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

1.1 Product identifier

Identification / trade name: Art. 2088, ORANCIT
REACH registration number: not notifiable
UFI: N7QH-80DD-N60Y-00XF

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

Use of the substance / mixture:
Cleaning agent

1.3 Details of the supplier of the safety data sheet

Supplier / Manufacturer: HWR-CHEMIE GmbH
Moosfeldstrasse 7
D-82275 Emmering

Telephone: 0049-8141-51030
Telefax: 0049-8141-510355
E-mail: info@hwr-chemie.de

E-mail (competent person): infoSDB@hwr-chemie.de
Information contact: Laboratory

1.4 Emergency phone

Emergency phone Germany: 0049-8141-51030 (only during office hours)
Emergency phone Austria: 0043 1 406 43 43 (poison information centre)

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Regulation (EC) No 1272/2008
Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Irrit. 2, H319; Aquatic Chronic 3, H412

2.2 Label elements

Regulation (EC) No 1272/2008

Hazard pictograms

Signal word: Warning.

Continued on next page

Hazard components for labeling

Orange, sweet, extract, 5-Chlor-2-methyl-4-isothiazolin-3-one, 2-Methyl-2H-isothiazol-3-one

Hazard statements

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P261 Avoid breathing fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
P501 Dispose of contents/container at hazardous or special waste collection point.

2.3 Other hazards

The substances in this mixture do not meet the PBT/vPvB criteria of REACH, annex XIII.
The substances in this mixture do not have any endocrine disrupting properties.

SECTION 3. Composition / information on ingredients

3.1 Substances

This product is a mixture.

3.2 Mixtures

Chemical characterization

Mixture of surfactants, distillate of orange oil, preservatives and colour in water.

Hazardous ingredients

5 - 10 % Alkylethersulfate C12-14 with 1-2.5 EO, sodium salt, EG 500-234-8, CAS 68891-38-3,
Skin Irrit. 2, H315; Eye Dam. 1, H318; Aquatic Chronic 3, H412
Specific concentration limits: 5 - 10 % Eye Irrit. 2

1 - 5 % Alkylpolyglucoside, EG 500-220-1, CAS 68515-73-1, Skin Irrit. 2, H315; Eye Dam. 1, H318
Specific concentration limits: > 10 % Eye Dam. 1

1 - 5 % Orange, sweet, extract, contains > 90 % D-Limonene, EG 232-433-8, CAS 8028-48-6,
Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Skin sens. 1, H317

1 - 5 % Alcohols, C10-16, ethoxylated, propoxylated, CAS 69227-22-1, Acute Tox. 4, H302; Eye Dam. 1, H318
Specific concentration limits: <10 % Eye Irrit. 2

< 0.5 % Perfume mixture, Flam. Liq. 3, H226; Asp. Tox. 1, H304; Skin Irrit. 2, H315; Skin Sens. 1, H317;
Aquatic Chronic 1, H410

<15 ppm Reaction mixture of 5-Chlor-2-methyl-4-isothiazolin-3-on [EG 247-500-7] and
2-Methyl-2H-isothiazol-3-one [EG 220-239-6], Acute Tox. 3, H301; Acute Tox. 2, H310, 330;
Skin Corr. 1B, H314; Eye Dam. 1, H318; Skin Sens. 1A, H317; Aquatic Acute 1, H400 (M=100);
Aquatic Chronic 1, H410 (M=10)

Additional information

Full text of hazard classes and H-phrases: see section 16

Continued on next page

SECTION 4. First aid measures

4.1 Description of first aid measures

General informations: In case of persistent symptoms seek medical advice. Remove contaminated clothing. In case of unconsciousness place patient into stable side position for transportation. Never give fluids or induce vomiting if patient is unconscious or is having convulsions.

In case of inhalation: Provide affected person with fresh air and seek medical advice depending on the symptoms.

In case of skin contact: Contaminated, soaked clothing should be immediately removed. Wash skin thoroughly with soap and water.

In case of eye contact: Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

In case of ingestion: Rinse mouth immediately and then drink plenty of water. Do not induce vomiting. Seek medical advice at once. In case of spontaneous vomiting hold the head of the casualty low with the body in a prone position in order to avoid aspiration.

4.2 Most important symptoms and effects, both acute and delayed

Dizziness, headache. Contact with eyes may cause reddening, running eyes and smarting pain.
Ingestion may result in nausea and stomach pain. Skin contact may cause irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment (decontamination, vital functions), no known specific antidote.

