



Safety Data Sheet according to (EC) No 1907/2006 as amended

Page 1 of 22

LOCTITE 268 known as LOCTITE 268 19G IT/GR

SDS No. : 453685
V012.0

Revision: 14.07.2022

printing date: 21.11.2022

Replaces version from: 03.09.2021

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

1.1. Product identifier

LOCTITE 268 known as LOCTITE 268 19G IT/GR

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

Intended use:

Threadlocker

1.3. Details of the supplier of the safety data sheet

Henkel Ltd

Adhesives

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000

ua-productsafety.uk@henkel.com

For Safety Data Sheet updates please visit our website <https://mysds.henkel.com/index.html#/appSelection> or www.henkel-adhesives.com.

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

| | |
|---|------------|
| Skin irritation | Category 2 |
| H315 Causes skin irritation. | |
| Serious eye irritation | Category 2 |
| H319 Causes serious eye irritation. | |
| Skin sensitizer | Category 1 |
| H317 May cause an allergic skin reaction. | |
| Specific target organ toxicity - single exposure | Category 3 |
| H335 May cause respiratory irritation. | |
| Target organ: respiratory tract irritation | |
| Chronic hazards to the aquatic environment | Category 3 |
| H412 Harmful to aquatic life with long lasting effects. | |

2.2. Label elements

Label elements (CLP):

Hazard pictogram:**Contains**

3,3,5 Trimethylcyclohexyl methacrylate

Cumene hydroperoxide
Acetic acid, 2-phenylhydrazide**Signal word:**

Warning

Hazard statement:H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.**Precautionary statement:**

"***" ***For consumer use only: P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P501 Dispose of contents/container in accordance with national regulation.***

**Precautionary statement:
Prevention**P273 Avoid release to the environment.
P280 Wear protective gloves.
P261 Avoid breathing vapors.**Precautionary statement:
Response**P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.**2.3. Other hazards**

None if used properly.

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

Following substances are present in a concentration $\geq 0,1\%$ and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):This mixture does not contain any substances in concentration \geq the concentration limit that are assessed to be a PBT, vPvB or ED.**SECTION 3: Composition/information on ingredients****3.2. Mixtures**

Declaration of the ingredients according to CLP (EC) No 1272/2008:

| Hazardous components CAS-No. EC Number REACH-Reg No. | Concentration | Classification | Specific Conc. Limits, M-factors and ATEs | Add. Information |
|--|---|---|--|-------------------------|
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate and 2-{4-[2-(4-{2-[2-(methacryloyloxy)etho | 25- 50 % | Aquatic Chronic 4, H413 | | |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 231-927-0 01-2120748527-45 | 10- 20 % | Aquatic Chronic 2, H411 Skin Sens. 1B, H317 STOT SE 3, H335 Skin Irrit. 2, H315 Eye Irrit. 2, H319 | STOT SE 3; H335; C >= 10 % | |
| N,N'-Ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide) 123-26-2 204-613-6 01-2119978265-26 | 1- < 5 % | Aquatic Chronic 4, H413 | | |
| Reaction products of 4,4'-isopropylidenediphenol, ethoxylated and methacrylic acid 01-2119980659-17 | 1- < 5 % | Aquatic Chronic 4, H413 | | |
| Cumene hydroperoxide 80-15-9 201-254-7 01-2119475796-19 | 1- < 2,5 % | STOT RE 2, H373 Skin Corr. 1B, H314 Acute Tox. 2, Inhalation, H330 Aquatic Chronic 2, H411 Acute Tox. 4, Oral, H302 Acute Tox. 4, Dermal, H312 Org. Perox. E, H242 STOT SE 3, H335 | Skin Irrit. 2; H315; C 3 - < 10 % Eye Dam. 1; H318; C 3 - < 10 % Eye Irrit. 2; H319; C 1 - < 3 % Skin Corr. 1B; H314; C >= 10 % STOT SE 3; H335; C >= 1 % ===== dermal:ATE = 1.100 mg/kg | |
| N,N-Diethyl-p-toluidine 613-48-9 210-345-0 | 0,1- < 1 % | Acute Tox. 3, Oral, H301 Acute Tox. 3, Dermal, H311 Acute Tox. 3, Inhalation, H331 STOT RE 2, H373 Aquatic Chronic 3, H412 | | |
| Acetic acid, 2-phenylhydrazide 114-83-0 204-055-3 | 0,1- < 1 % | Acute Tox. 3, Oral, H301 Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 STOT SE 3, Inhalation, H335 Carc. 2, H351 | | |
| N,N-dimethyl-o-toluidine 609-72-3 210-199-8 | 0,1- < 1 % | STOT RE 2, H373 Acute Tox. 3, Oral, H301 Acute Tox. 3, Dermal, H311 Acute Tox. 3, Inhalation, H331 Aquatic Chronic 3, H412 | | |
| 1,4-Naphthalenedione 130-15-4 204-977-6 | 0,0015- < 0,015 % (15 ppm- < 150 ppm) | Acute Tox. 3, Oral, H301 Skin Corr. 1C, H314 Skin Sens. 1, H317 Eye Dam. 1, H318 Acute Tox. 1, Inhalation, H330 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 | M acute = 10 M chronic = 1 | |

