

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 21.07.2014

Revision: 21.07.2014

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

- **1.1 Product identifier**
- **Trade name:** Shur Orange v.4
- **Article number:** 100413
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Basic cleaner
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Theochem Laboratories
7373 Rowlett Park Drive
Tampa, FL 33610
Phone: 813-237-6463
- **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585



SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.



corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.



environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



C; Corrosive

R34: Causes burns.



Xi; Sensitising

R43: May cause sensitisation by skin contact.



N; Dangerous for the environment

(Contd. on page 2)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: Shur Orange v.4

(Contd. of page 1)

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



This pictogram only applicable for EU regulations. Not for use in the United States (OSHA GHS).



GHS05 GHS07 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**

Disodium Metasilicate Pentahydrate

(R)-p-mentha-1,8-diene

· **Hazard statements**

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P280 Wear protective gloves / eye protection.

P264 Wash thoroughly after handling.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Hazard description:**

· **WHMIS-symbols:**

D2B - Toxic material causing other toxic effects

(Contd. on page 3)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: Shur Orange v.4

(Contd. of page 2)

E - Corrosive material



· NFPA ratings (scale 0 - 4)



· HMIS-ratings (scale 0 - 4)

HEALTH	3	Health = 3
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

· HMIS Long Term Health Hazard Substances

None of the ingredients is listed.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.· **Dangerous components:**

CAS: 68131-39-5 NLP: 500-195-7	alcohols, C12-15, ethoxylated ☒ Xi R41; ☒ N R50 ☒ Eye Dam. 1, H318 ☒ Aquatic Acute 1, H400 Aquatic Chronic 3, H412	< 10%
CAS: 111-76-2 EINECS: 203-905-0 Index number: 603-014-00-0	2-butoxyethanol ☒ Xn R20/21/22; ☒ Xi R36/38 ☒ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319	< 10%
CAS: 5989-27-5 EINECS: 227-813-5 Index number: 601-029-00-7	(R)-p-mentha-1,8-diene ☒ Xi R38; ☒ Xi R43; ☒ N R50/53 R10 ☒ Flam. Liq. 3, H226 ☒ Aquatic Acute 1, H400; Aquatic Chronic 1, H410 ☒ Skin Irrit. 2, H315; Skin Sens. 1, H317	< 10%

(Contd. on page 4)

Safety Data Sheet










according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: Shur Orange v.4

(Contd. of page 3)

CAS: 10213-79-3 EINECS: 229-912-9	Disodium Metasilicate Pentahydrate  C R34;  Xi R37  Met. Corr. 1, H290;  Skin Corr. 1B, H314  STOT SE 3, H335	≤ 2,5%
CAS: 68411-57-4 EINECS: 271-863-0	Disodium cocoamphodipropionate  Xi R36  Eye Irrit. 2, H319	≤ 2,5%
CAS: 1310-73-2 EINECS: 215-185-5 Index number: 011-002-00-6	sodium hydroxide  C R35  Skin Corr. 1A, H314	< 1%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

· **General information:** Immediately remove any clothing soiled by the product.

· After inhalation:

Supply fresh air; consult doctor in case of complaints.

Provide oxygen treatment if affected person has difficulty breathing.

· After skin contact:

Immediately rinse with water.

If skin irritation continues, consult a doctor.

Seek immediate medical help for blistering or open wounds.

· After eye contact:

Remove contact lenses if worn, if possible.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed

Strong caustic effect on skin and mucous membranes.

Breathing difficulty

Coughing

Gastric or intestinal disorders.

Allergic reactions

· Hazards

Danger of gastric perforation.

Danger of severe eye injury.

4.3 Indication of any immediate medical attention and special treatment needed

Medical supervision for at least 48 hours.

If necessary oxygen respiration treatment.

Contains (R)-p-mentha-1,8-diene. May produce an allergic reaction.

(Contd. on page 5)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: Shur Orange v.4

(Contd. of page 4)

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** None.
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information**
Cool endangered receptacles with water spray.
Use large quantities of foam as it is partially destroyed by the product.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Particular danger of slipping on leaked/spilled product.
Ensure adequate ventilation
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Send for recovery or disposal in suitable receptacles.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Prevent formation of aerosols.
Use only in well ventilated areas.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Unsuitable material for receptacle: aluminium.
Avoid storage near extreme heat, ignition sources or open flame.

(Contd. on page 6)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: Shur Orange v.4

(Contd. of page 5)

- **Information about storage in one common storage facility:**
Do not store together with acids.
Store away from foodstuffs.
Store away from oxidizing agents.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

Ingredients with limit values that require monitoring at the workplace:

111-76-2 2-butoxyethanol

IOELV (EU)	Short-term value: 246 mg/m ³ , 50 ppm Long-term value: 98 mg/m ³ , 20 ppm Skin
PEL (USA)	Long-term value: 240 mg/m ³ , 50 ppm Skin
REL (USA)	Long-term value: 24 mg/m ³ , 5 ppm Skin
TLV (USA)	Long-term value: 97 mg/m ³ , 20 ppm BEI
EL (Canada)	Long-term value: 20 ppm
EV (Canada)	Long-term value: 20 ppm Skin

1310-73-2 sodium hydroxide

PEL (USA)	Long-term value: 2 mg/m ³
REL (USA)	Ceiling limit: 2 mg/m ³
TLV (USA)	Ceiling limit: 2 mg/m ³
EL (Canada)	Ceiling limit: 2 mg/m ³
EV (Canada)	Ceiling limit: 2 mg/m ³

- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.

Ingredients with biological limit values:

111-76-2 2-butoxyethanol

BEI (USA)	200 mg/g creatinine Medium: urine Time: end of shift Parameter: Butoxyacetic acid with hydrolysis
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- **Additional information:** The lists valid during the making were used as basis.

(Contd. on page 7)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: Shur Orange v.4

(Contd. of page 6)

- **8.2 Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Do not inhale gases / fumes / aerosols.

- **Respiratory protection:**

Use suitable respiratory protective device when aerosol or mist is formed.

Use suitable respiratory protective device in case of insufficient ventilation.

For spills, respiratory protection may be advisable.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **For the permanent contact gloves made of the following materials are suitable:**

Butyl rubber, BR

Neoprene gloves

- **Eye protection:**

Contact lenses should not be worn.



Safety glasses

- **Body protection:** Alkaline resistant protective clothing

- **Limitation and supervision of exposure into the environment**

No further relevant information available.

- **Risk management measures**

See Section 7 for additional information.

No further relevant information available.

(Contd. on page 8)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: Shur Orange v.4

(Contd. of page 7)

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

 Form: Liquid

 Colour: Clear

· Odour: Fruit-like

· Odour threshold: Not determined.

· pH-value at 20 °C: 12,0-13,0

· Change in condition

 Melting point/Melting range: Not Determined.

 Boiling point/Boiling range: 212 °F / 100 °C

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

· Auto/Self-ignition temperature: 464 °F / 240 °C

· Decomposition temperature: Not determined.

· Self-igniting: Product is not self-igniting.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:

 Lower: Not determined.

 Upper: Not determined.

· Vapour pressure at 20 °C: 23 hPa

· Density at 20 °C: 1,02-1,04 g/cm³

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with

 water: Fully miscible.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

 Dynamic: Not determined.

 Kinematic: Not determined.

· 9.2 Other information: No further relevant information available.

(Contd. on page 9)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: Shur Orange v.4

(Contd. of page 8)

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with strong acids and oxidizing agents.
Toxic fumes may be released if heated above the decomposition point.
Reacts with certain metals.
- **10.4 Conditions to avoid** Store away from oxidizing agents.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Danger of forming toxic pyrolysis products.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

5989-27-5 (R)-p-mentha-1,8-diene

Oral LD50 4400 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Corrosive
Irritant
Danger through skin adsorption.
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **Repeated dose toxicity:** Repeated exposures may result in skin and/or respiratory sensitivity.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**
The product contains materials that are harmful to the environment.
Toxic for aquatic organisms
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.