SECTION 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media: Water spray jet / foam / CO2 / dry extinguishing powder

Unsuitable extinguishing media: Full water jet.

5.2 Special hazards arising from the substance or mixture

None suspected.

5.3 Advice for fire-fighters

The product itself is not flammable. Co-ordinate fire-fighting measures to the fire surroundings.
Special protective equipment: Wear full protective suit with self-contained breathing apparatus.
Collect contaminated fire extinguishing water separately. Do not allow entering drains, surface water or soil.

Continued on next page

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes. Wear protective equipment.

6.2 Environmental precautions

Large quantities of spills should be contained by. Do not allow to enter undiluted into surface water or drains.

6.3 Methods and material for containment and cleaning up

Absorb with an absorbent material and dispose of according to local regulations.

6.4 Reference to other sections

Observe protective measures in sections 8 and disposal considerations in section 13.

SECTION 7. Handling and Storage

7.1 Precautions for safe handling

Advices on safe handling

Wear protective clothing. Open carefully and keep container closed when not in use.
Avoid release into the environment.
General hygiene measures:
- Eating, drinking or smoking is prohibited in areas, where work is performed.
- Wash your hands after use.
- Take off contaminated clothing and protective equipment before entering eating areas.

Precautions against fire and explosion

Product does not burn itself.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store in tightly closed original container in a dry and cool place.
Storage compatibility and limitations according to TRGS 510 must be observed.

7.3 Specific end uses

Observe product information sheet.
eCl@ss (8.0): 30-02-16-90 / GISCODE: GU80

Continued on next page

SECTION 8. Exposure controls / Personal protection

8.1 Control parameters

Workplace exposure limits according to TRGS 900

Substances: (R)-p-Mentha-1,8-diene (D-Limonene)
Occupational exposure limit: 5 ppm, 28 mg/m³
Top limiting and exceedance factor: 4 (II)
Notes: H, Sh, Y, DFG

Substances: 2-(2-Ethoxyethoxy)ethanol
Occupational exposure limit: 6 ppm, 35 mg/m³
Top limiting and exceedance factor: 2 (1)
Notes: AGS, Y, 11

8.2 Exposure controls / Personal protection equipment

Appropriate engineering controls

See section 7. No additional measures necessary.

Personal protection equipment

Respiratory protection:	No personal respiratory protective equipment normally required.
Hand protection:	Tested gloves with breakthrough time >= 8 hours made from NR 0.5 mm, CR 0.5 mm, NBR 0.35 mm, Butyl 0.5 mm, FKM 0.4 mm, PVC 0.5 mm
Eye protection:	not applicable
Protective clothing:	not applicable

General health and safety measures

Respect good personal hygiene. Do not drink, eat or smoke while handling.

Environmental exposure controls

See section 6 and 7.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

General information

Physical state:	liquid
Colour:	yellow
Odour:	Orange
pH value (undiluted):	approx. 5.5
pH value (1 %):	approx. 6.5
Melting point/Freezing point (°C):	approx. -2
Boiling temperature (°C):	approx. 100

Continued on next page

Flashpoint (°C):	> 100
Flammability (solid, gas):	not applicable
Lower explosion limit:	not determined
Upper explosion limit:	not determined
Vapour pressure (hPa):	not determined
Relative vapor density:	not determined
Density (20 °C):	approx. 1.01
Solubility:	completely mixable with water
Partition coefficient (KOW):	not determined
Ignition temperature:	not determined
Decomposition temperature:	not determined
Dynamic viscosity (mPas):	< 10
Particle properties:	not applicable

9.2 Other information

Other safety characteristics

No other physical and chemical data has been recorded.

SECTION 10. Stability and Reactivity

10.1 Reactivity

May form insoluble precipitates when mixing with cleaning agents containing cationic surfactants (e.g. disinfectants).

10.2 Chemical stability

Stable under the specified storage conditions.

10.3 Possibility of hazardous reactions

There are expected no hazardous reactions for intended use.

10.4 Conditions to avoid

No hazardous conditions known. Note the information about handling and storage in section 7.

10.5 Incompatible materials

none suspected

10.6 Hazardous decomposition products

No hazardous decomposition products known.