**For full text of the H - statements and other abbreviations see section 16 "Other information".
Substances without classification may have community workplace exposure limits available.**

SECTION 4: First aid measures**4.1. Description of first aid measures****Inhalation:**

Move to fresh air. If symptoms persist, seek medical advice.

Skin contact:

Rinse with running water and soap.

Obtain medical attention if irritation persists.

Eye contact:

Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

Ingestion:

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

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

SKIN: Redness, inflammation.

EYE: Irritation, conjunctivitis.

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

SKIN: Rash, Urticaria.

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

See section: Description of first aid measures

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media:**

water, carbon dioxide, foam, powder

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

5.2. Special hazards arising from the substance or mixture

In the event of a fire, carbon monoxide (CO), carbon dioxide (CO₂) and nitrogen oxides (NO_x) can be released.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Additional information:

In case of fire, keep containers cool with water spray.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Avoid contact with skin and eyes.

Wear protective equipment.

Ensure adequate ventilation.

Keep away from sources of ignition.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

Dispose of contaminated material as waste according to Section 13.

Scrape up as much material as possible.

Sweep up spilled material. Avoid creating dust.

Store in a partly filled, closed container until disposal.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid skin and eye contact.

See advice in section 8

Hygiene measures:

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

Good industrial hygiene practices should be observed.

7.2. Conditions for safe storage, including any incompatibilities

Store in sealed original container.

Refer to Technical Data Sheet

7.3. Specific end use(s)

Threadlocker

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Great Britain

| Ingredient [Regulated substance] | ppm | mg/m ³ | Value type | Short term exposure limit category / Remarks | Regulatory list |
|--|-----|-------------------|------------------------------|--|-----------------|
| Silicon dioxide 112945-52-5 [SILICA, AMORPHOUS, INHALABLE DUST] | | 6 | Time Weighted Average (TWA): | | EH40 WEL |
| Silicon dioxide 112945-52-5 [SILICA, AMORPHOUS, RESPIRABLE DUST] | | 2,4 | Time Weighted Average (TWA): | | EH40 WEL |
| Silicon dioxide 112945-52-5 [Dust, respirable dust] | | 4 | Time Weighted Average (TWA): | | EH40 WEL |
| Silicon dioxide 112945-52-5 [Dust, inhalable dust] | | 10 | Time Weighted Average (TWA): | | EH40 WEL |
| Ethene, homopolymer 9002-88-4 [DUST, INHALABLE DUST] | | 10 | Time Weighted Average (TWA): | | EH40 WEL |
| Ethene, homopolymer 9002-88-4 [DUST, RESPIRABLE DUST] | | 4 | Time Weighted Average (TWA): | | EH40 WEL |

