

# EU SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 and Regulation (EU) No 453/2010 (REACH)

Date of print: 02.12.2011

Revision date: 06.05.2011

Date of first version: 08.12.2010

## Orange terpenes (Citrus sinensis)

Material number OE001

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

#### 1.1 Product identifier

Trade name: **Orange Peel Oil**  
REACH registration No.: 01-2119493353-35-0003

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

Identified uses      Industrial use  
Blending of mixtures and distribution, Compounding of fragrance oils, Formulation of detergents/maintenance Products, Formulation of cosmetics, of powder coatings and Inks - solids, Formulation of liquid coatings and Ink, Formulation of solvents and solvent based products, Formulation of solvent borne adhesive, Formulation of construction chemical, use of fragranced products, Spray coating including indoor point sources, use of solvents in oil field drilling and production operations, use of formulated lubricants, use of the substance within laboratory settings, including pilot plants, use in Paper, Board and related products, woodworking, leather, textile, transportation, building construction, adhesives, Professional uses, Professional use in a mixture

Consumer Use  
Use of fragrances, cosmetics, detergents, maintenance products and laboratory agents, use of coatings/inks, lubricants and construction chemicals, use after inclusion into a matrix

Uses advised against      None known

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

Company name: Kreidezeit Naturfarben GmbH  
Street/POB-No.: Kassemuehle 3  
State/city/postal code: D-31196 Sehlem  
WWW: www.kreidezeit.de  
E-mail: info@kreidezeit.de  
Telephone: +49 (0)5060 - 60 80 650  
Telefax: +49 (0)5060 - 60 80 680  
Dept. responsible for information:  
Telephone: +49 (0)5060 - 60 80 650, E-mail info@kreidezeit.de

#### 1.4 Emergency telephone number

**GIZ-Nord, Germany, Telephone: +49 (0)551-19240**

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to EC regulation 1272/2008 (CLP):

Asp. Tox. 1; H304      May be fatal if swallowed and enters airways.  
Aquatic Acute 1; H400      Very toxic to aquatic life.  
Aquatic Chronic 1; H410      Very toxic to aquatic life with long lasting effects.  
Flam. Liq. 3; H226      Flammable liquid and vapour.  
Skin Irrit. 2; H315      Causes skin irritation.  
Skin Sens. 1; H317      May cause an allergic skin reaction.

##### Classification according to directive 67/548/EEC:

R10      Flammable.  
Xn; R65      Harmful: may cause lung damage if swallowed.  
Xi; R38      Irritating to skin.  
Sens.; R43      May cause sensitization by skin contact.  
N; R50-53      Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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### 2.2 Label elements

#### Labelling (CLP)



Signal word	<b>Danger</b>	
Hazard statements	H226	Flammable liquid and vapour.
	H304	May be fatal if swallowed and enters airways.
	H315	Causes skin irritation.
	H317	May cause an allergic skin reaction.
	H410	Very toxic to aquatic life with long lasting effects.
Safety precautions	P102	Keep out of reach of children.
	P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
	P241	Use explosion-proof electrical/ventilating/lighting equipment.
	P261	Avoid breathing mist/vapours.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P331	Do NOT induce vomiting.
	P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P405	Store locked up.
P501	Dispose of contents/container to hazardous or special waste collection point.	

#### Labelling (67/548/EEC or 1999/45/EC)



Xn

harmful



N

dangerous for the environment

R phrase(s):	R 10	Flammable.
	R 38	Irritating to skin.
	R 43	May cause sensitization by skin contact.
	R 50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
	R 65	Harmful: may cause lung damage if swallowed.
S phrase(s):	S 2	Keep out of the reach of children.
	S 24	Avoid contact with skin.
	S 37	Wear suitable gloves.
	S 46	If swallowed, seek medical advice immediately and show this container or label.
	S 61	Avoid release to the environment. Refer to special instructions / safety data sheet.
	S 62	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
Text for labelling	Contains orange terpenes.	

### 2.3 Other hazards

During processing and use vapors are released.  
For risks which have to be observed thereby, see chapter 7: Handling, chapter 8: Exposure controls / personal protection and chapter 11: Toxicology.

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### SECTION 3: Composition/ information on ingredients

#### 3.1 Substances

Chemical characterization (substance):

Orange, sweet, ext. contains > 90% Limonene

CAS-Number: 8028-48-6

EINECS-Number: 232-433-8

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- General information: Take off immediately all contaminated clothing.  
In case of accident or if you feel unwell, seek medical advice immediately.
- After inhalation: Provide fresh air. Seek medical treatment in case of troubles.  
If victim is at risk of losing consciousness, position and transport on their side.
- In case of skin contact: After contact with skin, wash immediately with soap and plenty of water.  
Do not use any organic solvents.
- After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart.  
In case of troubles or persistent symptoms, consult an ophthalmologist.
- After swallowing: Do NOT induce vomiting. Danger of aspiration!  
Immediately get medical attention.

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

No data available

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

No special measures are required.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media:

Foam, extinguishing powder, carbon dioxide, Water fog.

Extinguishing media which must not be used for safety reasons:

High power water jet

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

In case of fire may be liberated: carbon monoxide and carbon dioxide.

#### 5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear self-contained breathing apparatus.

Additional information: Hazchem-Code: 3Y

Use fine water spray to cool endangered containers.

Heating causes rise in pressure with risk of bursting.

You have to dispose of contaminated extinguishing water according to the regulations of the authorities.

### SECTION 6: Accidental release measures

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

Provide adequate ventilation. Do not breathe vapours.

Suitable protective clothing.

Keep away from unprotected people.

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### 6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains.  
In case of release, notify competent authorities.

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

Soak up with absorbent materials such as sand, siliceous earth, acid- or universal binder. Store in special closed containers and dispose of according to ordinance.

Additional information: Remove all sources of ignition. Avoid open flames.

### 6.4 Reference to other sections

not applicable

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advices on safe handling Wear suitable protective clothing. Avoid contact with skin and eyes.  
Do not breathe vapour. Provide adequate ventilation.

Precautions against fire and explosion:

Vapours form explosive mixtures with air.  
Avoid open flames. Keep away from sources of ignition. - No smoking.  
Take precautionary measures against static discharge.

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

Requirements for storerooms and containers:

Store in well-filled containers, protected from light. Keep container dry.  
Keep container tightly closed in a cool, well-ventilated place.  
Keep only in the original container.

Provide solvent resistant flooring.

Hints on joint storage keep away from strong bases, strong acids and oxidizing agents.

Further details: Store in areas not accessible to outsiders.

Storage class: 3= Flammable liquids

### 7.3 Specific end use(s)

see section 1.2

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Additional information: Contains no substances with occupational exposure limit values.

DNEL  
DNEL Long-term, workers, dermal: 8,89 mg/kg bw/d.  
DNEL Short-term, workers, dermal: 185,8 µg/cm<sup>2</sup>  
DNEL Long-term, workers, inhalative: 31,1 mg/m<sup>3</sup>  
DNEL Long-term, consumers, oral: 4,44 mg/kg bw/d.  
DNEL Long-term, consumers, dermal: 4,44 mg/kg bw/d.  
DNEL Long-term, consumers, inhalative: 7,78 mg/m<sup>3</sup>  
DNEL Short-term, consumers, dermal: 92,9 µg/cm<sup>2</sup>

PNEC  
PNEC water (freshwater): 5,4 mg/L.  
PNEC water (marine water): 0,54 mg/L.  
PNEC water (intermittent release): 5,77 mg/L.  
PNEC sediment (freshwater): 1,3 mg/kg dwt.  
PNEC sediment (marine water): 0,13 mg/kg dwt.  
PNEC soil: 0,261 mg/kg dwt.  
PNEC sewage treatment plant: 2,1 mg/L.  
PNEC oral food: 13,3 mg/kg food.

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### 8.2 Exposure controls

Provide adequate ventilation.  
Do not breathe vapours.

### Occupational exposure controls

Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded. Use filter type A (= against vapours of organic substances) according to EN 141. (identification colour: brown)

Hand protection: Protective gloves according to EN 374.  
Glove material: Nitrile rubber  
Breakthrough time: >480 min.  
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed safety glasses according to EN 166.

General protection and hygiene measures:  
Avoid contact with skin and eyes.  
Keep away from sources of ignition.  
When using do not eat, drink or smoke.  
Wash hands before breaks and after work.  
Wash clothing before further use.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state:	liquid
Colour	clear
Odour:	like oranges
Boiling temperature / boiling range	175 - 178 °C
Flash point / flash point range:	53,4 °C
Autoflammability:	235 °C
Vapour pressure:	at 25 °C: 1,865 hPa
Density:	at 20 °C: 0,847 g/mL
Water solubility:	at 25 °C: 3,4834-1767,3 mg/L
Partition coefficient n-octanol /water:	>80% product >= 4
Viscosity, dynamic:	0,99 mPa*s
Viscosity, kinematic:	1,17 mm <sup>2</sup> /s

### 9.2 Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Flammable.

### 10.2 Chemical stability

No data available

### 10.3 Possibility of hazardous reactions

Vapours form explosive mixtures with air.  
Spontaneous ignition possible through autoxidation of cloths soaked in the product.

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### 10.4 Conditions to avoid

Avoid open flames. Keep away from sources of ignition.  
avoid Excessive heating. Protect from light.

### 10.5 Incompatible materials

keep away from strong bases, strong acids and oxidizing agents.

### 10.6 Hazardous decomposition products

In case of fire may be liberated: Organic crack products and carbon oxides.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute toxicity:

LD50 Rat, oral: > 5000 mg/kg

LD50 Rabbit, dermal: > 5000 mg/kg

After swallowing: Harmful: may cause lung damage if swallowed.

In case of skin contact: Irritant. May cause sensitization by skin contact.

