

## Section 1. Identification

**Product identifier** : OCEANIC HW 443  
**Product code** : 174937 (8200)  
**Uses advised against** : Consumer, private household, general public  
**Product type** : Liquid.  
**Date of issue/Date of revision** : September 11 2019.

| <b>Manufacturer - Supplier</b>                                                                                   | <b>Telephone no.:</b> | <b>Emergency phone:</b>  |
|------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------|
| MacDermid Offshore Solutions<br>(ABN 84 133 834 812)<br>29 Dennis Street<br>Campbellfield, VIC 3061<br>Australia | +61 3 9303 5150       | +61 3 9303 5150 (9-5 PM) |

## Section 2. Hazard(s) identification

**Classification of the substance or mixture** : ACUTE TOXICITY (oral) - Category 4  
 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A  
 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE (kidneys) - Category 2

### GHS label elements

#### **Hazard pictograms**



#### **Signal word**

: **WARNING**

#### **Hazard statements**

: **Harmful if swallowed.**  
**Causes serious eye irritation.**  
**May cause damage to organs through prolonged or repeated exposure. (kidneys)**

### Precautionary statements

#### **Prevention**

: Wear eye or face protection. Do not breathe vapour. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

#### **Response**

: Get medical attention if you feel unwell. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

#### **Storage**

: Store in a well-ventilated place. Keep cool. Keep container tightly closed.

#### **Disposal**

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

#### **Supplemental label elements**

: Not applicable.

**Other hazards which do not result in classification** : None known.

## Section 3. Composition and ingredient information

Substance/mixture : Mixture

| Ingredient name                       | % (w/w) | CAS number |
|---------------------------------------|---------|------------|
| ethanediol                            | 30-40   | 107-21-1   |
| 2,2',2''-nitrilotriethanol            | 1-10    | 102-71-6   |
| 2-(dimethylamino)-2-methylpropan-1-ol | 1-10    | 7005-47-2  |

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 or the environment 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** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Get medical attention following exposure or if feeling unwell. 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** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 15 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : 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. Get medical attention. If necessary, call a poison center or 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 irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Harmful if swallowed.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

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## Section 4. First aid measures

### 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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Firefighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
sulfur oxides

**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.

**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 spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised 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** : Avoid dispersal of spilt 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 material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. 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.

## Section 6. Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the 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 spilt 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). Do not breathe vapour or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

- 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** : Storage temperature: -20 to 40°C (-4 to 104°F). Store in accordance with local regulations. 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. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls and personal protection

### Control parameters

#### Occupational exposure limits

| <u>Ingredient name</u>     | <u>Exposure limits</u>                                                                                                                                                                                                                 |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ethanediol                 | <b>Safe Work Australia (Australia, 1/2014). Absorbed through skin.</b><br>TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Particulate<br>STEL: 104 mg/m <sup>3</sup> 15 minutes. Form: Vapour                                                 |
| 2,2',2''-nitrilotriethanol | TWA: 52 mg/m <sup>3</sup> 8 hours. Form: Vapour<br>TWA: 20 ppm 8 hours. Form: Vapour<br>STEL: 40 ppm 15 minutes. Form: Vapour<br><b>Safe Work Australia (Australia, 1/2014). Skin sensitiser.</b><br>TWA: 5 mg/m <sup>3</sup> 8 hours. |

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

- Environmental exposure controls** : 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.

## Section 8. Exposure controls and personal protection

### Individual protection measures

- 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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : 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.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. 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.
- 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.
- 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.
- Colour** : Yellow.
- Odour** : Amine-like.
- Odour threshold** : Not available.
- pH** : 9.6
- Melting point** : Not available.
- Boiling point** : 100°C (212°F)
- Flash point** : Not available.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapour pressure** : Not available.
- Vapour density** : Not available.
- Relative density** : Not available.
- Solubility** : Not available.
- VOC** : 443.2 g/l

## Section 9. Physical and chemical properties

**Partition coefficient: n-octanol/water** : Not available.

**Auto-ignition temperature** : Not available.

**Decomposition temperature** : Not available.

**Viscosity** : Not available.

**Flow time (ISO 2431)** : Not available.

## 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** : No specific data.

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

**Hazardous polymerisation** : Under normal conditions of storage and use, hazardous polymerisation will not occur.

## Section 11. Toxicological information

### Acute toxicity

| Product/ingredient name    | Result      | Species              | Dose       | Exposure |
|----------------------------|-------------|----------------------|------------|----------|
| ethanediol                 | LD50 Dermal | Mouse - Male, Female | 3500 mg/kg | -        |
|                            | LD50 Oral   | Mouse                | 5500 mg/kg | -        |
|                            | LD50 Oral   | Rat                  | 4700 mg/kg | -        |
| 2,2',2''-nitrilotriethanol | LD50 Oral   | Rat                  | 7.39 g/kg  | -        |

