# SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

**Issue Date** 01-Dec-2021 **Revision Date** 07-Feb-2023 **Version** 1

## Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

**Product Code(s)** 2745425-EU-1

**Product Name** Test Strips Nitrate

**Unique Formula Identifier (UFI)** DSFV-MMVV-M60A-7USM

**Molecular weight** Not applicable

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

**Recommended Use** Determination of nitrate. Test strip.

**Uses advised against** Material becomes corrosive when wet

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

**Supplier**
HACH UK
Laser House
Ground Floor, Suite B
Waterfront Quay, Salford Quays
GB - Manchester, M50 3XW
Tel. +44 (0) 161 872 1487
info-uk@hach.com

HACH Ireland
Unit 34 GB Business Park
Little Island
IRL-Co. Cork
T45 H681
Tel. +353 (0)146 02 522
info-ie@hach.com

### 1.4. Emergency telephone number

UK: Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service
IE: National Poisons Information Centre (NPIC) 01 809 2566 (24/7)

## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

*Regulation (EC) No 1272/2008*

| | |
|---|---|
| **Skin corrosion/irritation** | Category 1 Sub-category A - (H314) |
| **Serious eye damage/eye irritation** | Category 1 - (H318) |
| **Acute aquatic toxicity** | Category 1 - (H400) |

| | |
|---|---|
| **Chronic aquatic toxicity** | Category 2 - (H411) |

### 2.2. Label elements

Contains Benzenesulfonic acid, 4-ethenyl-, homopolymer

**Signal word**
Danger

**Hazard statements**
H314 - Causes severe skin burns and eye damage
H400 - Very toxic to aquatic life
H411 - Toxic to aquatic life with long lasting effects

**Precautionary Statements - EU (§28, 1272/2008)**
P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing and eye/face protection
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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
P310 - Immediately call a POISON CENTER or doctor
P391 - Collect spillage

### 2.3. Other hazards
No information available.

PBT & vPvB
This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT)
This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Not applicable

### 3.2 Mixtures

| Chemical name | CAS No.<br>EC No.<br>Index No. | Weight-% | Classification according to Regulation (EC) No. 1272/2008 [CLP] | Specific concentration limit (SCL) | M-Factor | M-Factor (long-term) |
|---|---|---|---|---|---|---|
| Zinc | 7440-66-6<br>(030-001-01-9)<br>(030-001-00-1)<br>231-175-3<br>030-001-01-9 | 1 - 5% | Aquatic Acute 1 - H400<br>Aquatic Chronic 1 - H410 | - | - | - |

| Chemical name | CAS No.<br>EC No.<br>Index No. | Weight-% | Classification according to Regulation (EC) No. 1272/2008 [CLP] | Specific concentration limit (SCL) | M-Factor | M-Factor (long-term) |
|---|---|---|---|---|---|---|
| | 030-001-00-1 | | | | | |

**Full text of H- and EUH-phrases: see section 16**

*Acute Toxicity Estimate* *No information available*

## Section 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

**General advice** Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

**Inhalation** Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. If breathing is difficult, (trained personnel should) give oxygen. Get immediate medical attention.

**Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.

**Skin contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical attention.

**Ingestion** Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.

**Self-protection of the first aider** Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Wear personal protective clothing (see section 8).

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

**Symptoms** Burning sensation.

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

**Note to doctors** Treat symptomatically.

## Section 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** No information available.

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

**Specific hazards arising from the** The product causes burns of eyes, skin and mucous membranes. Thermal decomposition

| | |
|---|---|
| **chemical** | can lead to release of irritating gases and vapours. |
| **Hazardous combustion products** | May emit acrid smoke and fumes. |

**5.3. Advice for firefighters**

| | |
|---|---|
| **Special protective equipment and precautions for fire-fighters** | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |
| **Additional information** | Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |

## Section 6: ACCIDENTAL RELEASE MEASURES

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

| | |
|---|---|
| **Personal precautions** | Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. |
| **For emergency responders** | Use personal protection recommended in Section 8. |

**6.2. Environmental precautions**

| | |
|---|---|
| **Environmental precautions** | Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains. |

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

| | |
|---|---|
| **Methods for containment** | Prevent further leakage or spillage if safe to do so. |
| **Methods for cleaning up** | Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. |
| **Prevention of secondary hazards** | Clean contaminated objects and areas thoroughly observing environmental regulations. |

**6.4. Reference to other sections**

| | |
|---|---|
| **Reference to other sections** | See section 8 for more information. See section 13 for more information. |

## Section 7: HANDLING AND STORAGE

**7.1. Precautions for safe handling**

| | |
|---|---|
| **Advice on safe handling** | Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. |
| **General hygiene considerations** | Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and after work. Avoid creating dust. |

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

| | |
|---|---|
| **Storage Conditions** | Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Keep out of the reach of children. Store away from other materials. |

### 7.3. Specific end use(s)

**Specific use(s)** Analytical reagent.
**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

**Exposure Limits**

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

**Additional information** No information available.

### 8.2. Exposure controls

**Engineering controls** Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Personal protective equipment**
**Eye/face protection** Tight sealing safety goggles. Wear safety glasses with side shields (or goggles).

**Hand protection** Wear suitable gloves. Barrier creams may help to protect the exposed areas of skin. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374-1:2016 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III acco.

| Gloves | | | |
|---|---|---|---|
| Duration of contact | PPE - Glove material | Glove thickness | Break through time |
| Long term (repeated) | Wear protective butyl rubber gloves | 0,40 mm | >480 minutes |
| Short term | Wear protective nitrile rubber gloves | 0,20 mm | >30 minutes |

**Skin and body protection** Wear suitable protective clothing. Long sleeved clothing.

**Respiratory protection** Ensure adequate ventilation. No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

**Recommended filter type:** ABEK-P3.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and after work. Avoid creating dust.

**Environmental exposure controls** Do not allow into any sewer, on the ground or into any body of water.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

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

**Physical state** Solid

**Colour** white **Odour** Odourless

**Odour threshold** No data available

| Property | Values | Remarks • Method |
|---|---|---|
| **Molecular weight** | Not applicable | |
| **pH** | No data available | |
| **Melting point / freezing point** | No data available | |
| **Initial boiling point and boiling range** | No data available | |
| **Evaporation rate** | Not applicable | |
| **Vapour pressure** | Not applicable | |
| **Relative vapor density** | No data available | |
| **Specific Gravity** | Not applicable | |
| **Partition coefficient** | log $K_{ow}$ ~ 0 | |
| **Soil Organic Carbon-Water Partition Coefficient** | log $K_{oc}$ ~ -0 | |
| **Autoignition temperature** | No data available | |
| **Decomposition temperature** | No data available | |
| **Dynamic viscosity** | Not applicable | |
| **Kinematic viscosity** | Not applicable | |
| **Relative density** | | |

**Solubility(ies)**

**Water solubility**

| Water solubility classification | Water solubility | Water Solubility Temperature |
|---|---|---|
| No information available | No data available | No information available |

**Solubility in other solvents**

| Chemical Name | Solubility classification | Solubility | Solubility Temperature |
|---|---|---|---|
| None reported | No information available | No data available | No information available |

**Metal Corrosivity**

**Steel Corrosion Rate** No data available
**Aluminum Corrosion Rate** No data available

**Explosive properties**

| | |
|---|---|
| **Upper explosion limit** | Not applicable |
| **Lower explosion limit** | Not applicable |

**Flammable properties**

| | |
|---|---|
| **Flash point** | Not applicable |

**Flammability**

| | |
|---|---|
| **Upper flammability limit:** | No data available |
| **Lower flammability limit** | No data available |

**Oxidising properties** No data available.

**Bulk density** No data available

**9.2. Other information**

No information available.

## Section 10: STABILITY AND REACTIVITY

**10.1. Reactivity**

**Reactivity** No information available.

**10.2. Chemical stability**

**Stability** Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

**Possibility of hazardous reactions** None under normal processing.

**Hazardous polymerisation** Hazardous polymerisation does not occur.

**10.4. Conditions to avoid**

**Conditions to avoid** Exposure to air or moisture over prolonged periods. Extremes of temperature and direct sunlight.

**10.5. Incompatible materials**

**Incompatible materials** Acids. Bases. Oxidising agent.

**10.6. Hazardous decomposition products**

**Hazardous Decomposition Products** Zinc oxide.

## Section 11: TOXICOLOGICAL INFORMATION

**11.1. Information on toxicological effects**

**Acute toxicity**
Based on available data, the classification criteria are not met

*Mixture* No data available.

*Substance* Test data reported below.

**Oral Exposure Route:**

| Chemical name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---|---|---|---|---|---|
| Benzenesulfonamide, 4-amino- | Rat $LD_{50}$ | 3900 mg/kg | None reported | None reported | GESTIS |

**Acute Toxicity Estimate (ATE)**

**Unknown acute toxicity**
0 % of the mixture consists of ingredient(s) of unknown toxicity.

**Skin corrosion/irritation**
Causes severe burns.

*Mixture* No data available.

*Substance* Test data reported below.

| Chemical name | Test method | Species | Reported dose | Exposure time | Results | Key literature references and sources for data |
|---|---|---|---|---|---|---|
| Urea | Draize Test | Human | 22 mg | 72 hours | Mild skin irritant | RTECS |
| Zinc | Draize Test | Human | 0.300 mg | 72 hours | Mild skin irritant | RTECS |

**Serious eye damage/eye irritation**
Classification based on data available for ingredients. Causes serious eye damage. Causes burns.

*Mixture* No data available.

*Substance* Test data reported below.

| Chemical name | Test method | Species | Reported dose | Exposure time | Results | Key literature references and sources for data |
|---|---|---|---|---|---|---|
| Urea | OECD Test 405: Acute Eye Corrosion/Irritation | Rabbit | 0.1 mL | Single application | Mild eye irritant | ECHA |
| Zinc | OECD Test 405: Acute Eye Corrosion/Irritation | Rabbit | 100 mg | 24 hours | Mild eye irritant | ECHA |

**Respiratory or skin sensitisation**
Based on available data, the classification criteria are not met.

*Mixture* No data available.

*Substance* Test data reported below.

**Skin Sensitization Exposure Route:**

| Chemical name | Test method | Species | Results | Key literature references and sources for data |
|---|---|---|---|---|
| Zinc | OECD Test No. 406: Skin | Guinea pig | No sensitisation responses were observed. | ECHA |

| | | | | |
|---|---|---|---|---|
| | Sensitisation | | | |
| C.I. Acid Yellow 23 | Based on human experience | Human | Confirmed to be a skin sensitizer | HSDB<br>Vendor SDS |

**Respiratory Sensitization Exposure Route:**

| Chemical name | Test method | Species | Results | Key literature references and sources for data |
|---|---|---|---|---|
| C.I. Acid Yellow 23 | Based on human experience | Human | Confirmed to be a respiratory sensitizer | HSDB<br>Vendor SDS |

**STOT - single exposure**
Based on available data, the classification criteria are not met.

*Mixture* No data available.

*Substance* Test data reported below.

**Oral Exposure Route:**

| Chemical name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---|---|---|---|---|---|
| Zinc | Mouse $TD_{Lo}$ | 5000 mg/kg | None reported | **Kidney, Ureter, or Bladder**<br>**Liver**<br>Hepatitis (hepatocellular necrosis), diffuse<br>**Lungs, Thorax, or Respiration**<br>Respiratory depression | RTECS |
| C.I. Acid Yellow 23 | Human $TD_{Lo}$ | 0.014 mg/kg | None reported | **Peripheral Nerve and Sensation**<br>Paresthesis<br>**Musculoskeletal**<br>Changes in teeth and supporting structures | RTECS |

**Inhalation (Dust/Mist) Exposure Route:**

| Chemical name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---|---|---|---|---|---|
| Zinc | Human $TC_{Lo}$ | 0.59 mg/L | 4 hours | **Skin and Appendages**<br>Sweating | RTECS |

**STOT - repeated exposure**
Based on available data, the classification criteria are not met.

*Mixture* No data available.

*Substance* Test data reported below.

**Oral Exposure Route:**

| Chemical name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---|---|---|---|---|---|
| Zinc | Human $TC_{Lo}$ | 70 mg/kg | 70 days | **Biochemical**<br>Other changes | RTECS |
| C.I. Acid Yellow 23 | Rat $TD_{Lo}$ | 476 mg/kg | 28 days | **Behavioral**<br>Food intake | RTECS |

**Dermal Exposure Route:**

| Chemical name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---|---|---|---|---|---|
| Urea | Rat $TD_{Lo}$ | 3024 mg/kg | 28 days | **Liver** Changes in liver weight **Endocrine** Changes in thymus weight **Chronic** Changes in testicular weight | RTECS |

**Inhalation (Dust/Mist) Exposure Route:**

| Chemical name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---|---|---|---|---|---|
| Urea | Rat $TC_{Lo}$ | 288 mg/m³ | 17 weeks | **Kidney, Ureter, or Bladder** Other changes in urine composition **Nutritional and Gross Metabolic** Changes in chlorine | RTECS |
| Zinc | Human $TC_{Lo}$ | 0.0024 mg/L | 1825 days | **Blood** Normocytic anemia, Changes in serum composition (e.g. TP, bilirubin, cholesterol) | RTECS |

**Germ cell mutagenicity**
Based on available data, the classification criteria are not met.

*Mixture invitro* **Data** No data available.

*Substance invitro* **Data** Test data reported below.

| Chemical name | Test | Cell Strain | Reported dose | Exposure time | Results | Key literature references and sources for data |
|---|---|---|---|---|---|---|
| Urea | DNA damage | Mouse lymphoma | 43000 mg/L | None reported | Positive test result for mutagenicity | ECHA |
| Zinc | Mammalian gene cell mutation | Mouse lymphoma | 12.13 mg/L | 3 hours | Negative | ECHA |
| Benzenesulfonamide, 4-amino- | DNA damage | Rat liver | 0.03 mmol/L | None reported | Positive test result for mutagenicity | RTECS |
| C.I. Acid Yellow 23 | Cytogenetic analysis | Human lymphocyte | 100 mg/L | None reported | Positive test result for mutagenicity | RTECS |

*Mixture invivo* **Data** No data available.

*Substance invivo* **Data** Test data reported below.

**Oral Exposure Route:**

| Chemical name | Test | Species | Reported dose | Exposure time | Results | Key literature references and sources for data |
|---|---|---|---|---|---|---|
| Urea | Chromosomal abberation | Mouse | 500 mg | 5 days | Inconclusive test result for mutagenicity | ECHA |

**Carcinogenicity**

Based on available data, the classification criteria are not met.

*Mixture* No data available.

*Substance* Test data reported below.

**Oral Exposure Route:**

| Chemical name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---|---|---|---|---|---|
| Urea | Rat NOAEL | 2250 mg/kg | 1.0 years | Negative results for carcinogenicity | ECHA |
| Zinc | Mouse | 12.6 mg/kg | 46 weeks | **Gastrointestinal** Tumors | ERMA |

**Reproductive toxicity**
Based on available data, the classification criteria are not met.

*Mixture* No data available.

*Substance* Test data reported below.

**Oral Exposure Route:**

| Chemical name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---|---|---|---|---|---|
| Urea | Rat NOAEL | > 1000 mg/kg | Single generation | No reproductive or developmental toxic effects observed | ECHA |
| Zinc | Rat NOAEL | 15 mg/kg | 7 days | No reproductive or developmental toxic effects observed | ECHA |
| Benzenesulfonamide, 4-amino- | Rat $TD_{Lo}$ | 22 mg/kg | 22 days | **Effects on Newborn** Growth statistics (e.g. % reduced weight gain) | RTECS |
| C.I. Acid Yellow 23 | Rat $TD_{Lo}$ | 18500 mg/kg | 21 days | **Specific Developmental Abnormalities** Blood and lymphatic systems (including spleen and marrow) **Effects on Newborn** Growth statistics (e.g. % reduced weight gain) Behavioral | RTECS |

**Aspiration hazard**
Based on available data, the classification criteria are not met.

**11.2 Information on other hazards**
Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

**11.2.1. Endocrine disrupting properties**
**Endocrine disrupting properties** No information available.

**11.2.2. Other information**
**Other adverse effects** No information available.

## Section 12: ECOLOGICAL INFORMATION

**12.1. Toxicity**

**Ecotoxicity** Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

**Unknown aquatic toxicity** Contains 0 % of components with unknown hazards to the aquatic environment.

**Mixture**

**Acute aquatic toxicity:** No data available.

**Aquatic Chronic Toxicity:** No data available.

**Substance**

**Acute aquatic toxicity:** Test data reported below.

*Fish:*

| Chemical name | Exposure time | Species | Endpoint type | Reported dose | Key literature references and sources for data |
|---|---|---|---|---|---|
| Zinc | 96 hours | *Oncorhynchus mykiss* | $LC_{50}$ | 0.14 mg/L | GESTIS |

*Crustacea:*

| Chemical name | Exposure time | Species | Endpoint type | Reported dose | Key literature references and sources for data |
|---|---|---|---|---|---|
| Zinc | 48 Hours | *Daphnia magna* | $EC_{50}$ | 0.07 mg/L | GESTIS |

*Algae:*

| Chemical name | Exposure time | Species | Endpoint type | Reported dose | Key literature references and sources for data |
|---|---|---|---|---|---|
| Zinc | 96 hours | *Pseudokirchneriella subcapitata* | $EC_{50}$ | 0.03 mg/L | GESTIS |

**Aquatic Chronic Toxicity:** No data available.

**12.2. Persistence and degradability**

**Mixture** No data available.

**12.3. Bioaccumulative potential**

**Mixture:** No data available.

*Partition coefficient* log $K_{ow}$ ~ 0

**12.4. Mobility in soil**

*Soil Organic Carbon-Water Partition Coefficient* log $K_{oc}$ ~ -0

**12.5. Results of PBT and vPvB assessment**

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

| Chemical name | PBT and vPvB assessment |
|---|---|
| Zinc | The substance is not PBT / vPvB |

**12.6. Endocrine disrupting properties**

*Endocrine Disruptor Information:* This product does not contain any known or suspected endocrine disruptors

**12.7. Other adverse effects**

No information available.

*Ozone:* Not applicable

*Ozone depletion potential (ODP):* No information available

## Section 13: DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods**

**Advice on Disposal**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

**Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

**Contaminated packaging** Dispose of contents/containers in accordance with local regulations.

**Other Information** Waste codes should be assigned by the user based on the application for which the product was used.

## Section 14: TRANSPORT INFORMATION

**IMDG**

| | |
|---|---|
| **14.1 UN number or ID number** | Not regulated |
| **14.2 Proper shipping name** | Not regulated |
| **14.3 Transport hazard class(es)** | Not regulated |
| **14.4 Packing Group** | Not regulated |
| **14.5 Marine pollutant** | This material meets the definition of a marine pollutant |
| **Environmental hazards** | Yes |
| **14.6 Special precautions for user** | See section 6-8 for more information |
| **14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code** | Not applicable |

**ADR**

| | |
|---|---|
| **14.1 UN number or ID number** | Not regulated |
| **14.2 Proper shipping name** | Not regulated |
| **14.3 Transport hazard class(es)** | Not regulated |
| **14.4 Packing Group** | Not regulated |
| **14.5 Environmental hazards** | Yes |
| **14.6 Special precautions for user** | See section 6-8 for more information |

**IATA** Not regulated

| | |
|---|---|
| **14.1 UN number or ID number** | Not regulated |
| **14.2 Proper shipping name** | Not regulated |

**14.3 Transport hazard class(es)** Not regulated
**14.4 Packing group** Not regulated
**14.5 Environmental hazards** Yes
**14.6 Special precautions for user** See section 6-8 for more information

**Additional information**
There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods.
If the item is not in a reagent set or kit, the classification given above applies.
If the item is part of a reagent set or kit the classification would change to the following:
UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.
If the item is not regulated, the Chemical Kit classification does not apply.

## Section 15: REGULATORY INFORMATION

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

**National regulations**

**European Union**

**Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work**

**Take note of Directive 94/33/EC on the protection of young people at work**

**Authorisations and/or restrictions on use:**
This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

| Chemical name | Restricted substance per REACH Annex XVII | Substance subject to authorisation per REACH Annex XIV |
|---|---|---|
| Zinc - 7440-66-6 | 75. | |

**Persistent Organic Pollutants** Not applicable

**Dangerous substance category per Seveso Directive (2012/18/EU)**
• E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1
• E2 - Hazardous to the Aquatic Environment in Category Chronic 2

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**
Not applicable

**Germany**

**Water hazard class (WGK)** obviously hazardous to water (WGK 2)

**France**

**Occupational Illnesses (R-463-3, France)**

| Chemical name | French RG number | Title |
|---|---|---|
| Zinc<br>7440-66-6 | RG 61 | - |

**International Inventories**

| | |
|---|---|
| **EINECS/ELINCS** | Does not comply |
| **TSCA** | Complies |
| **DSL/NDSL** | Does not comply |
| **ENCS** | Does not comply |
| **IECSC** | Complies |
| **KECL - Existing substances** | Does not comply |
| **PICCS** | Does not comply |
| **AICS** | Does not comply |

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**ENCS** - Japan Existing and New Chemical Substances
**IECSC** - China Inventory of Existing Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances
**AICS** - Australian Inventory of Chemical Substances

**15.2. Chemical safety assessment**

**Chemical Safety Report** Chemical safety assessments for substances in this mixture were not carried out.

## Section 16: OTHER INFORMATION

**Issue Date** 01-Dec-2021

**Revision Date** 07-Feb-2023

**Revision Note** New SDS.

**Key or legend to abbreviations and acronyms used in the safety data sheet**

**Legend**

| | |
|---|---|
| ** | Hazard Designation |
| ADN | Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieure |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| CAS | Chemical Abstracts Service Number |
| Ceiling | Maximum limit value |
| CLP | Classification, Labelling and Packaging of substances and mixtures [Regulation (EC) No. 1272/2008] |
| DNEL | Derived No Effect Level (DNEL) |
| EC | European Community |
| ECHA | ECHA (The European Chemicals Agency) |
| EC50 | Effective Concentration to 50% of a test population |
| EEC | European Economic Community |
| EN | European Standard |
| IMDG | International Maritime Dangerous Goods (IMDG) |
| IATA | International Air Transport Association (IATA) |
| IATA-DGR | International Air Transport Association - Dangerous Goods Regulations |
| ICAO | International Civil Aviation Organization |
| ICAO-TI | International Civil Aviation Organization - Technical Instructions |
| IUCLID | IUCLID (The International Uniform Chemical Information Database) |

| | |
|---|---|
| GHS | Globally Harmonized System of Classification and Labelling of Chemicals |
| LOAEL | Lowest observed adverse effect level |
| LOAEC | Lowest observed adverse effect concentration |
| LC50 | Lethal Concentration to 50% of a test population |
| LD50 | Lethal Dose to 50% of a test population (Median Lethal Dose) |
| LOLI | LOLI (List of Lists - An International Chemical Regulatory Database) |
| MAK | Maximale Arbeitsplatz-Konzentration, a German expression corresponding to threshold limit value, which relates to safe daily exposure levels to chemical substances |
| NOAEL | NOAEL (No observed adverse effect level) |
| NOAEC | No observed adverse effect concentration |
| OSHA | OSHA (Occupational Safety and Health Administration of the US Department of Labour) |
| PEC | Predicted Effect Concentration |
| PNEC | Predicted No Effect Concentration (PNEC) |
| PBT | Persistent, Bioaccumulative, and Toxic (PBT) Chemicals |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals [Regulation (EC) No. 1907/2006]) |
| RID | Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) |
| RTECS | RTECS (Registry of Toxic Effects of Chemical Substances) |
| TWA | TWA (time-weighted average) |
| SKN* | Skin designation |
| SKN+ | Skin sensitisation |
| STEL | STEL (Short Term Exposure Limit) |
| STOT | Specific Target Organ Toxicity |
| STOT RE | Specific target organ toxicity — repeated exposure |
| STOT SE | Specific target organ toxicity — single exposure |
| SVHC | Substances of Very High Concern |
| TLV | Threshold Limit Value |
| TRGS | Technical rules for hazardous substances, Germany |
| TSCA | Toxic Substances Control Act |
| UN | United Nations |
| vPvB | very persistent and very bioaccumulative |
| VOC | Volatile organic compounds |
| AwSV | Administrative regulation of water polluting substances, Germany |

**Key literature references and sources for data**
See Section 11: TOXICOLOGICAL INFORMATION
See Section 12: ECOLOGICAL INFORMATION

**Classification procedure**

| **Classification according to Regulation (EC) No. 1272/2008 [CLP]** | **Method Used** |
|---|---|
| Acute oral toxicity | Calculation method |
| Acute dermal toxicity | Calculation method |
| Acute inhalation toxicity - gas | Calculation method |
| Acute inhalation toxicity - Vapour | Calculation method |
| Acute inhalation toxicity - dust/mist | Calculation method |
| Skin corrosion/irritation | Calculation method |
| Serious eye damage/eye irritation | Calculation method |
| Respiratory sensitisation | Calculation method |
| Skin sensitisation | Calculation method |
| Mutagenicity | Calculation method |
| Carcinogenicity | Calculation method |
| Reproductive toxicity | Calculation method |
| STOT - single exposure | Calculation method |
| STOT - repeated exposure | Calculation method |
| Acute aquatic toxicity | Calculation method |
| Chronic aquatic toxicity | Calculation method |
| Aspiration toxicity | Calculation method |
| Ozone | Calculation method |

| | |
|---|---|
| **Training Advice** | Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work |
| **Restrictions on use** | None |

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**End of Safety Data Sheet**

# SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

**Issue Date** 25-Nov-2020 **Revision Date** 07-Feb-2023 **Version** 1

## Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

**Product Code(s)** 2745425-EU-2

**Product Name** Test Strips Nitrite

**Molecular weight** Not applicable

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

**Recommended Use** Determination of nitrite. Test strip.

**Uses advised against** Consumer use

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

**Supplier**
HACH UK
Laser House
Ground Floor, Suite B
Waterfront Quay, Salford Quays
GB - Manchester, M50 3XW
Tel. +44 (0) 161 872 1487
info-uk@hach.com

HACH Ireland
Unit 34 GB Business Park
Little Island
IRL-Co. Cork
T45 H681
Tel. +353 (0)146 02 522
info-ie@hach.com

### 1.4. Emergency telephone number

UK: Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service
IE: National Poisons Information Centre (NPIC) 01 809 2566 (24/7)

## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

*Regulation (EC) No 1272/2008*

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

### 2.2. Label elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

**Hazard statements**
This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

**2.3. Other hazards**

PBT & vPvB
This mixture contains substances considered to be persistent, bio-accumulating and toxic (PBT)
This mixture contains substances considered to be very persistent and very bioaccumulating (vPvB)

**Endocrine Disruptor Information**

| Chemical name | EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances of Very High Concern (SVHC) for Authorisation | EU - REACH (1907/2006) - Endocrine Disruptor Assessment List of Substances |
|---|---|---|
| Polyethylene glycol branched nonylphenyl ether | Endocrine disrupting properties | - |

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

**3.1 Substances**

Not applicable

**3.2 Mixtures**

| Chemical name | CAS No.<br>EC No.<br>Index No. | Weight-% | Classification according to Regulation (EC) No. 1272/2008 [CLP] | Specific concentration limit (SCL) | M-Factor | M-Factor (long-term) |
|---|---|---|---|---|---|---|
| Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)- | 25973-55-1<br>247-384-8<br>- | <1% | STOT RE 2 - H373<br>Aquatic Chronic 4 - H413 | - | - | - |
| Polyethylene glycol branched nonylphenyl ether | 68412-54-4<br>-<br>- | <1% | Skin Irrit. 2 - H315<br>Eye Irrit. 2 - H319<br>Aquatic Acute 1 - H400<br>Aquatic Chronic 1 - H410 | - | - | - |

**Full text of H- and EUH-phrases: see section 16**

*Acute Toxicity Estimate* *No information available*

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 - 4 hour - dust/mist - mg/L | Inhalation LC50 - 4 hour - vapour - mg/L | Inhalation LC50 - 4 hour - gas - ppm |
|---|---|---|---|---|---|
| Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)-25973-55-1 | > 2000 mg/kg | > 2000 mg/kg | > 0.00952 mg/L | None reported | None reported |
| Polyethylene glycol branched nonylphenyl | 2590 mg/kg | 2830 mg/kg | None reported | None reported | None reported |

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 - 4 hour - dust/mist - mg/L | Inhalation LC50 - 4 hour - vapour - mg/L | Inhalation LC50 - 4 hour - gas - ppm |
|---|---|---|---|---|---|
| ether<br>68412-54-4 | | | | | |

This product contains one or more candidate substance(s) of very high concern (Regulation (EC) No. 1907/2006 (REACH), Article 59)

| Chemical name | CAS No | SVHC candidates |
|---|---|---|
| Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)- | 25973-55-1 | X |
| Polyethylene glycol branched nonylphenyl ether | 68412-54-4 | X |

## Section 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

**General advice** Take off contaminated clothing and shoes immediately. Show this safety data sheet to the doctor in attendance.

**Inhalation** Remove to fresh air. If symptoms persist, call a doctor.

**Eye contact** Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a doctor.

**Skin contact** Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a doctor.

**Ingestion** Rinse mouth.

**Self-protection of the first aider** Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8). Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

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

**Symptoms** No information available.

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

**Note to doctors** Treat symptomatically.

## Section 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** No information available.

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

**Specific hazards arising from the** Thermal decomposition can lead to release of irritating and toxic gases and vapours.

