

# Safety data sheet

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BASF Safety data sheet according to Regulation (EC) No. 1907/2006 as amended from time to time.

Date / Revised: 21.11.2016

Version: 2.0

Product: **RAK 3 + 4**

(ID no. 30059153/SDS\_CPA\_GB/EN)

Date of print 22.11.2016

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

### 1.1. Product identifier

**RAK 3 + 4**

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

Relevant identified uses: crop protection product, insecticide

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

Company:BASF SE  
67056 Ludwigshafen  
GERMANYContact address:BASF plc  
PO Box 4, Earl Road, Cheadle Hulme,  
Cheadle, Cheshire  
SK8 6QG, UNITED KINGDOM

Telephone: +44 161 485-6222

E-mail address: product-safety-north@basf.com

### 1.4. Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

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## SECTION 2: Hazards Identification

### 2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]

Skin Corr./Irrit. 2

Skin Sens. 1

Aquatic Chronic 2

H315, H317, H411, EUH401

For the classifications not written out in full in this section the full text can be found in section 16.

## 2.2. Label elements

Globally Harmonized System (GHS) in accordance with UK regulations.

Pictogram:



Signal Word:

Warning

Hazard Statement:

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary Statement:

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.

Precautionary Statements (Prevention):

P280	Wear protective gloves.
P261	Avoid breathing mist.
P272	Contaminated work clothing should not be allowed out of the workplace.
P264	Wash contaminated body parts thoroughly after handling.
P273	Avoid release to the environment.

Precautionary Statements (Response):

P303 + P352	IF ON SKIN (or hair): Wash with plenty of soap and water.
P333 + P311	If skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

Precautionary Statements (Disposal):

P501	Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.
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According to Regulation (EC) No 1272/2008 [CLP]

Hazard determining component(s) for labelling: Z11-Tetradecenylacetate, E8,E10-Dodecadienol

### 2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

See section 12 - Results of PBT and vPvB assessment.

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

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## SECTION 3: Composition/Information on Ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

#### Chemical nature

crop protection agent in multichamber ampoula, pheromone, Vapor releasing product (VP)

Chamber 1 contains:

approx. 225 mg Z11-Tetradecenylacetate tech.

Chamber 2 contains:

approx. 225 mg E8,E10-Dodeca-8,10-Dienole tech.

#### Hazardous ingredients (GHS)

according to Regulation (EC) No. 1272/2008

Z11-Tetradecenylacetate

Content (W/W): 4 %

CAS Number: 20711-10-8

EC-Number: 243-982-8

Aquatic Acute 1

H400

E8,E10-Dodecadienol

Content (W/W): 4 %

CAS Number: 33956-49-9

EC-Number: 251-761-2

Skin Corr./Irrit. 2

Skin Sens. 1

Aquatic Acute 1

Aquatic Chronic 2

H315, H317, H411, H400

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

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## SECTION 4: First-Aid Measures

### 4.1. Description of first aid measures

Remove contaminated clothing.

Show container, label and/or safety data sheet to physician.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

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

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further important symptoms and effects are so far not known.

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

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

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## SECTION 5: Fire-Fighting Measures

### 5.1. Extinguishing media

Suitable extinguishing media:

water spray, carbon dioxide, dry powder, foam

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

carbon monoxide, Carbon dioxide, nitrogen oxides

The substances/groups of substances mentioned can be released in case of fire.

### 5.3. Advice for fire-fighters

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire.

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## SECTION 6: Accidental Release Measures

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

Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

### 6.2. Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Do not allow contamination of public drains or surface or ground waters. Inform local water plc if spillage enters drains and the Environment Agency (England & Wales), the Scottish Environmental Protection Agency (Scotland), or the Environment and Heritage Service (Northern Ireland) if it enters surface or ground waters. Keep people and animals away.

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

For small amounts: Sweep/shovel up.

For large amounts: Sweep/shovel up.

Dispenser/ampoules should be collected. Contain and collect mechanically and dispose of in accordance with local regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

### 6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

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## SECTION 7: Handling and Storage

### 7.1. Precautions for safe handling

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:

Keep away from sources of ignition - No smoking. The product is combustible.

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

Segregate from foods and animal feeds. Odour-releasing: Segregate from products sensitive to odours.

Further information on storage conditions: Keep in a cool place. Keep at temperature not exceeding 5 °C.

Storage stability:

Avoid prolonged storage.

Storage stability is based upon ambient temperatures and conditions described.

Protect from temperatures above: 5 °C

Diffusion if stored for extended periods above the indicated temperature.

### 7.3. Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

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## SECTION 8: Exposure Controls/Personal Protection

### 8.1. Control parameters

#### Components with occupational exposure limits

No occupational exposure limits known.

Refer to the current edition of HSE Guidance Note EH40 Occupational Exposure Limits (United Kingdom). For normal use and handling refer to the product label/leaflet.

### 8.2. Exposure controls

#### Personal protective equipment

Respiratory protection:

Respiratory protection not required.

Hand protection:

Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) etc.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

#### General safety and hygiene measures

The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

#### Environmental exposure controls

For information regarding environmental exposure controls, see Section 6.

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## SECTION 9: Physical and Chemical Properties

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

Form: liquid

Colour:	brown
Odour:	strong specific odour
Odour threshold:	Not determined due to potential health hazard by inhalation.
pH value:	approx. 5 - 7 (approx. 20 °C) not soluble
Melting point:	approx. 0 °C The data given are those of the active ingredient.
Boiling point:	approx. 117 °C The data given are those of the active ingredient.
Flash point:	approx. 138 °C
Evaporation rate:	not applicable
Flammability:	not highly flammable
Lower explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Upper explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Ignition temperature:	approx. 235 °C
Vapour pressure:	approx. 0.019 hPa (20 °C) The product has not been tested. The statement has been derived from the properties of the individual components.
Density:	approx. 0.88 g/cm <sup>3</sup> (20 °C) data refers to the ingredients of compartment 2
Relative vapour density (air):	not applicable
Solubility in water:	of low solubility, Information based on the main components.
Partitioning coefficient n-octanol/water (log Kow):	not applicable
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.

Viscosity, dynamic:

not determined

Explosion hazard: not explosive

Fire promoting properties: Based on its structural properties  
the product is not classified as  
oxidizing.

## 9.2. Other information

Other Information:

The product consists of a a pheromone blend filled into a dispenser. Stated information applies for the dispenser content if not differently indicated.

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## SECTION 10: Stability and Reactivity

### 10.1. Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

### 10.2. Chemical stability

The product is stable if stored and handled as prescribed/indicated.

### 10.3. Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.

### 10.4. Conditions to avoid

See MSDS section 7 - Handling and storage.

### 10.5. Incompatible materials

Substances to avoid:

strong bases, strong acids, strong oxidizing agents

### 10.6. Hazardous decomposition products

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

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## SECTION 11: Toxicological Information

### 11.1. Information on toxicological effects

#### Acute toxicity

Assessment of acute toxicity:

The product has not been tested. The statement has been derived from the properties of the individual components. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation. Virtually nontoxic after a single ingestion.



*Information on: E8,E10-Dodecadienol**Experimental/calculated data:**LD50 rat (oral): > 5,000 mg/kg**Information on: Z11-Tetradecenylacetate**Experimental/calculated data:**LD50 rat (oral): > 5,000 mg/kg*  
-----*Information on: E8,E10-Dodecadienol**Experimental/calculated data:**LC50 rat (by inhalation): > 5.26 mg/l 4 h**No mortality was observed. Tested as dust aerosol.**Information on: Z11-Tetradecenylacetate**Experimental/calculated data:**LC50 rat (by inhalation): > 5.3 mg/l 4 h*  
-----*Information on: E8,E10-Dodecadienol**Experimental/calculated data:**LD50 rat (dermal): > 2,000 mg/kg**No mortality was observed.**Information on: Z11-Tetradecenylacetate**Experimental/calculated data:**LD50 rat (dermal): > 5,000 mg/kg*  
-----**Irritation**

## Assessment of irritating effects:

The product has not been tested. The statement has been derived from the properties of the individual components. Skin contact causes irritation. Not irritating to the eyes.

*Information on: E8,E10-Dodecadienol**Experimental/calculated data:**Skin corrosion/irritation rabbit: Irritant.**Information on: Z11-Tetradecenylacetate**Experimental/calculated data:**Skin corrosion/irritation rabbit: Slightly irritating.*  
-----*Information on: E8,E10-Dodecadienol**Experimental/calculated data:**Serious eye damage/irritation rabbit: moderately irritating*

*Information on: Z11-Tetradecenylacetate*

*Experimental/calculated data:*

*Serious eye damage/irritation rabbit: non-irritant*

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#### Respiratory/Skin sensitization

Assessment of sensitization:

The product has not been tested. The statement has been derived from the properties of the individual components. Sensitization after skin contact possible.