Continued on next page

SECTION 11. Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Alcohols, C10-16, ethoxylated, propoxylated
LD50 oral > 300-2000 mg/kg body weight (rat) (directive 84/449/EWG, B.1)

Acute Toxicity Estimate of the mixture:
ATE mix (oral) > 2000 mg/kg body weight

Skin Corrosion / Irritation

Mixture is classified as irritating to the skin.

Serious Eye Damage / Irritation

Mixture is classified as irritating to the eyes.

Sensitisation

Sensitising by skin contact.

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Mixture does not contain any substances which are classified as carcinogenic, mutagenic or toxic for reproduction.

Specific target organ toxicity (single exposure)

Mixture does not contain any substances with specific target organ toxicity.

Specific target organ toxicity (repeated exposure)

Mixture does not contain any substances with specific target organ toxicity.

Aspiration hazard

The mixture does not meet the criteria for classification.

11.2 Information on other hazards

Endocrine disrupting properties

This mixture does not contain any substances which are identified as endocrine disrupting.

Other information

No further data available.

Continued on next page

SECTION 12. Ecological information

The available data refer to the substances in the mixture. The mixture as a whole has not been tested.

12.1 Toxicity

Alkylethersulfate C12-14 with 1-2.5 EO, sodium salt
Acute toxicity fishes:
LC50 > 10 - 100 mg/L (DIN EN ISO 7346-2)
Long-term toxicity crustacea:
NOEC > 0.1 - 1 mg/L (Literature)

Orange, sweet, extract
Acute toxicity fishes:
LC50 (96 h) = 0.7 mg/L (Pimephales promelas) (OECD 203)
Acute toxicity crustacea:
EC50 (48 h) = 0.67 mg/L (Daphnia Magna) (OECD 202)
Acute toxicity algae:
ErC50 (72 h) = 150 mg/L (Desmodesmus subspicatus) (OECD 201)

12.2 Persistence and degradability

Alkylethersulfate C12-14 with 1-2.5 EO, sodium salt
Readily biodegradable (according to OECD criteria)

Alkylpolyglucoside
Readily biodegradable (according to OECD criteria)

Alcohols, C10-16, ethoxylated, propoxylated
Readily biodegradable (according to OECD criteria)

Orange, sweet, extract
Readily biodegradable (72-83.4%, OECD 301B)

The surfactants contained in this preparation comply with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents.

12.3 Bioaccumulative potential

Alkylethersulfate C12-14 with 1-2.5 EO, sodium salt
No further relevant information available.

Alkylpolyglucoside
Not expected to bioaccumulate.

Alcohols, C10-16, ethoxylated, propoxylated
Not expected to bioaccumulate.

Orange, sweet, extract
No further relevant information available.

Continued on next page

12.4 Mobility in soil

Alkylethersulfate C12-14 with 1-2.5 EO, sodium salt
No further relevant information available.

Alkylpolyglucoside
Absorption to solid soil phase is possible. Substance is not volatile.

Alcohols, C10-16, ethoxylated, propoxylated
Absorption to solid soil phase is possible. Substance is not volatile.

Orange, sweet, extract
No further relevant information available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances which are identified as PBT or vPvB.

12.6 Endocrine disrupting properties

This mixture does not contain any substances which are identified as endocrine disrupting.

12.7 Other adverse effects

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

SECTION 13. Disposal considerations

13.1 Waste treatment methods

Recommendation

Cleaning concentrates should not be disposed of via wastewater. Hazardous waste according to European list of wastes. Dispose of in accordance with local, official regulations.

Waste codes/waste designations according to EWC

20 01 29 (detergents containing hazardous substances)

Packaging

Contaminated package

Hazardous waste according to European list of wastes. Dispose of in accordance with local, official regulations. Waste code 15 01 10 (packaging containing residues of or contaminated by hazardous substances)

Cleaned package

Non contaminated and clean packagings can be used for recycling.

Continued on next page

SECTION 14. Transport information

14.1 UN number or ID number
not applicable

14.2 UN Proper shipping name:

ADR / RID:
No dangerous good in sense of this transport regulation.

IMDG-Code / ICAO-TI / IATA-DGR:
No dangerous good in sense of this transport regulation.

14.3 Transport hazard class(es)

ADR / RID / IMDG-Code / ICAO-TI / IATA-DGR:
not applicable

14.4 Packing group
not applicable

14.5 Enviromental hazards
not applicable

14.6 Special precautions for user
See section 6 and 8.

14.7 Maritime transport in bulk according to IMO instruments
not applicable

SECTION 15. Regulatory information

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

EU regulations
Subject to the Regulation (EC) No. 648/2004 on detergents.