**chemical**

**Hazardous combustion products** Carbon oxides.

**5.3. Advice for firefighters**

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**Additional information** Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

## Section 6: ACCIDENTAL RELEASE MEASURES

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

**Personal precautions** Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information.

**For emergency responders** Use personal protection recommended in Section 8.

**6.2. Environmental precautions**

**Environmental precautions** Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

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

**Methods for containment** Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**6.4. Reference to other sections**

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## Section 7: HANDLING AND STORAGE

**7.1. Precautions for safe handling**

**Advice on safe handling** Avoid contact with skin, eyes or clothing. Avoid breathing dust/fume/gas/mist/vapours/spray.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wash hands before breaks and after work.

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

**Storage Conditions** Keep container tightly closed in a dry and well-ventilated place.

**7.3. Specific end use(s)**

**Specific use(s)** Analytical reagent.
**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

**Additional information** No information available.

### 8.2. Exposure controls

**Engineering controls** Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Hand protection** Wear suitable gloves. Barrier creams may help to protect the exposed areas of skin. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374-1:2016 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III acco.

**Skin and body protection** Avoid contact with eyes, skin and clothing.

**Respiratory protection** Ensure adequate ventilation.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wash hands before breaks and after work.

**Environmental exposure controls** Do not allow into any sewer, on the ground or into any body of water.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

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

**Physical state** Solid

**Colour** white **Odour** Odourless

**Odour threshold** Not applicable

| Property | Values | Remarks • Method |
|---|---|---|
| **Molecular weight** | Not applicable | |
| **pH** | No data available | |

| | |
|---|---|
| **Melting point / freezing point** | No data available |
| **Initial boiling point and boiling range** | No data available |
| **Evaporation rate** | Not applicable |
| **Vapour pressure** | Not applicable |
| **Relative vapor density** | No data available |
| **Specific Gravity** | Not applicable |
| **Partition coefficient** | log $K_{ow}$ ~ 0.01 |
| **Soil Organic Carbon-Water Partition Coefficient** | log $K_{oc}$ ~ 0.1 |
| **Autoignition temperature** | No data available |
| **Decomposition temperature** | No data available |
| **Dynamic viscosity** | Not applicable |
| **Kinematic viscosity** | Not applicable |
| **Relative density** | |

**Solubility(ies)**

**Water solubility**

| Water solubility classification | Water solubility | Water Solubility Temperature |
|---|---|---|
| No information available | No data available | No information available |

**Solubility in other solvents**

| Chemical Name | Solubility classification | Solubility | Solubility Temperature |
|---|---|---|---|
| None reported | No information available | No data available | No information available |

**Metal Corrosivity**

| | |
|---|---|
| **Steel Corrosion Rate** | Not applicable |
| **Aluminum Corrosion Rate** | Not applicable |

**Explosive properties**

| | |
|---|---|
| **Upper explosion limit** | Not applicable |
| **Lower explosion limit** | Not applicable |

**Flammable properties**

| | |
|---|---|
| **Flash point** | Not applicable |

**Flammability**

| | |
|---|---|
| **Upper flammability limit:** | No data available |
| **Lower flammability limit** | No data available |

| | |
|---|---|
| **Oxidising properties** | No data available. |
| **Bulk density** | No data available |

### 9.2. Other information

No information available.

## Section 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

**Reactivity** No information available.

### 10.2. Chemical stability

**Stability** Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** None under normal processing.

### 10.4. Conditions to avoid

**Conditions to avoid** Extremes of temperature and direct sunlight.

### 10.5. Incompatible materials

**Incompatible materials** Oxidising agent. Acids.

### 10.6. Hazardous decomposition products

**Hazardous Decomposition Products** None known based on information supplied.

## Section 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

**Acute toxicity**
Based on available data, the classification criteria are not met

*Mixture* No data available.

*Substance* Test data reported below.

**Oral Exposure Route:**

| Chemical name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---|---|---|---|---|---|
| Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)- | Rat $LD_{50}$ | > 2000 mg/kg | None reported | None reported | Vendor SDS |
| Benzenesulfonamide, 4-amino- | Rat $LD_{50}$ | 3900 mg/kg | None reported | None reported | GESTIS |
| Polyethylene glycol branched nonylphenyl ether | Rat $LD_{50}$ | 2590 mg/kg | None reported | None reported | ERMA |

**Dermal Exposure Route:**

| Chemical name | Endpoint | Reported | Exposure | Toxicological effects | Key literature references and |
|---|---|---|---|---|---|

| | type | dose | time | | sources for data |
|---|---|---|---|---|---|
| Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)- | Rabbit $LD_{50}$ | > 2000 mg/kg | None reported | None reported | Vendor SDS |
| Polyethylene glycol branched nonylphenyl ether | Rabbit $LD_{50}$ | 2830 mg/kg | None reported | None reported | ERMA |

**Inhalation (Dust/Mist) Exposure Route:**

| Chemical name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---|---|---|---|---|---|
| Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)- | Rat $LC_{50}$ | > 0.00952 mg/L | 4 hours | None reported | Vendor SDS |

**Inhalation (Vapor) Exposure Route:**

**Acute Toxicity Estimate (ATE)**

**The following values are calculated based on chapter 3.1 of the GHS document**

**Unknown acute toxicity**
2.97 % of the mixture consists of ingredient(s) of unknown toxicity.

**Skin corrosion/irritation**
Based on available data, the classification criteria are not met.

*Mixture* No data available.

*Substance* Test data reported below.

| Chemical name | Test method | Species | Reported dose | Exposure time | Results | Key literature references and sources for data |
|---|---|---|---|---|---|---|
| 2-Pyrrolidinone, 1-ethenyl-, homopolymer | None reported | Rabbit | None reported | None reported | Not corrosive or irritating to skin | Vendor SDS |
| Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)- | Draize Test | Rabbit | 500 mg | 4 hours | Not corrosive or irritating to skin | No information available |
| Polyethylene glycol branched nonylphenyl ether | Draize Test | Rabbit | 0.5 mL | 4 hours | Skin irritant | ECHA |

**Serious eye damage/eye irritation**
Based on available data, the classification criteria are not met.

*Mixture* No data available.