Occupational Exposure Limits

Valid for
Ireland

| Ingredient [Regulated substance] | ppm | mg/m ³ | Value type | Short term exposure limit category / Remarks | Regulatory list |
|--|-----|-------------------|------------------------------|--|-----------------|
| Silicon dioxide 112945-52-5 [SILICA, AMORPHOUS] | | 6 | Time Weighted Average (TWA): | | IR_OEL |
| Silicon dioxide 112945-52-5 [SILICA, AMORPHOUS] | | 2,4 | Time Weighted Average (TWA): | | IR_OEL |
| Silicon dioxide 112945-52-5 [DUSTS NON-SPECIFIC] | | 10 | Time Weighted Average (TWA): | | IR_OEL |
| Silicon dioxide 112945-52-5 [DUSTS NON-SPECIFIC] | | 4 | Time Weighted Average (TWA): | | IR_OEL |
| Ethene, homopolymer 9002-88-4 [DUSTS NON-SPECIFIC] | | 10 | Time Weighted Average (TWA): | | IR_OEL |
| Ethene, homopolymer 9002-88-4 [DUSTS NON-SPECIFIC] | | 4 | Time Weighted Average (TWA): | | IR_OEL |

Predicted No-Effect Concentration (PNEC):

| Name on list | Environmental Compartment | Exposure period | Value | | | | Remarks |
|--|------------------------------|-----------------|--------------|-----|--------------|--------|---------|
| | | | mg/l | ppm | mg/kg | others | |
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediy)l bismethacrylate and 2-[4-[2-(4-[2-[2-(methacryloyloxy)etho | sewage treatment plant (STP) | | 1 mg/l | | | | |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | aqua (freshwater) | | 0,0019 mg/l | | | | |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | aqua (marine water) | | 0,00019 mg/l | | | | |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | aqua (intermittent releases) | | 0,019 mg/l | | | | |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | sewage treatment plant (STP) | | 100 mg/l | | | | |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | sediment (freshwater) | | | | 0,141 mg/kg | | |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | sediment (marine water) | | | | 0,014 mg/kg | | |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | Soil | | | | 0,027 mg/kg | | |
| N,N'-Ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide) 123-26-2 | sewage treatment plant (STP) | | 0,1 mg/l | | | | |
| .alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9 | aqua (freshwater) | | 0,0031 mg/l | | | | |
| .alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9 | aqua (intermittent releases) | | 0,031 mg/l | | | | |
| .alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9 | aqua (marine water) | | 0,00031 mg/l | | | | |
| .alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9 | sewage treatment plant (STP) | | 0,35 mg/l | | | | |
| .alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9 | sediment (freshwater) | | | | 0,023 mg/kg | | |
| .alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9 | sediment (marine water) | | | | 0,0023 mg/kg | | |
| .alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9 | Soil | | | | 0,0029 mg/kg | | |

Derived No-Effect Level (DNEL):

| Name on list | Application Area | Route of Exposure | Health Effect | Exposure Time | Value | Remarks |
|---|--------------------|-------------------|---------------------------------------|---------------|-------------------------|---------|
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | Workers | inhalation | Long term exposure - systemic effects | | 16,45 mg/m ³ | |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | Workers | dermal | Long term exposure - systemic effects | | 46,7 mg/kg | |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | General population | inhalation | Long term exposure - systemic effects | | 2,9 mg/m ³ | |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | General population | dermal | Long term exposure - systemic effects | | 1,67 mg/kg | |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | General population | oral | Long term exposure - systemic effects | | 1,67 mg/kg | |
| .alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9 | Workers | inhalation | Long term exposure - systemic effects | | 6 mg/m ³ | |

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:

Ensure good ventilation/extraction.

Respiratory protection:

Ensure adequate ventilation.

An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area

Dust mask, P2 particle filter.

Hand protection:

Chemical-resistant protective gloves (EN 374).

Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):

nitrile rubber (NBR; >= 0.4 mm thickness)

Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):

nitrile rubber (NBR; >= 0.4 mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.

Protective eye equipment should conform to EN166.

Skin protection:

Wear suitable protective clothing.

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions.

Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|--|
| Physical state | solid |
| Delivery form | Currently under determination |
| Colour | red |
| Odor | characteristic |
| Melting point | Currently under determination |
| Initial boiling point | > 300 °F (> 148.9 °C)None |
| Flammability | Currently under determination |
| Explosive limits | Currently under determination |
| Flash point | solid |
| Auto-ignition temperature | Currently under determination |
| Decomposition temperature | Currently under determination |
| pH | Not applicable, Product reacts with water. |
| Viscosity (kinematic) | Not applicable, Product is a solid. |
| Solubility (qualitative) (Solvent: Water) | Slight |
| Partition coefficient: n-octanol/water | Currently under determination |
| Vapour pressure (80 °F (26.7 °C)) | < 5,0000000 mm hg |
| Density () | 1,1 g/cm3 no methodEstimated |
| Relative vapour density: | Not available. |
| Particle characteristics | Currently under determination |

9.2. Other information

Other information not applicable for this product

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with strong oxidants.
Acids.
Reducing agents.
Strong bases.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

Stable under normal conditions of storage and use.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

carbon oxides.
Hydrocarbons
nitrogen oxides
Rapid polymerisation may generate excessive heat and pressure.

SECTION 11: Toxicological information

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

Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Species | Method |
|--|---------------|----------------|---------|---|
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate and 2-[4-[2-(4-[2-(2-(methacryloyloxy)etho | LD50 | > 35.000 mg/kg | rat | not specified |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | LD0 | > 5.000 mg/kg | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | LD50 | > 5.000 mg/kg | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| N,N'-Ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide) 123-26-2 | LD50 | > 2.000 mg/kg | rat | OECD Guideline 423 (Acute Oral toxicity) |
| Reaction products of 4,4'-isopropylidenediphenol, ethoxylated and methacrylic acid | LD50 | > 2.000 mg/kg | rat | OECD Guideline 423 (Acute Oral toxicity) |
| Cumene hydroperoxide 80-15-9 | LD50 | 382 mg/kg | rat | other guideline: |
| Acetic acid, 2-phenylhydrazide 114-83-0 | LD50 | 270 mg/kg | rat | not specified |
| 1,4-Naphthalenedione 130-15-4 | LD50 | 124 mg/kg | rat | equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity) |

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Species | Method |
|--|-------------------------------|---------------|---------|--|
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate and 2-{4-[2-(4-{2-[2-(methacryloyloxy)etho | LD50 | > 2.000 mg/kg | rat | OECD Guideline 402 (Acute Dermal Toxicity) |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | LD0 | > 2.000 mg/kg | rat | OECD Guideline 402 (Acute Dermal Toxicity) |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | LD50 | > 2.000 mg/kg | rat | OECD Guideline 402 (Acute Dermal Toxicity) |
| Reaction products of 4,4'-isopropylidenediphenol, ethoxylated and methacrylic acid | LD50 | > 2.000 mg/kg | rat | OECD Guideline 402 (Acute Dermal Toxicity) |
| Cumene hydroperoxide 80-15-9 | Acute toxicity estimate (ATE) | 1.100 mg/kg | | Expert judgement |

Acute inhalative toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Test atmosphere | Exposure time | Species | Method |
|----------------------------------|------------|------------|-----------------|---------------|---------|--|
| Cumene hydroperoxide 80-15-9 | LC50 | 1,370 mg/l | vapour | 4 h | rat | not specified |
| 1,4-Naphthalenedione 130-15-4 | LC50 | 0,046 mg/l | dust/mist | 4 h | rat | OECD Guideline 403 (Acute Inhalation Toxicity) |

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result | Exposure time | Species | Method |
|--|-------------------------|---------------|---|--|
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate and 2-{4-[2-(4-{2-[2-(methacryloyloxy)etho | not irritating | 24 h | rabbit | not specified |
| Reaction products of 4,4'-isopropylidenediphenol, ethoxylated and methacrylic acid | not irritating | 15 min | Human, EpiSkin™ (SM), Reconstructed Human Epidermis (RHE) | OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method) |
| Cumene hydroperoxide 80-15-9 | corrosive | | rabbit | Draize Test |
| 1,4-Naphthalenedione 130-15-4 | Category 1C (corrosive) | | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |

Serious eye damage/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result | Exposure time | Species | Method |
|--|----------------|------------------|-------------------------------|---------------------------|
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate and 2-{4-[2-(4-{2-[2-(methacryloyloxy)etho | not irritating | | rabbit | not specified |
| Reaction products of 4,4'-isopropylidenediphenol, ethoxylated and methacrylic acid | not irritating | | Bovine, cornea, in vitro test | OECD Guideline 437 (BCOP) |

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result | Test type | Species | Method |
|--|-----------------|------------------------------------|------------|---|
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate and 2-{4-[2-(4-{2-[2-(methacryloyloxy)etho | not sensitising | Mouse local lymphnode assay (LLNA) | mouse | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | sensitising | Mouse local lymphnode assay (LLNA) | mouse | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| N,N'-Ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide) 123-26-2 | not sensitising | Mouse local lymphnode assay (LLNA) | mouse | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| Reaction products of 4,4'-isopropylidenediphenol, ethoxylated and methacrylic acid | not sensitising | Mouse local lymphnode assay (LLNA) | mouse | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| 1,4-Naphthalenedione 130-15-4 | sensitising | not specified | guinea pig | not specified |

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result | Type of study / Route of administration | Metabolic activation / Exposure time | Species | Method |
|--|---------------|--|---|----------------|---|
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate and 2-{4-[2-(4-{2-[2-(methacryloyloxy)etho | negative | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate and 2-{4-[2-(4-{2-[2-(methacryloyloxy)etho | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate and 2-{4-[2-(4-{2-[2-(methacryloyloxy)etho | negative | in vitro mammalian cell micronucleus test | with and without | | OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test) |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Reaction products of 4,4'-isopropylidenediphenol, ethoxylated and methacrylic acid | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Reaction products of 4,4'-isopropylidenediphenol, ethoxylated and methacrylic acid | negative | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| Reaction products of 4,4'-isopropylidenediphenol, ethoxylated and methacrylic acid | negative | in vitro mammalian cell micronucleus test | with and without | | OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test) |
| Cumene hydroperoxide 80-15-9 | positive | bacterial reverse mutation assay (e.g Ames test) | without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |

Carcinogenicity

No data available.

Reproductive toxicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result / Value | Test type | Route of application | Species | Method |
|--|---|-----------|-------------------------|---------|--|
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate and 2-[4-[2-(4-[2-[2-(methacryloyloxy)etho | NOAEL P 1.000 mg/kg | screening | oral: gavage | rat | OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |
| Reaction products of 4,4'-isopropylidenediphenol, ethoxylated and methacrylic acid | NOAEL P 1.000 mg/kg NOAEL F1 1.000 mg/kg | screening | oral: gavage | rat | OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |

STOT-single exposure:

No data available.

STOT-repeated exposure::

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result / Value | Route of application | Exposure time / Frequency of treatment | Species | Method |
|--|-------------------|-------------------------|--|---------|--|
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate and 2-[4-[2-(4-[2-[2-(methacryloyloxy)etho | NOAEL 1.000 mg/kg | oral: gavage | 13 weeks daily | rat | OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | NOAEL 1.000 mg/kg | oral: gavage | 28 d daily | rat | OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |
| Reaction products of 4,4'-isopropylidenediphenol, ethoxylated and methacrylic acid | NOAEL 1.000 mg/kg | oral: gavage | 13 weeks daily | rat | OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) |
| Cumene hydroperoxide 80-15-9 | | inhalation: aerosol | 6 h/d 5 d/w | rat | not specified |

Aspiration hazard:

No data available.