After eye contact: Not an irritant (Rabbit OECD 405)

### General remarks

Repeated dose toxicity (subacute, subchronic, chronic), Mouse, LOAEL: 1000 mg/kg bw/day

Genotoxicity: negative

Developmental toxicity, Rat/Mouse: not teratogenic, NOAEL: 591 mg/kg bw/day

Developmental toxicity, Rabbit: not teratogenic,

NOAELmaternal: 250 mg/kg bw/day

NOAELdevelopmental: 1000 mg/kg bw/day

## SECTION 12: Ecological information

### 12.1 Toxicity

Aquatic toxicity: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Algae toxicity:

ErC50 *Desmodesmus subspicatus*: 150 mg/L /72 h (OECD 201)

Daphnia toxicity:

EC50 *Daphnia magna*: 0,67 mg/L /48 h (OECD 202, Limonene)

Fish toxicity:

LC50 *Pimephales promelas* (fathead minnow): 0,7 mg/L / 96 h (OECD 203)

Water Hazard Class: 1 = slightly hazardous to water (WGK catalog number 3824)

Further details: Do not allow to penetrate into soil, waterbodies or drains.

### 12.2. Persistence and degradability

Further details: Biodegradability: 72 - 83,4 %/28 d (OECD 301 B)  
readily biodegradable

### 12.3 Bioaccumulative potential

Bioconcentration factor (BCF)

Bioconcentration factor (BCF): 32 - 156

### 12.4 Mobility in soil

No data available

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### 12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

### 12.6 Other adverse effects

AOX reference: Product does not contain organically bound halogen (AOX).

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Waste key number 14 06 03\* = Other solvents and solvent mixtures  
\* = Evidence for disposal must be provided.

Recommendation: Incinerate according to applicable local, state and federal regulations.

#### Contaminated packaging

Recommendation: Waste key number:  
150107 Glass packaging  
150104 Metallic packaging  
Dispose of waste according to applicable legislation.  
Handle contaminated packages in the same way as the substance itself.

## SECTION 14: Transport information

### 14.1 UN number

ADR/RID, IMDG, IATA: 2319

### 14.2 UN proper shipping name

ADR/RID, IMDG, IATA: UN 2319, TERPENE HYDROCARBONS, N.O.S.

### 14.3 Transport hazard class(es)

ADR/RID: Class 3, Code: F1  
IMDG: Class 3, Code -  
IATA: Class 3

### 14.4 Packing group

ADR/RID, IMDG, IATA: III

### 14.5 Environmental hazards

Marine Pollutant - IMDG: Yes

### 14.6 Special precautions for user

#### Land transport (ADR/RID)

Warning board: ADR/RID: Kemmler-number 30, UN number 2319  
Hazard label 3  
Limited quantities 5 L  
EQ E1  
Contaminated packaging: Instructions P001 IBC03 LP01 R001  
Special provisions for packing together MP19  
Portable tanks: Instructions T4  
Portable tanks: Special provisions TP1 TP29  
Tank coding LGBF  
Tunnel restriction code: D/E



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### Sea transport (IMDG)

EmS:	F-E, S-D
Special provisions	-
Limited quantities	5 L
EQ	E1
Contaminated packaging: Instructions	P001, LP01
Contaminated packaging: Provisions	-
IBC: Instructions	IBC03
IBC: Provisions	-
Tank instructions: IMO	-
Tank instructions: UN	T4
Tank instructions Provisions	TP1, TP29
Stowage and segregation	Category A.
Properties and observations	Colourless to yellowish liquids. Flashpoint: 32°C to 49°C c.c. Immiscible with water.
Segregation group	none

### Air transport (IATA)

Hazard	Flamm. liquid
EQ	E1
Passenger Ltd.Qty.:	Pack.Instr. Y344 - Max.Qty. 10 L
Passenger:	Pack.Instr. 355 - Max.Qty. 60 L
Cargo:	Pack.Instr. 366 - Max.Qty. 220 L
ERG	3L

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

No data available

## SECTION 15: Regulatory information

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

#### National regulations - Great Britain

Hazchem-Code: 3Y

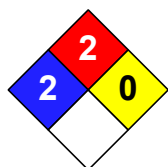
#### National regulations - Germany

Storage class: 3= Flammable liquids

Water Hazard Class: 1 = slightly hazardous to water (WGK catalog number 3824)

#### National regulations - USA

Hazard rating systems



NFPA Hazard Rating:

Health: 2 (Moderate)

Fire: 2 (Moderate)

Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 2 (Moderate)

Flammability: 2 (Moderate)

Physical Hazard: 0 (Minimal)

Personal Protection: X = Consult your supervisor

HEALTH	2
FLAMMABILITY	2
PHYSICAL HAZARD	0
	X

### 15.2 Chemical Safety Assessment

For this substance a chemical safety assessment has been carried out.



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### SECTION 16: Other information

#### Further remarks

Hazard statements	H226 = Flammable liquid and vapour. H304 = May be fatal if swallowed and enters airways. H315 = Causes skin irritation. H317 = May cause an allergic skin reaction. H410 = Very toxic to aquatic life with long lasting effects.
R phrase(s):	R 10 = Flammable. R 38 = Irritating to skin. R 43 = May cause sensitization by skin contact. R 50/53 = Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R 65 = Harmful: may cause lung damage if swallowed.
Reason of change:	Changes in section 9: boiling range General revision

#### Group that issues data sheet

Contact person: see chapter 1, department responsible for information.

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.