*Substance* Test data reported below.

| Chemical name | Test method | Species | Reported dose | Exposure time | Results | Key literature references and sources for data |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| 2-Pyrrolidinone, 1-ethenyl-, homopolymer | None reported | Rabbit | None reported | None reported | Not corrosive or irritating to eyes | Vendor SDS |
| Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)- | Draize Test | Rabbit | 63 mg | None reported | Not corrosive or irritating to eyes | No information available |
| Polyethylene glycol branched nonylphenyl ether | None reported | None reported | None reported | None reported | Data Source | No information available |

**Respiratory or skin sensitisation**
Based on available data, the classification criteria are not met.

*Mixture* No data available.

*Substance* Test data reported below.

**Skin Sensitization Exposure Route:**

| Chemical name | Test method | Species | Results | Key literature references and sources for data |
|---|---|---|---|---|
| 2-Pyrrolidinone, 1-ethenyl-, homopolymer | OECD Test No. 406: Skin Sensitisation | Guinea pig | No sensitisation responses were observed. | Vendor SDS |

**STOT - single exposure**
Based on available data, the classification criteria are not met.

*Mixture* No data available.

*Substance* No data available.

**STOT - repeated exposure**
Based on available data, the classification criteria are not met.

*Mixture* No data available.

*Substance* No data available.

**Germ cell mutagenicity**
Based on available data, the classification criteria are not met.

*Mixture invitro* **Data** No data available.

*Substance invitro* **Data** Test data reported below.

| Chemical name | Test | Cell Strain | Reported dose | Exposure time | Results | Key literature references and sources for data |
|---|---|---|---|---|---|---|
| Benzenesulfonamide, 4-amino- | DNA damage | Rat liver | 0.03 mmol/L | None reported | Positive test result for mutagenicity | RTECS |

*Mixture invivo* **Data** No data available.

*Substance invivo* **Data** No data available.

**Carcinogenicity**
Based on available data, the classification criteria are not met.

*Mixture* No data available.

*Substance* No data available.

**Reproductive toxicity**
Based on available data, the classification criteria are not met.

*Mixture* No data available.

*Substance* Test data reported below.

**Oral Exposure Route:**

| Chemical name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---|---|---|---|---|---|
| Benzenesulfonamide, 4-amino- | Rat $TD_{Lo}$ | 22 mg/kg | 22 days | **Effects on Newborn** Growth statistics (e.g. % reduced weight gain) | RTECS |

**Aspiration hazard**
Based on available data, the classification criteria are not met.

**11.2 Information on other hazards**
Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

**11.2.1. Endocrine disrupting properties**
**Endocrine disrupting properties**

**11.2.2. Other information**
**Other adverse effects** No information available.

## Section 12: ECOLOGICAL INFORMATION

**12.1. Toxicity**

**Ecotoxicity** Based on available data, the classification criteria are not met.

**Unknown aquatic toxicity** Contains 2.97 % of components with unknown hazards to the aquatic environment.

**Mixture**

**Acute aquatic toxicity:** No data available.

**Aquatic Chronic Toxicity:** No data available.

**Substance**

**Acute aquatic toxicity:** Test data reported below.

*Fish:*

| Chemical name | Exposure time | Species | Endpoint type | Reported dose | Key literature references and sources for data |
|---|---|---|---|---|---|
| Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)- | 96 hours | *Danio rerio* | $LC_{50}$ | > 100 mg/L | EPA |
| Polyethylene glycol branched nonylphenyl ether | 96 hours | *Lepomis macrochirus* | $LC_{50}$ | > 10 mg/L | No information available |

**Aquatic Chronic Toxicity:** No data available.

**12.2. Persistence and degradability**

**Mixture** No data available.

**12.3. Bioaccumulative potential**

**Mixture:** No data available.

*Partition coefficient* log $K_{ow}$ ~ 0.01

**12.4. Mobility in soil**

*Soil Organic Carbon-Water Partition Coefficient* log $K_{oc}$ ~ 0.1

**12.5. Results of PBT and vPvB assessment**

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

| Chemical name | PBT and vPvB assessment |
|---|---|
| Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)- | PBT substance PBT / vPvB substance |
| Polyethylene glycol branched nonylphenyl ether | The substance is not PBT / vPvB |

**12.6. Endocrine disrupting properties**

*Endocrine Disruptor Information:* This product does not contain any known or suspected endocrine disruptors

| Chemical name | EU - Endocrine Disrupters Candidate List | EU - Endocrine Disruptors - Evaluated Substances | Endocrine disrupting potential |
|---|---|---|---|
| Polyethylene glycol branched nonylphenyl ether | Group III Chemical | - | - |

**12.7. Other adverse effects**

No information available.

*Ozone:* Not applicable

*Ozone depletion potential (ODP):* No information available

## Section 13: DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods**

**Advice on Disposal**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

**Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and

| | |
|---|---|
| | discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste. |
| **Contaminated packaging** | Dispose of contents/containers in accordance with local regulations. |
| **Other Information** | Waste codes should be assigned by the user based on the application for which the product was used. |

## Section 14: TRANSPORT INFORMATION

**IMDG**

| | |
|---|---|
| **14.1 UN number or ID number** | Not regulated |
| **14.2 Proper shipping name** | Not regulated |
| **14.3 Transport hazard class(es)** | Not regulated |
| **14.4 Packing Group** | Not regulated |
| **14.5 Marine pollutant** | Not applicable |
| **14.6 Special precautions for user** | See section 6-8 for more information |
| **14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code** | Not applicable |

**ADR**

| | |
|---|---|
| **14.1 UN number or ID number** | Not regulated |
| **14.2 Proper shipping name** | Not regulated |
| **14.3 Transport hazard class(es)** | Not regulated |
| **14.4 Packing Group** | Not regulated |
| **14.5 Environmental hazards** | Not applicable |
| **14.6 Special precautions for user** | See section 6-8 for more information |

**IATA** Not regulated

| | |
|---|---|
| **14.1 UN number or ID number** | Not regulated |
| **14.2 Proper shipping name** | Not regulated |
| **14.3 Transport hazard class(es)** | Not regulated |
| **14.4 Packing group** | Not regulated |
| **14.5 Environmental hazards** | Not applicable |
| **14.6 Special precautions for user** | See section 6-8 for more information |

**Additional information**
There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods.
If the item is not in a reagent set or kit, the classification given above applies.
If the item is part of a reagent set or kit the classification would change to the following:
UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.
If the item is not regulated, the Chemical Kit classification does not apply.