*Information on: E8,E10-Dodecadienol*

*Experimental/calculated data:*

*Guinea pig maximization test guinea pig: Caused skin sensitization in animal studies.*

*Information on: Z11-Tetradecenylacetate*

*Experimental/calculated data:*

*Guinea pig maximization test guinea pig: Skin sensitizing effects were not observed in animal studies.*

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#### Germ cell mutagenicity

Assessment of mutagenicity:

No data required for Straight Chained Lepidopteran Pheromones (SCLP) following the recommendation of OECD [OECD Series on Pesticides, No. 12 - Guidance for Registration Requirements for Pheromones and Other Semiochemicals Used for Arthropod Pest Control, 26-Feb-2002 (ENV/JM/MONO (2001)12)]

#### Carcinogenicity

Assessment of carcinogenicity:

No data required for Straight Chained Lepidopteran Pheromones (SCLP) following the recommendation of OECD [OECD Series on Pesticides, No. 12 - Guidance for Registration Requirements for Pheromones and Other Semiochemicals Used for Arthropod Pest Control, 26-Feb-2002 (ENV/JM/MONO (2001)12)]

#### Reproductive toxicity

Assessment of reproduction toxicity:

No data required for Straight Chained Lepidopteran Pheromones (SCLP) following the recommendation of OECD [OECD Series on Pesticides, No. 12 - Guidance for Registration Requirements for Pheromones and Other Semiochemicals Used for Arthropod Pest Control, 26-Feb-2002 (ENV/JM/MONO (2001)12)]

#### Developmental toxicity

Assessment of teratogenicity:

No data required for Straight Chained Lepidopteran Pheromones (SCLP) following the recommendation of OECD [OECD Series on Pesticides, No. 12 - Guidance for Registration

Requirements for Pheromones and Other Semiochemicals Used for Arthropod Pest Control, 26-Feb-2002 (ENV/JM/MONO (2001)12)]

Specific target organ toxicity (single exposure)

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Remarks: The product has not been tested. The statement has been derived from the properties of the individual components.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

No data required for Straight Chained Lepidopteran Pheromones (SCLP) following the recommendation of OECD [OECD Series on Pesticides, No. 12 - Guidance for Registration Requirements for Pheromones and Other Semiochemicals Used for Arthropod Pest Control, 26-Feb-2002 (ENV/JM/MONO (2001)12)]

Aspiration hazard

The product has not been tested. The statement has been derived from the properties of the individual components.

No aspiration hazard expected.

Other relevant toxicity information

Misuse can be harmful to health.

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## SECTION 12: Ecological Information

### 12.1. Toxicity

Assessment of aquatic toxicity:

Harmful to aquatic life with long lasting effects.

The product has not been tested. The statement has been derived from the properties of the individual components.

*Information on: E8,E10-Dodecadienol*

*Toxicity to fish:*

*LC50 (96 h) > 120 mg/l, Oncorhynchus mykiss*

**|** *LC50 (96 h) > 0.685 - < 1.22 mg/l, Brachydanio rerio*

*Information on: Z11-Tetradecenylacetate*

*Toxicity to fish:*

*LC50 (96 h) > 10 mg/l, Cyprinus carpio*

*Information on: 2,6-di-tert-Butyl-p-cresol*

*Toxicity to fish:*

*LC0 (96 h) >= 0.57 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 84/449/EEC, C.1, semistatic)*

*The statement of the toxic effect relates to the analytically determined concentration. Limit concentration test only (LIMIT test).*

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*Information on: E8,E10-Dodecadienol*

*Aquatic invertebrates:*

**|** *EC50 (48 h) 0.7 mg/l, Daphnia magna*

*Information on: Z11-Tetradecenylacetate*

*Aquatic invertebrates:*

*LC50 (48 h) > 10 mg/l, Daphnia magna*

*Information on: 2,6-di-tert-Butyl-p-cresol*

*Aquatic invertebrates:*

*EC0 (48 h) 0.48 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)*

*The statement of the toxic effect relates to the analytically determined concentration.*

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*Information on: E8,E10-Dodecadienol*