National regulations
Maternity Protection Act (MuSchG): not applicable.
Major Accidents Ordinance (12. BImSchV): not applicable.
Observe employment restrictions for young people (§ 22 JArbSchG).
Water hazard class: WGK 3 (in accordance with German regulation AwSV)

15.2 Chemical Safety Assessment
For this mixture a chemical safety assessment has not been carried out.

Continued on next page

SECTION 16. Other information

Indication of changes

Revised sections: 1, 15

Hazard statements referred to in Section 2 and 3 i.a.w. Regulation (EC) No 1272/2008

Flam. Liq 3, H226 = Flammable liquids, category 3, Flammable liquid and vapour.
Acute Tox. 3, H301 = Acute toxicity, category 3, Toxic if swallowed.
Asp. Tox. 1, H304 = Aspiration hazard, category 1, May be fatal if swallowed and enters airways.
Acute Tox. 1, H310 = Acute toxicity, category 1, Fatal in contact with skin.
Skin Corr. 1A/B/C, H314 = Skin corrosion / irritation, category 1A/B/C, Causes severe skin burns and eye damage.
Skin Irrit. 2, H315 = Skin corrosion / irritation, category 2, Causes skin irritation.
Skin Sens. 1, H317 = Skin sensitisation, category 1, May cause an allergic skin reaction.
Eye Dam. 1, H318 = Eye damage / irritation, category 1, Causes serious eye damage.
Eye Irrit. 2, H319 = Eye damage / irritation, category 2, Causes serious eye irritation.
Acute Tox. 2, H330 = Acute toxicity, category 2, Fatal if inhaled.
Aquatic Acute 1, H400 = Hazardous to the aquatic environment, acute, category 1, Very toxic to aquatic life.
Aquatic Chronic 1, H410 = Hazardous to the aquatic environment, chronic, category 1, Very toxic to aquatic life with long lasting effects.
Aquatic Chronic 2, H411 = Hazardous to the aquatic environment, chronic, category 2, Toxic to aquatic life with long lasting effects.
Aquatic Chronic 3, H412 = Hazardous to the aquatic environment, chronic, category 3, Harmful to aquatic life with long lasting effects.

Key literature references and sources for data

REACH Regulation (EC) No. 1907/2006
CLP Regulation (EC) No. 1272/2008

All data were taken from the safety data sheets of our sub-suppliers, where available. Missing data were taken from the Substance Database GESTIS of the Institute for Occupational Safety and Health of the German statutory accident insurance or from the database of the European Chemicals Agency (ECHA).

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Legend

ABEK	Filter designation
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE mix	Acute Toxicity Estimates for mixtures
AVV	European waste list regulation
AwSV	Ordinance on systems for handling water-polluting substances
Butyl	Butyl rubber
CAS	(Registration number) Chemical Abstracts Service
CLP	Regulation on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenicity, mutagenicity, reproductive toxicity
CR	Chloroprene rubber
EC50	Median effective concentration
EG	(Registration number) European Union
ErC50	Median effective concentration
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act
FKM	Fluorocarbon rubber
GISCODE	Labelling system of the professional associations in the construction industry
IATA-DGR	International Air Transport Association - Dangerous Goods Regulations
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO-TI	Technical Instructions For The Safe Transport of Dangerous Goods by Air
IMDG	International Maritime Dangerous Goods
LC50	Lethal concentration of a substance leading to the death of 50% of the exposed organisms
LD50	Lethal dose of a substance that leads to death of 50% of the organisms exposed to it
MARPOL	International Convention for the Prevention of Pollution from Ships
NBR	Acrylonitrile butadiene rubber
NOEC	No Observed Effect Concentration
NOEL	No Observed Effect Level
NR	Natural rubber
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, bioaccumulating, toxic
PET	Polyethylene terephthalate
PTFE	Polytetrafluoroethylene
PVC	Polyvinyl chloride
REACH	Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Convention concerning International Carriage by Rail
TRGS	Technical Rules for Hazardous Substances
UN	United Nations
US-EPA	United States Environmental Protection Agency
VOC	Volatile Organic Compounds
vPvB	Very persistent, very bioaccumulating
WGK	Water hazard class

Further information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal.