SAFETY DATA SHEET

B60VQ33

Section 1. Identification

Product name : ARMORSEAL® 33 Epoxy Primer/Sealer (Part B) Hardener
Product code : B60VQ33
Other means of identification : Not available.
Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against
Paint or paint related material.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 W. Prospect Avenue
Cleveland, OH 44115

Emergency telephone number of the company : US / Canada: (800) 424-9300
Mexico: SETIQ 01-800-00-214-00 / (52) 55-5559-1588 24 hours / 365 days a year

Product Information Telephone Number : US / Canada: (800) 524-5979
Mexico: Not Available

Regulatory Information Telephone Number : US / Canada: (216) 566-2902
Mexico: Not Available

Transportation Emergency Telephone Number : US / Canada: (800) 424-9300
Mexico: SETIQ 01-800-00-214-00 / (52) 55-5559-1588 24 hours / 365 days a year

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 4
ACUTE TOXICITY (oral) - Category 4
SKIN CORROSION/IRRITATION - Category 1
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
SKIN SENSITIZATION - Category 1
TOXIC TO REPRODUCTION (Fertility) - Category 1B
TOXIC TO REPRODUCTION (Unborn child) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 36.7%
Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 40.5%

GHS label elements
Hazard pictograms : 

Date of issue/Date of revision : 11/28/2019
Date of previous issue : 6/26/2019
Version : 12
# Section 2. Hazards identification

<table>
<thead>
<tr>
<th><strong>Signal word</strong></th>
<th>Danger</th>
</tr>
</thead>
</table>
| **Hazard statements** | Combustible liquid.  
Harmful if swallowed.  
Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.  
May damage fertility.  
Suspected of damaging the unborn child.  
May cause damage to organs through prolonged or repeated exposure. |

## Precautionary statements

**Prevention**

- Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from flames and hot surfaces. - No smoking. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

**Response**

- Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

**Storage**

- Store locked up. Store in a well-ventilated place. Keep cool.

**Disposal**

- Dispose of contents and container in accordance with all local, regional, national and international regulations.

## Supplemental label elements

- DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY. This product must be mixed with other components before use. Before opening the packages, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS.

- This product contains a Significant New Use Rule (SNUR) Chemical. Do not allow this product to enter drains, sewers, wastewater treatment systems, groundwater, streams, lakes or ponds. See Environmental Data Sheet (EDS) for additional details.

- Please refer to the SDS for additional information. Keep out of reach of children. Do not transfer contents to other containers for storage.

## Hazards not otherwise classified

- None known.

# Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th><strong>Substance/mixture</strong></th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Other means of identification</strong></td>
<td>Not available.</td>
</tr>
</tbody>
</table>

## CAS number/other identifiers

- B60VQ33 ARMORSEAL® 33 Epoxy Primer/Sealer (Part B) Hardener
- SHW-85-NA-GHS-US
## Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>% by weight</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-Nonylphenol</td>
<td>≥10 - ≤25</td>
<td>84852-15-3</td>
</tr>
<tr>
<td>Diethylenetriamine</td>
<td>≤9.6</td>
<td>111-40-0</td>
</tr>
<tr>
<td>Phenylmethanol</td>
<td>≤7.6</td>
<td>100-51-6</td>
</tr>
<tr>
<td>Amino Polymer</td>
<td>≤10</td>
<td>135108-88-2</td>
</tr>
<tr>
<td>4,4’-Isopropylidenediphenol</td>
<td>≤8.6</td>
<td>80-05-7</td>
</tr>
<tr>
<td>Methylenedicyclohexylamine</td>
<td>≤3</td>
<td>1761-71-3</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

#### Eye contact
- Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

#### Inhalation
- Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

#### Skin contact
- Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

#### Ingestion
- Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects
- **Eye contact**: Causes serious eye damage.
- **Inhalation**: No known significant effects or critical hazards.
- **Skin contact**: Causes severe burns. May cause an allergic skin reaction.
- **Ingestion**: Harmful if swallowed.

### Over-exposure signs/symptoms

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B60VQ33 ARMORSEAL® 33 Epoxy Primer/Sealer (Part B) Hardener  
SHW-85-NA-GHS-US
Section 4. First aid measures

**Eye contact**: Adverse symptoms may include the following:
- Pain
- Watering
- Redness

**Inhalation**: Adverse symptoms may include the following:
- Reduced fetal weight
- Increase in fetal deaths
- Skeletal malformations

**Skin contact**: Adverse symptoms may include the following:
- Pain or irritation
- Redness
- Blisters
- Reduced fetal weight
- Increase in fetal deaths
- Skeletal malformations

**Ingestion**: Adverse symptoms may include the following:
- Stomach pains
- Reduced fetal weight
- Increase in fetal deaths
- Skeletal malformations

**Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to physician**: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments**: No specific treatment.