*Aquatic plants:*

**|** *EC50 (72 h) 0.148 mg/l, Selenastrum capricornutum*

**|** *No observed effect concentration 0.056 mg/l, Selenastrum capricornutum*

*Information on: Z11-Tetradecenylacetate*

*Aquatic plants:*

*EC50 (72 h) 0.36 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201)*

*Information on: 2,6-di-tert-Butyl-p-cresol*

*Aquatic plants:*

*EC50 (72 h) > 0.40 mg/l (growth rate), Scenedesmus subspicatus (Guideline 92/69/EEC, C.3, static)*

*The statement of the toxic effect relates to the analytically determined concentration.*

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## **12.2. Persistence and degradability**

Assessment biodegradation and elimination (H2O):

Can be eliminated mechanically.

## **12.3. Bioaccumulative potential**

Assessment bioaccumulation potential:

No data required for Straight Chained Lepidopteran Pheromones (SCLP) following the recommendation of OECD [OECD Series on Pesticides, No. 12 - Guidance for Registration Requirements for Pheromones and Other Semiochemicals Used for Arthropod Pest Control, 26-Feb-2002 (ENV/JM/MONO (2001)12)]

## **12.4. Mobility in soil**

Assessment transport between environmental compartments:

Volatility: No data available.

### 12.5. Results of PBT and vPvB assessment

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

### 12.6. Other adverse effects

The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

### 12.7. Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

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## SECTION 13: Disposal Considerations

### 13.1. Waste treatment methods

Must be disposed of or incinerated in accordance with local regulations.

The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom).

This product and any uncleaned containers must be disposed of as hazardous waste in accordance with the 2005 Hazardous Waste Regulations and amendments (United Kingdom)

Contaminated packaging:

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

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## SECTION 14: Transport Information

### Land transport

ADR

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable

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Special precautions for user      None known

**RID**

UN number:                      Not classified as a dangerous good under transport regulations  
UN proper shipping name:      Not applicable  
Transport hazard class(es):    Not applicable  
Packing group:                  Not applicable  
Environmental hazards:        Not applicable  
Special precautions for user    None known

**Inland waterway transport****ADN**

UN number:                      Not classified as a dangerous good under transport regulations  
UN proper shipping name:      Not applicable  
Transport hazard class(es):    Not applicable  
Packing group:                  Not applicable  
Environmental hazards:        Not applicable  
Special precautions for user:    None known

**Transport in inland waterway vessel**

Not evaluated

**Sea transport****IMDG**

UN number:                      Not classified as a dangerous good under transport regulations  
UN proper shipping name:      Not applicable  
Transport hazard class(es):    Not applicable  
Packing group:                  Not applicable  
Environmental hazards:        Not applicable  
Special precautions for user    None known

**Air transport****IATA/ICAO**

Not classified as a dangerous good under transport regulations

UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

**14.1. UN number**

See corresponding entries for "UN number" for the respective regulations in the tables above.

**14.2. UN proper shipping name**

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

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

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

**14.4. Packing group**

See corresponding entries for "Packing group" for the respective regulations in the tables above.

**14.5. Environmental hazards**

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

**14.6. Special precautions for user**

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

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

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

**SECTION 15: Regulatory Information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

This product is classified under the European CLP Regulation. (United Kingdom)

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 as amended from time to time.

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The data should be considered when making any assessment under the Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, for example, 'COSHH Essentials' (United Kingdom).

This product may be subject to the Control of Major Accident Hazards Regulations (COMAH), and amendments if specific threshold tonnages are exceeded (United Kingdom).

## 15.2. Chemical Safety Assessment

Advice on product handling can be found in sections 7 and 8 of this safety data sheet.

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## SECTION 16: Other Information

For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

Full text of the classifications, including the hazard classes and the hazard statements, if mentioned in section 2 or 3:

Skin Corr./Irrit.	Skin corrosion/irritation
Skin Sens.	Skin sensitization
Aquatic Chronic	Hazardous to the aquatic environment - chronic
Aquatic Acute	Hazardous to the aquatic environment - acute
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.
H400	Very toxic to aquatic life.

If you have any queries relating to this MSDS, its contents or any other product safety related questions, please write to the following e-mail address: [product-safety-north@basf.com](mailto:product-safety-north@basf.com)

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

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Vertical lines in the left hand margin indicate an amendment from the previous version.