 Chemical safety assessment
This information is not available.

SECTION 16: Other information

Full text of H-Statements
H315 : Causes skin irritation.
H319 : Causes serious eye irritation.
H411 : Toxic to aquatic life with long lasting effects.
H412 : Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical
Further information

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