**Protection of first-aiders**: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing media**: Use dry chemical, CO₂, water spray (fog) or foam.

**Unsuitable extinguishing media**: Do not use water jet.

**Specific hazards arising from the chemical**: Combustible liquid. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

**Hazardous thermal decomposition products**: Decomposition products may include the following materials:
- Carbon dioxide
- Carbon monoxide
- Nitrogen oxides
Section 5. Fire-fighting measures

**Special protective actions for fire-fighters**: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters**: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

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

**For non-emergency personnel**: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders**: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions**: This product contains a Significant New Use Rule (SNUR) Chemical. Do not allow this product to enter drains, sewers, wastewater treatment systems, groundwater, streams, lakes or ponds. See Environmental Data Sheet (EDS) for additional details.

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Methods and materials for containment and cleaning up**

**Small spill**: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill**: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

**Precautions for safe handling**

**Protective measures**: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof...
Section 7. Handling and storage

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits (OSHA United States)

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>CAS #</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-Nonylphenol</td>
<td>84852-15-3</td>
<td>None.</td>
</tr>
</tbody>
</table>
| Diethylenetriamine               | 111-40-0       | ACGIH TLV (United States, 3/2019).  
Absorbed through skin.  
TWA: 1 ppm 8 hours.  
TWA: 4.2 mg/m³ 8 hours.  
NIOSH REL (United States, 10/2016).  
Absorbed through skin.  
TWA: 1 ppm 8 hours.  
TWA: 4 mg/m³ 10 hours.  
AIHA WEEL (United States, 7/2018).  
TWA: 10 ppm 8 hours. |
| Phenylmethanol                   | 100-51-6       | None.                                               |
| Amino Polymer                    | 135108-88-2    | None.                                               |
| 4,4’-Isopropylidenediphenol     | 80-05-7        | None.                                               |
| Methyleneedicyclohexylamine      | 1761-71-3      | None.                                               |

Occupational exposure limits (Canada)

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>CAS #</th>
<th>Exposure limits</th>
</tr>
</thead>
</table>
| Diethylenetriamine               | 111-40-0       | CA Alberta Provincial (Canada, 6/2018).  
Absorbed through skin.  
8 hrs OEL: 4.2 mg/m³ 8 hours.  
8 hrs OEL: 1 ppm 8 hours.  
CA British Columbia Provincial (Canada, 5/2019).  
Absorbed through skin.  
TWA: 1 ppm 8 hours.  
CA Ontario Provincial (Canada, 1/2018).  
Absorbed through skin.  
TWA: 1 ppm 8 hours.  
CA Quebec Provincial (Canada, 1/2014).  
Absorbed through skin.  
TWAEV: 1 ppm 8 hours.  
TWAEV: 4.2 mg/m³ 8 hours.  
CA Saskatchewan Provincial (Canada, 7/2013).  
Absorbed through skin. |
Section 8. Exposure controls/personal protection

### Hand protection
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

### Safety eyewear
Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

### Eye/face protection

### Body protection
Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

### Other skin protection
Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

### Hygiene measures
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

### Skin protection
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

### Individual protection measures

### Appropriate engineering controls
Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

### Environmental exposure controls
This product contains a Significant New Use Rule (SNUR) Chemical. Do not allow this product to enter drains, sewers, wastewater treatment systems, groundwater, streams, lakes or ponds. See Environmental Data Sheet (EDS) for additional details.

### Emissions from ventilation or work process equipment
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Occupational exposure limits (Mexico)

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS #</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzyl alcohol</td>
<td>100-51-6</td>
<td>STEL: 2 ppm 15 minutes. TWA: 1 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AIHA WEEL (United States, 7/2018). TWA: 10 ppm 8 hours.</td>
</tr>
</tbody>
</table>

### Exposure limits

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS #</th>
<th>Exposure limits</th>
</tr>
</thead>
</table>
**Section 8. Exposure controls/personal protection**

**Respiratory protection**: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Section 9. Physical and chemical properties**