(Contd. on page 10)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: Shur Orange v.4

(Contd. of page 9)

- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**
After neutralization a reduction of the harming action may be recognized
Toxic for water fleas
Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralized.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.
Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
Can be disposed of with household garbage with prior chemical-physical or biological treatment following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

(Contd. on page 11)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: Shur Orange v.4

(Contd. of page 10)

SECTION 14: Transport information

- **14.1 UN-Number**
- **DOT, ADR, IMDG, IATA** UN1760
- **14.2 UN proper shipping name**



Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 5 L (1.3 gal).

- **DOT** Corrosive liquids, n.o.s. (Sodium hydroxide, Dipentene),
MARINE POLLUTANT
- **ADR** 1760 CORROSIVE LIQUID, N.O.S. (SODIUM
HYDROXIDE, DIPENTENE), ENVIRONMENTALLY
HAZARDOUS
- **IMDG, IATA** CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE,
DIPENTENE), MARINE POLLUTANT

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

- **DOT**



- **Class** 8 Corrosive substances.
- **Label** 8

- **ADR**



- **Class** 8 (C9) Corrosive substances.
- **Label** 8

- **IMDG**



- **Class** 8 Corrosive substances.
- **Label** 8

- **IATA**



- **Class** 8 Corrosive substances.
- **Label** 8

(Contd. on page 12)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: Shur Orange v.4

(Contd. of page 11)

· 14.4 Packing group	III
· DOT, ADR, IMDG, IATA	III
· 14.5 Environmental hazards:	
· Marine pollutant:	Yes
	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Corrosive substances.
· Danger code (Kemler):	80
· EMS Number:	F-A,S-B
· Segregation groups	Alkalis
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	

· ADR	
· Transport category	3
· Tunnel restriction code	E

· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
· DOT	
· Remarks:	Product is additionally classified as a MARINE POLLUTANT based on MARPOL and DOT rules. Labeling as a MARINE POLLUTANT is not required for non-bulk single package shipments by motor vehicle, rail car or aircraft. Bulk packaging consists of a maximum capacity of greater than 450L (119 gallons) for a liquid and a maximum net mass greater than 400kg (882 pounds) for a solid.
· UN "Model Regulation":	UN1760, CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE, DIPENTENE), 8, III, MARINE POLLUTANT

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

111-76-2 | 2-butoxyethanol

(Contd. on page 13)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: Shur Orange v.4

(Contd. of page 12)

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

111-76-2 | 2-butoxyethanol

NL

· **IARC (International Agency for Research on Cancer)**

111-76-2 | 2-butoxyethanol

3

5989-27-5 | (R)-p-mentha-1,8-diene

3

· **TLV (Threshold Limit Value established by ACGIH)**

111-76-2 | 2-butoxyethanol

A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **Canada**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

111-76-2 | 2-butoxyethanol

5989-27-5 | (R)-p-mentha-1,8-diene

· **Other regulations, limitations and prohibitive regulations**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

(Contd. on page 14)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: Shur Orange v.4

(Contd. of page 13)

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

- H226 Flammable liquid and vapour.
 - H290 May be corrosive to metals.
 - H302 Harmful if swallowed.
 - H312 Harmful in contact with skin.
 - H314 Causes severe skin burns and eye damage.
 - H315 Causes skin irritation.
 - H317 May cause an allergic skin reaction.
 - H318 Causes serious eye damage.
 - H319 Causes serious eye irritation.
 - H332 Harmful if inhaled.
 - H335 May cause respiratory irritation.
 - H400 Very toxic to aquatic life.
 - H410 Very toxic to aquatic life with long lasting effects.
 - H412 Harmful to aquatic life with long lasting effects.
-
- R10 Flammable.
 - R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
 - R34 Causes burns.
 - R35 Causes severe burns.
 - R36 Irritating to eyes.
 - R36/38 Irritating to eyes and skin.
 - R37 Irritating to respiratory system.
 - R38 Irritating to skin.
 - R41 Risk of serious damage to eyes.
 - R43 May cause sensitisation by skin contact.
 - R50 Very toxic to aquatic organisms.
 - R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 WHMIS: Workplace Hazardous Materials Information System (Canada)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 Flam. Liq. 3: Flammable liquids, Hazard Category 3

(Contd. on page 15)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: Shur Orange v.4

(Contd. of page 14)

Met. Corr. 1: Corrosive to metals, Hazard Category 1
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

Sources

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