11.2 Information on other hazards

not applicable

SECTION 12: Ecological information

General ecological information:

Do not empty into drains / surface water / ground water.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Exposure time | Species | Method |
|--|---------------|-----------------------------|---------------|---|--|
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate and 2-{4-[2-(4-{2-[2-(methacryloyloxy)etho | LL50 | Toxicity > Water solubility | 96 h | Danio rerio | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate and 2-{4-[2-(4-{2-[2-(methacryloyloxy)etho | NOEC | Toxicity > Water solubility | 34 d | Danio rerio | OECD Guideline 210 (fish early lite stage toxicity test) |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | LC50 | 1,9 mg/l | 96 h | Brachydanio rerio (new name: Danio rerio) | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| N,N'-Ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide) 123-26-2 | LL50 | Toxicity > Water solubility | 96 h | Oncorhynchus mykiss | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Reaction products of 4,4'-isopropylidenediphenol, ethoxylated and methacrylic acid | LL50 | Toxicity > Water solubility | 96 h | Oncorhynchus mykiss | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Cumene hydroperoxide 80-15-9 | LC50 | 3,9 mg/l | 96 h | Oncorhynchus mykiss | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| N,N-dimethyl-o-toluidine 609-72-3 | LC 50 | 46 mg/l | 96 h | Fathead minnow (Pimephales promelas) | |
| 1,4-Naphthalenedione 130-15-4 | LC50 | 0,045 mg/l | 96 h | Oryzias latipes | OECD Guideline 203 (Fish, Acute Toxicity Test) |

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Exposure time | Species | Method |
|--|---------------|-----------------------------|---------------|---------------|--|
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate and 2-{4-[2-(4-{2-[2-(methacryloyloxy)etho | EL50 | Toxicity > Water solubility | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | EC50 | 14,43 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| N,N'-Ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide) 123-26-2 | EL50 | Toxicity > Water solubility | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Reaction products of 4,4'-isopropylidenediphenol, ethoxylated and methacrylic acid | EL50 | Toxicity > Water solubility | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Cumene hydroperoxide 80-15-9 | EC50 | 18,84 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| 1,4-Naphthalenedione 130-15-4 | EC50 | 0,026 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute |

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Exposure time | Species | Method |
|--|---------------|-----------------------------|---------------|---|---|
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate and 2-{4-[2-(4-{2-[2-(methacryloyloxy)etho | EL50 | Toxicity > Water solubility | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | EC10 | 0,43 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| N,N'-Ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide) 123-26-2 | EC50 | Toxicity > Water solubility | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| N,N'-Ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide) 123-26-2 | NOEC | Toxicity > Water solubility | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Reaction products of 4,4'-isopropylidenediphenol, ethoxylated and methacrylic acid | EL50 | Toxicity > Water solubility | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Reaction products of 4,4'-isopropylidenediphenol, ethoxylated and methacrylic acid | EL10 | Toxicity > Water solubility | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Cumene hydroperoxide 80-15-9 | EC50 | 3,1 mg/l | 72 h | Desmodesmus subspicatus (reported as Scenedesmus subspicatus) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Cumene hydroperoxide 80-15-9 | NOEC | 1 mg/l | 72 h | Desmodesmus subspicatus (reported as Scenedesmus subspicatus) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 1,4-Naphthalenedione 130-15-4 | NOEC | 0,07 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 1,4-Naphthalenedione 130-15-4 | EC50 | 0,42 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Exposure time | Species | Method |
|--|---------------|-----------------------------|---------------|---|--|
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate and 2-{4-[2-(4-{2-[2-(methacryloyloxy)etho | EC50 | Toxicity > Water solubility | 3 h | activated sludge of a predominantly domestic sewage | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |
| Cumene hydroperoxide 80-15-9 | EC10 | 70 mg/l | 30 min | not specified | not specified |
| 1,4-Naphthalenedione 130-15-4 | EC50 | 5,94 mg/l | 3 h | activated sludge of a predominantly domestic sewage | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |

12.2. Persistence and degradability

| Hazardous substances CAS-No. | Result | Test type | Degradability | Exposure time | Method |
|--|----------------------------|-----------|-----------------|------------------|---|
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate and 2-{4-[2-(4-{2-[2-(methacryloyloxy)etho | not readily biodegradable. | aerobic | > 19,9 - 41,3 % | 28 d | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) |
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate and 2-{4-[2-(4-{2-[2-(methacryloyloxy)etho | inherently biodegradable | aerobic | > 52,2 - 65,5 % | 60 d | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | not readily biodegradable. | aerobic | 16,8 % | 28 d | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) |
| N,N'-Ethane-1,2-diybis(12-hydroxyoctadecan-1-amide) 123-26-2 | not readily biodegradable. | aerobic | 22 % | 28 d | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| Reaction products of 4,4'-isopropylidenediphenol, ethoxylated and methacrylic acid | not readily biodegradable. | aerobic | 43 % | 28 d | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| Reaction products of 4,4'-isopropylidenediphenol, ethoxylated and methacrylic acid | inherently biodegradable | aerobic | 66 % | 60 d | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| Cumene hydroperoxide 80-15-9 | not readily biodegradable. | aerobic | 3 % | 28 d | OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test) |
| N,N-Diethyl-p-toluidine 613-48-9 | not readily biodegradable. | | 1 % | 14 d | other guideline: |
| N,N-dimethyl-o-toluidine 609-72-3 | not readily biodegradable. | | 1 % | 14 d | other guideline: |
| 1,4-Naphthalenedione 130-15-4 | not readily biodegradable. | aerobic | 0 % | 28 d | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) |

12.3. Bioaccumulative potential

| Hazardous substances CAS-No. | Bioconcentration factor (BCF) | Exposure time | Temperature | Species | Method |
|---------------------------------|-------------------------------|---------------|-------------|-------------|---|
| Cumene hydroperoxide 80-15-9 | 9,1 | | | calculation | OECD Guideline 305 (Bioconcentration: Flow-through Fish Test) |

12.4. Mobility in soil

| Hazardous substances CAS-No. | LogPow | Temperature | Method |
|---|--------------|-------------|---|
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediy) bismethacrylate and 2-{4-[2-(4-{2-[2-(methacryloyloxy)etho | > 6,2 | | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | 5,25 | 20 °C | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| N,N'-Ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide) 123-26-2 | 5,86 | | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| Reaction products of 4,4'-isopropylidenediphenol, ethoxylated and methacrylic acid | > 5,3 - 5,62 | | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| Cumene hydroperoxide 80-15-9 | 1,6 | 25 °C | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| Acetic acid, 2-phenylhydrazide 114-83-0 | 0,74 | | not specified |
| 1,4-Naphthalenedione 130-15-4 | 1,71 | | not specified |

12.5. Results of PBT and vPvB assessment

| Hazardous substances CAS-No. | PBT / vPvB |
|---|---|
| Reaction mass of (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediy) bismethacrylate and 2-{4-[2-(4-{2-[2-(methacryloyloxy)etho | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| 3,3,5 Trimethylcyclohexyl methacrylate 7779-31-9 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| N,N'-Ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide) 123-26-2 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Reaction products of 4,4'-isopropylidenediphenol, ethoxylated and methacrylic acid | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Cumene hydroperoxide 80-15-9 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| 1,4-Naphthalenedione 130-15-4 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |

12.6. Endocrine disrupting properties

not applicable

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Do not empty into drains / surface water / ground water.

Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Waste code

08 04 09* waste adhesives and sealants containing organic solvents and other dangerous substances

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

SECTION 14: Transport information**14.1. UN number**

| | |
|------|---------------------|
| ADR | Not dangerous goods |
| RID | Not dangerous goods |
| ADN | Not dangerous goods |
| IMDG | Not dangerous goods |
| IATA | Not dangerous goods |

14.2. UN proper shipping name

| | |
|------|---------------------|
| ADR | Not dangerous goods |
| RID | Not dangerous goods |
| ADN | Not dangerous goods |
| IMDG | Not dangerous goods |
| IATA | Not dangerous goods |

14.3. Transport hazard class(es)

| | |
|------|---------------------|
| ADR | Not dangerous goods |
| RID | Not dangerous goods |
| ADN | Not dangerous goods |
| IMDG | Not dangerous goods |
| IATA | Not dangerous goods |

14.4. Packing group

| | |
|------|---------------------|
| ADR | Not dangerous goods |
| RID | Not dangerous goods |
| ADN | Not dangerous goods |
| IMDG | Not dangerous goods |
| IATA | Not dangerous goods |

14.5. Environmental hazards

| | |
|------|----------------|
| ADR | not applicable |
| RID | not applicable |
| ADN | not applicable |
| IMDG | not applicable |
| IATA | not applicable |

14.6. Special precautions for user

| | |
|-----|----------------|
| ADR | not applicable |
|-----|----------------|

| | |
|------|----------------|
| RID | not applicable |
| ADN | not applicable |
| IMDG | not applicable |
| IATA | not applicable |

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**

| | |
|---|----------------|
| Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009): | Not applicable |
| Prior Informed Consent (PIC) (Regulation (EU) No 649/2012): | Not applicable |
| Persistent organic pollutants (Regulation (EU) 2019/1021): | Not applicable |
| VOC content (2010/75/EC) | < 3 % |

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H242 Heating may cause a fire.
 H301 Toxic if swallowed.
 H302 Harmful if swallowed.
 H311 Toxic in contact with skin.
 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.
 H330 Fatal if inhaled.
 H331 Toxic if inhaled.
 H335 May cause respiratory irritation.
 H351 Suspected of causing cancer.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.
 H411 Toxic to aquatic life with long lasting effects.
 H412 Harmful to aquatic life with long lasting effects.
 H413 May cause long lasting harmful effects to aquatic life.

| | |
|-------------|---|
| ED: | Substance identified as having endocrine disrupting properties |
| EU OEL: | Substance with a Union workplace exposure limit |
| EU EXPLD 1: | Substance listed in Annex I, Reg (EC) No. 2019/1148 |
| EU EXPLD 2 | Substance listed in Annex II, Reg (EC) No. 2019/1148 |
| SVHC: | Substance of very high concern (REACH Candidate List) |
| PBT: | Substance fulfilling persistent, bioaccumulative and toxic criteria |
| PBT/vPvB: | Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria |
| vPvB: | Substance fulfilling very persistent and very bioaccumulative criteria |

Further information:

This Safety Data Sheet has been produced for sales from Henkel to parties purchasing from Henkel, is based on Regulation (EC) No 1907/2006 and provides information in accordance with applicable regulations of the European Union only. In that respect, no statement, warranty or representation of any kind is given as to compliance with any statutory laws or regulations of any other jurisdiction or territory other than the European Union. When exporting to territories other than the European Union, please consult with the respective Safety Data Sheet of the concerned territory to ensure compliance or liaise with Henkel's Product Safety and Regulatory Affairs Department (ua-productsafety.de@henkel.com) prior to export to other territories than the European Union.

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

Dear Customer,
 Henkel is committed to creating a sustainable future by promoting opportunities along the entire value chain. If you would like to contribute by switching from a paper to the electronic version of SDS, please contact the local Customer Service representative. We recommend to use a non-personal email address (e.g. SDS@your_company.com).

Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.