**Appearance**
- **Physical state**: Liquid.
- **Color**: Not available.
- **Odor**: Not available.
- **Odor threshold**: Not available.
- **pH**: Not available.
- **Melting point/freezing point**: Not available.
- **Boiling point.boiling range**: 185°C (365°F)
- **Flash point**: Closed cup: 93°C (199.4°F) [Pensky-Martens Closed Cup]
- **Evaporation rate**: Not available.
- **Flammability (solid, gas)**: Not available.
- **Lower and upper explosive (flammable) limits**: Lower: 1.3%  
  Upper: 13%
- **Vapor pressure**: 0.049 kPa (0.37 mm Hg) [at 20°C]
- **Vapor density**: 3.48 [Air = 1]
- **Relative density**: 0.99
- **Solubility**: Not available.
- **Partition coefficient: n-octanol/water**: Not available.
- **Auto-ignition temperature**: Not available.
- **Decomposition temperature**: Not available.
- **Viscosity**: Kinematic (40°C (104°F)): >0.205 cm²/s (>20.5 cSt)
- **Molecular weight**: Not applicable.
- **Aerosol product**: Not available.
- **Heat of combustion**: 40.103 kJ/g

**Section 10. Stability and reactivity**

**Reactivity**: No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability**: The product is stable.

**Possibility of hazardous reactions**: Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid**: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

**Incompatible materials**: Reactive or incompatible with the following materials: oxidizing materials.
Section 10. Stability and reactivity

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-Nonylphenol</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>1300 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Diethylenetriamine</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>1090 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Phenylmethanol</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>2000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>4,4'-Isopropylidenediphenol</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>1230 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>1200 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-Nonylphenol</td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>100 mg 24 hours</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>500 mg</td>
<td>-</td>
</tr>
<tr>
<td>Diethylenetriamine</td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>100 % 24 hours</td>
<td>-</td>
</tr>
<tr>
<td>Phenylmethanol</td>
<td>Skin - Mild irritant</td>
<td>Man</td>
<td>-</td>
<td>16 mg 48 hours</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Pig</td>
<td>-</td>
<td>100 % 24 hours</td>
<td>-</td>
</tr>
<tr>
<td>4,4'-Isopropylidenediphenol</td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>250 ug 24 hours</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>500 mg 24 hours</td>
<td>-</td>
</tr>
<tr>
<td>Methylenedicyclohexylamine</td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>250 mg 24 hours</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>10 Ul 24 hours</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)
### Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phenylmethanol</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Narcotic effects</td>
</tr>
<tr>
<td>4,4’-Isopropylidenediphenol</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Respiratory tract irritation</td>
</tr>
</tbody>
</table>

#### Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phenylmethanol</td>
<td>Category 2</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
<tr>
<td>Amino Polymer</td>
<td>Category 2</td>
<td>Oral</td>
<td>Not determined</td>
</tr>
<tr>
<td>Methylene-dicyclohexylamine</td>
<td>Category 2</td>
<td>Oral</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

**Aspiration hazard**  
Not available.

**Information on the likely routes of exposure**

**Potential acute health effects**

- **Eye contact**: Causes serious eye damage.
- **Inhalation**: No known significant effects or critical hazards.
- **Skin contact**: Causes severe burns. May cause an allergic skin reaction.
- **Ingestion**: Harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics**

- **Eye contact**: Adverse symptoms may include the following:  
  - pain  
  - watering  
  - redness

- **Inhalation**: Adverse symptoms may include the following:  
  - reduced fetal weight  
  - increase in fetal deaths  
  - skeletal malformations

- **Skin contact**: Adverse symptoms may include the following:  
  - pain or irritation  
  - redness  
  - blistering may occur  
  - reduced fetal weight  
  - increase in fetal deaths  
  - skeletal malformations

- **Ingestion**: Adverse symptoms may include the following:  
  - stomach pains  
  - reduced fetal weight  
  - increase in fetal deaths  
  - skeletal malformations

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

**Potential immediate effects**: Not available.
Section 11. Toxicological information

Potential delayed effects : Not available.

Long term exposure : Not available.

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : May damage fertility.