## Section 15: REGULATORY INFORMATION

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

**National regulations**

**European Union**

**Authorisations and/or restrictions on use:**
This product contains one or more substance(s) subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)
This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

| Chemical name | Restricted substance per REACH Annex XVII | Substance subject to authorisation per REACH Annex XIV |
|---|---|---|

| | | |
|---|---|---|
| Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)- - 25973-55-1 | | 51. |

**Persistent Organic Pollutants** Not applicable

**Export Notification requirements** This product contains substances which are regulated pursuant to Regulation (EC) No. 649/2012 of the European parliament and of the council concerning the export and import of dangerous chemicals

| Chemical name | European Export/Import Restrictions per (EC) 689/2008 - Annex Number |
|---|---|
| Polyethylene glycol branched nonylphenyl ether - 68412-54-4 | I.1<br>I.2 |

**Dangerous substance category per Seveso Directive (2012/18/EU)**
• Non-controlled

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**
Not applicable

**Germany**

**Water hazard class (WGK)** obviously hazardous to water (WGK 2)

**France**

**Occupational Illnesses (R-463-3, France)**

**International Inventories**

| | |
|---|---|
| **EINECS/ELINCS** | Does not comply |
| **TSCA** | Complies |
| **DSL/NDSL** | Complies |
| **ENCS** | Complies |
| **IECSC** | Complies |
| **KECL - Existing substances** | Complies |
| **PICCS** | Complies |
| **AICS** | Complies |

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**ENCS** - Japan Existing and New Chemical Substances
**IECSC** - China Inventory of Existing Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances
**AICS** - Australian Inventory of Chemical Substances

**15.2. Chemical safety assessment**

**Chemical Safety Report** Chemical safety assessments for substances in this mixture were not carried out.

## Section 16: OTHER INFORMATION

**Issue Date** 25-Nov-2020

**Revision Date** 07-Feb-2023

**Revision Note** New SDS.

**Key or legend to abbreviations and acronyms used in the safety data sheet**

**Legend**

| | |
|---|---|
| ** | Hazard Designation |
| ADN | Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieure |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| CAS | Chemical Abstracts Service Number |
| Ceiling | Maximum limit value |
| CLP | Classification, Labelling and Packaging of substances and mixtures [Regulation (EC) No. 1272/2008] |
| DNEL | Derived No Effect Level (DNEL) |
| EC | European Community |
| ECHA | ECHA (The European Chemicals Agency) |
| EC50 | Effective Concentration to 50% of a test population |
| EEC | European Economic Community |
| EN | European Standard |
| IMDG | International Maritime Dangerous Goods (IMDG) |
| IATA | International Air Transport Association (IATA) |
| IATA-DGR | International Air Transport Association - Dangerous Goods Regulations |
| ICAO | International Civil Aviation Organization |
| ICAO-TI | International Civil Aviation Organization - Technical Instructions |
| IUCLID | IUCLID (The International Uniform Chemical Information Database) |
| GHS | Globally Harmonized System of Classification and Labelling of Chemicals |
| LOAEL | Lowest observed adverse effect level |
| LOAEC | Lowest observed adverse effect concentration |
| LC50 | Lethal Concentration to 50% of a test population |
| LD50 | Lethal Dose to 50% of a test population (Median Lethal Dose) |
| LOLI | LOLI (List of Lists - An International Chemical Regulatory Database) |
| MAK | Maximale Arbeitsplatz-Konzentration, a German expression corresponding to threshold limit value, which relates to safe daily exposure levels to chemical substances |
| NOAEL | NOAEL (No observed adverse effect level) |
| NOAEC | No observed adverse effect concentration |
| OSHA | OSHA (Occupational Safety and Health Administration of the US Department of Labour) |
| PEC | Predicted Effect Concentration |
| PNEC | Predicted No Effect Concentration (PNEC) |
| PBT | Persistent, Bioaccumulative, and Toxic (PBT) Chemicals |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals [Regulation (EC) No. 1907/2006]) |
| RID | Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) |
| RTECS | RTECS (Registry of Toxic Effects of Chemical Substances) |
| TWA | TWA (time-weighted average) |
| SKN* | Skin designation |
| SKN+ | Skin sensitisation |
| STEL | STEL (Short Term Exposure Limit) |
| STOT | Specific Target Organ Toxicity |

| | |
|---|---|
| STOT RE | Specific target organ toxicity — repeated exposure |
| STOT SE | Specific target organ toxicity — single exposure |
| SVHC | Substances of Very High Concern |
| TLV | Threshold Limit Value |
| TRGS | Technical rules for hazardous substances, Germany |
| TSCA | Toxic Substances Control Act |
| UN | United Nations |
| vPvB | very persistent and very bioaccumulative |
| VOC | Volatile organic compounds |
| AwSV | Administrative regulation of water polluting substances, Germany |

**Key literature references and sources for data**
See Section 11: TOXICOLOGICAL INFORMATION
See Section 12: ECOLOGICAL INFORMATION

**Classification procedure**

| Classification according to Regulation (EC) No. 1272/2008 [CLP] | Method Used |
|---|---|
| Acute oral toxicity | Calculation method |
| Acute dermal toxicity | Calculation method |
| Acute inhalation toxicity - gas | Calculation method |
| Acute inhalation toxicity - Vapour | Calculation method |
| Acute inhalation toxicity - dust/mist | Calculation method |
| Skin corrosion/irritation | Calculation method |
| Serious eye damage/eye irritation | Calculation method |
| Respiratory sensitisation | Calculation method |
| Skin sensitisation | Calculation method |
| Mutagenicity | Calculation method |
| Carcinogenicity | Calculation method |
| Reproductive toxicity | Calculation method |
| STOT - single exposure | Calculation method |
| STOT - repeated exposure | Calculation method |
| Acute aquatic toxicity | Calculation method |
| Chronic aquatic toxicity | Calculation method |
| Aspiration toxicity | Calculation method |
| Ozone | Calculation method |

**Training Advice** Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

**Restrictions on use** None

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**End of Safety Data Sheet**