### Irritation/Corrosion

| Product/ingredient name    | Result                 | Species | Score | Exposure                            | Observation |
|----------------------------|------------------------|---------|-------|-------------------------------------|-------------|
| 2,2',2''-nitrilotriethanol | Eyes - Mild irritant   | Rabbit  | -     | 10 milligrams                       | -           |
|                            | Eyes - Severe irritant | Rabbit  | -     | 20 milligrams                       | -           |
|                            | Skin - Mild irritant   | Human   | -     | 72 hours 15 milligrams Intermittent | -           |
|                            | Skin - Severe irritant | Mouse   | -     | 50 Percent                          | -           |
|                            | Skin - Mild irritant   | Rabbit  | -     | 24 hours 560 milligrams             | -           |

### Sensitisation

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Additional information:

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

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## Section 11. Toxicological information

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

| Name       | Category   | Route of exposure | Target organs |
|------------|------------|-------------------|---------------|
| ethanediol | Category 2 | Oral              | kidneys       |

### Aspiration hazard

Not available.

### Potential acute health effects

- Eye contact** : Causes serious eye irritation.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : Harmful if swallowed.

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

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness  
**Inhalation** : No specific data.  
**Skin contact** : No specific data.  
**Ingestion** : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

- Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

- General** : May cause damage to organs through prolonged or repeated exposure.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

## Section 11. Toxicological information

| Route | ATE value    |
|-------|--------------|
| Oral  | 1214.5 mg/kg |

## Section 12. Ecological information

### Toxicity

| Product/ingredient name    | Result                               | Species                                    | Exposure   |
|----------------------------|--------------------------------------|--------------------------------------------|------------|
| ethanediol                 | Acute EC50 >6500 mg/l Fresh water    | Algae - Pseudokirchneriella subcapitata    | 96 hours   |
|                            | Acute EC50 >1995 mg/l Fresh water    | Micro-organism                             | 30 minutes |
|                            | Acute LC50 6900000 µg/l Fresh water  | Crustaceans - Ceriodaphnia dubia - Neonate | 48 hours   |
|                            | Acute LC50 41000000 µg/l Fresh water | Daphnia - Daphnia magna - Neonate          | 48 hours   |
|                            | Acute LC50 8050000 µg/l Fresh water  | Fish - Pimephales promelas                 | 96 hours   |
|                            | Acute EC50 609.98 mg/l Fresh water   | Crustaceans - Ceriodaphnia dubia - Neonate | 48 hours   |
| 2,2',2''-nitrilotriethanol | Acute LC50 11800000 µg/l Fresh water | Fish - Pimephales promelas                 | 96 hours   |
|                            | Chronic NOEC 16000 µg/l Fresh water  | Daphnia - Daphnia magna                    | 21 days    |

### Persistence and degradability

| Product/ingredient name                   | Test | Result                    | Dose | Inoculum |
|-------------------------------------------|------|---------------------------|------|----------|
| 2-(dimethylamino)<br>-2-methylpropan-1-ol | -    | 31 % - Inherent - 28 days | -    | -        |

| Product/ingredient name                   | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------------------------|-------------------|------------|------------------|
| ethanediol                                | -                 | -          | Readily          |
| 2-(dimethylamino)<br>-2-methylpropan-1-ol | -                 | -          | Inherent         |

### Bioaccumulative potential

| Product/ingredient name    | LogP <sub>ow</sub> | BCF  | Potential |
|----------------------------|--------------------|------|-----------|
| ethanediol                 | -1.36              | -    | low       |
| 2,2',2''-nitrilotriethanol | -1                 | <3.9 | low       |

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

Other adverse effects : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimised 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

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## Section 13. Disposal considerations

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. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

|                            | ADG            | ADR/RID        | IMDG           | IATA           |
|----------------------------|----------------|----------------|----------------|----------------|
| UN number                  | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| UN proper shipping name    | -              | -              | -              | -              |
| Transport hazard class(es) | -              | -              | -              | -              |
| Packing group              | -              | -              | -              | -              |
| Environmental hazards      | No.            | No.            | No.            | No.            |
| Additional information     | -              | -              | -              | -              |

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## Section 15. Regulatory information

### Standard Uniform Schedule of Medicine and Poisons

Not regulated.

### Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

### International regulations

#### Inventory list

**United States** : Not determined.

## Section 16. Any other relevant information

### History

**Date of issue/Date of revision** : 9/11/2019

**Date of previous issue** : 8/30/2019

**Version** : 1.01

**Prepared by** **Regulatory Affairs Department**  
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## Section 16. Any other relevant information

### Key to abbreviations

: ADG = Australian Dangerous Goods  
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
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  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
SUSMP = Standard Uniform Schedule of Medicine and Poisons  
UN = United Nations

### Procedure used to derive the classification

| Classification                                                            | Justification      |
|---------------------------------------------------------------------------|--------------------|
| ACUTE TOXICITY (oral) - Category 4                                        | Calculation method |
| SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A                           | Calculation method |
| SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE (kidneys) - Category 2 | Calculation method |

### References

: Not available.

Indicates information that has changed from previously issued version.

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.