Numerical measures of toxicity

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>1825.11 mg/kg</td>
</tr>
<tr>
<td>Dermal</td>
<td>5138.77 mg/kg</td>
</tr>
<tr>
<td>Inhalation (vapors)</td>
<td>88.32 mg/l</td>
</tr>
</tbody>
</table>

Section 12. Ecological information

Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-Nonylphenol</td>
<td>Acute EC50 0.03 mg/l</td>
<td>Algae - Skeletonema costatum</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 0.027 mg/l</td>
<td>Algae - Skeletonema costatum</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 137 µg/l</td>
<td>Crustaceans - Eohaustorius estuarius - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 17 µg/l</td>
<td>Fish - Pleuronectes americanus - Larvae</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic EC10 0.012 mg/l</td>
<td>Algae - Skeletonema costatum</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 5 µg/l</td>
<td>Crustaceans - Gammarus fossarum - Adult</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 7.4 µg/l</td>
<td>Fish - Pimephales promelas - Embryo</td>
<td>33 days</td>
</tr>
<tr>
<td>Diethylenetriamine</td>
<td>Acute EC50 345600 µg/l</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 53500 µg/l</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 1014000 µg/l</td>
<td>Fish - Poecilia reticulata</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 10000 µg/l</td>
<td>Fish - Lepomis macrochirus</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 1000 µg/l</td>
<td>Algae - Skeletonema costatum</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 1.506 mg/l</td>
<td>Algae - Prorocentrum minimum - Exponential growth phase</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 7.75 mg/l</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 50.4 µg/l</td>
<td>Crustaceans - Artemia sinica</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 3.5 mg/l</td>
<td>Fish - Rivulus marmoratus</td>
<td>96 hours</td>
</tr>
</tbody>
</table>
Section 12. Ecological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phenylmethanol</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
</tbody>
</table>

Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP_{ow}</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-Nonylphenol</td>
<td>-</td>
<td>740</td>
<td>high</td>
</tr>
<tr>
<td>Diethylenetriamine</td>
<td>-</td>
<td>2.8-6.3</td>
<td>low</td>
</tr>
<tr>
<td>4,4’-Isopropylidenediphenol</td>
<td>-</td>
<td>20-67</td>
<td>low</td>
</tr>
</tbody>
</table>

Mobility in soil

- **Soil/water partition coefficient (K_{oc})**: Not available.

Other adverse effects

- **No known significant effects or critical hazards.**

Section 13. Disposal considerations

- **Disposal methods**: This product contains a Significant New Use Rule (SNUR) Chemical. Do not allow this product to enter drains, sewers, wastewater treatment systems, groundwater, streams, lakes or ponds. See Environmental Data Sheet (EDS) for additional details.

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
### Section 14. Transport information

<table>
<thead>
<tr>
<th>DOT Classification</th>
<th>TDG Classification</th>
<th>Mexico Classification</th>
<th>IATA</th>
<th>IMDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>UN3267</td>
<td>UN3267</td>
<td>UN3267</td>
<td>UN3267</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>Corrosive liquid, basic, organic, n.o.s. (Diethylenetriamine)</td>
<td>Corrosive liquid, basic, organic, n.o.s. (Diethylenetriamine)</td>
<td>Corrosive liquid, basic, organic, n.o.s. (Diethylenetriamine)</td>
<td>Corrosive liquid, basic, organic, n.o.s. (Diethylenetriamine)</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
<td>III</td>
<td>III</td>
<td>III</td>
</tr>
<tr>
<td>Additional information</td>
<td>-</td>
<td>Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8).</td>
<td>-</td>
<td>The environmentally hazardous substance mark may appear if required by other transportation regulations.</td>
</tr>
<tr>
<td>ERG No.</td>
<td>153</td>
<td>ERG No.</td>
<td>153</td>
<td>ERG No.</td>
</tr>
</tbody>
</table>

**Special precautions for user**: Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

**Transport in bulk according to Annex II of MARPOL and the IBC Code**: Not available.

**Proper shipping name**: Not available.

**Ship type**: Not available.

**Pollution category**: Not available.
Section 15. Regulatory information

U.S. Federal regulations

SARA 313
SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

International regulations

International lists

Section 16. Other information

Hazardous Material Information System (U.S.A.)

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLAMMABLE LIQUIDS - Category 4</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>ACUTE TOXICITY (oral) - Category 4</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SKIN CORROSION/IRRITATION - Category 1</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SKIN SENSITIZATION - Category 1</td>
<td>Calculation method</td>
</tr>
<tr>
<td>TOXIC TO REPRODUCTION (Fertility) - Category 1B</td>
<td>Calculation method</td>
</tr>
<tr>
<td>TOXIC TO REPRODUCTION (Unborn child) - Category 2</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

History

Date of printing : 11/28/2019
Date of issue/Date of revision : 11/28/2019
Section 16. Other information

Date of previous issue: 6/26/2019
Version: 12

Key to abbreviations:
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- N/A = Not available
- SGG = Segregation Group
- UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by the manufacturer, including but not limited to the incorporation of products not specified by the manufacturer, or the use or addition of products in proportions not specified by the manufacturer. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.