

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 01/01/2024

| SECT | ION 4. Identification of the substan | oolmiyturo and of the comp | on v/undorf | oking |
|-------------|--|--|----------------|---------------------------------------|
| <u>3ECT</u> | ION 1: Identification of the substan Product identifier | cermixture and or the comp | any/undert | актту |
| Product | | xture | | |
| Product | | ueDEF Diesel Exhaust Fluid | | |
| SDS ID | | 5065 | | |
| | | | | |
| 1.2. | Relevant identified uses of the substance | • | | |
| Use of t | he substance/mixture : So | olution for NOx reduction in SCR sys | tems | |
| 1.3. | Details of the supplier of the safety data s | heet | | |
| 3100 Sa | rld Industries, LLC anders Road | | | |
| | ook, IL 60062 - USA 559-2000 | | | |
| · · · | dworldind.com | | | |
| 1.4. | Emergency telephone number | | | |
| | | 0 424 9300 (United States); 00 1 70 | 3 527 3887 (In | ternational) |
| Ũ | | nemtrec | , , | , |
| SECT | ION 2: Hazards identification | | | |
| 2.1. | Classification of the substance or mixture | | | |
| | | • | | |
| | S classification | | | |
| Not clas | sified | | | |
| 2.2. | Label elements | | | |
| GHS-U | S labelling | | | |
| Signal v | vord (GHS-US) : No | one | | |
| Hazard | statements (GHS-US) : No | one | | |
| Precaut | ionary statements (GHS-US) : No | one | | |
| 2.3. | Other hazards | | | |
| | tional information available | | | |
| 2.4. | Unknown acute toxicity (GHS US) | | | |
| | available | | | |
| | ION 3: Composition/information on | ingradiante | | |
| | Substances | Ingredients | | |
| 3.1. | | | | |
| Not app | | | | |
| 3.2. | Mixtures | | | |
| Name | | Product identifier | % by wt | GHS-US classification |
| water | | (CAS-No.) 7732-18-5 | 67.5 32.5 | Not classified Not classified |
| urea | | (CAS-No.) 57-13-6 | 52.5 | 1101 0103311100 |
| Full text | of hazard classes and H-statements : see sec | ion 16 | | |
| SECT | ION 4: First aid measures | | | |
| 4.1. | Description of first aid measures | | | |
| | I measures general : Ne | ever give anything by mouth to an un vice (show the label where possible) | | son. If you feel unwell, seek medical |
| First-aid | | sure fresh air breathing. Allow the vi | | |
| | | | | |

persists.

| Suitable extinguishing media : Feam. Dry powder. Carbon dioxide. Sand. Insuitable extinguishing media : Do not use a heavy water stream. Social hazards arising from the substance or mixture Reactivity : No dangerous reactions known under normal conditions of use. S.3. Special protective equipment and precautions for fire-fighters Trefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment. Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. SECTION 6: Accidential release measures S.1. Personal precautions, protective equipment and emergency procedures S.1. Personal precautions, protective equipment and emergency procedures S.1. For non-emergency personnel Emergency procedures : The EPA has no established reportable quantity for spills for this material, secondary containment is not specified. S.1.1. For non-emergency personnel S.1.2. For emergency responders "Protective equipment : Equip cleanup crew with proper protection. Emergency procedures : Ventilate area. S.2. Environmental precautions Protective equipment : Equip cleanup crew with proper protection. Emergency procedures S.3. Methods and material for containment and cleaning up Welhods for cleaning up : Soak up spills with inst solds, such as clay or diatomaceous earth as soon as possible. Collect SECTION Y: Handling and storagep 7.1. Precautions for safe handling Precautions for safe handling : Wash hands and other exposed areas with mild scap and water before eating, drinking or smiking and when leaving work. Provide good ventilation in process area to prevent formation or vapor. 7.2. Conditions for safe handling : Wash hands and other exposed areas with mild scap and water before eating, drinking or smiking and when leaving work. Provide good ventilation in process area to prevent formation or vapor. 7.2. Conditions for | First-aid measures after ingestion | : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. |
|---|--|---|
| 3. Indication of any immediate medical attention and special treatment needed 36. Attinualishing media 5.1 Extinguishing media Suitable extinguishing media : Don to use a heavy water stream. 5.2. Special heards arising from the substance or mixture Teaching in the substance or mixture Is a strength in mixture or mixture 5.3. Special protective equipment and precautions for fire-fighters Trienghting instructions : Use water spray or fog for cooling exposed containers. Exercise caulion when fighting any chemical fire. Prevent fire fighting water from entering the environment. Tool and in fire gatus : Do not lowe a heary water fore equipment, including respiratory protection. Tool and in fire area without proper protective equipment, including respiratory protection. Tool and in fire area without proper protective equipment, including respiratory protection. Special protective equipment and emergency procedures 14.1 For on-emergency personnel 15.2. Environmental proceutions 15.2. Equipment 16.2. For emergency procedures 16.2. Environmental proceutions 17.2. For emergency procedures 18.3. Methods and material for containment and cleaning up | .2. Most important symptoms and | effects, both acute and delayed |
| la additional information available SECTION 55 Firefighting measures SECTION 57 Firefighting media SECTION 57 Firefighting media Sectinguishing media Sectin | | |
| bi additional information available EECTION 55 Firefighting media 4. 5. Section being media 2. Special protective equipment and proceautions for fire-fighters refighting instructions 2. Special protective equipment and proceautions for fire-fighters refighting instructions 2. Special protective equipment and proceautions for fire-fighters refighting instructions 2. Special procective equipment and proceautions for fire-fighters refighting instructions 2. Do not enter fire area without proper protective equipment, including respiratory protection. SECTION 61: Accidential reloase measures 3. The EPA has no established reportable quantity for splils for this material, secondary containment is not specified. 1.1. For one-mergency presonners restructive equipment : E Equip cleanup crew with proper protection. restructive equipment and cleaning up restructive exity weaks and public waters. Notify authorities if liquid enters sewers or public waters. 1.1. For one-mergency presonders restruction for cleaning up : Sock up splils with inert solds, such as ally or diato | .3. Indication of any immediate me | dical attention and special treatment needed |
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| Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. 7.2. Conditions for safe storage, including any incompatibilities Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight, Heat sources. Keep container closed when not in use. Incompatible materials : Strong acids. Strong bases. 7.3. Specific end use(s) No additional information available SECTION 8: Exposure controls/personal protection 8.1. Control parameters | SECTION 7: Handling and storag | e |
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| Heat sources. Keep container closed when not in use. Incompatible materials : Strong acids. Strong bases. 7.3. Specific end use(s) No additional information available SECTION 8: Exposure controls/personal protection 8.1. Control parameters | 7.2. Conditions for safe storage, inc | luding any incompatibilities |
| 7.3. Specific end use(s) No additional information available SECTION 8: Exposure controls/personal protection 8.1. Control parameters | - | Heat sources. Keep container closed when not in use. |
| No additional information available SECTION 8: Exposure controls/personal protection 8.1. Control parameters | | : Strong acids. Strong bases. |
| 8.1. Control parameters | | |
| | SECTION 8: Exposure controls/p | ersonal protection |
| urea (57-13-6) | 8.1. Control parameters | |
| | urea (57-13-6) | |

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water (7732-18-5)

Not applicable

8.2. Appropriate engineering controls

No additional information available

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure. Gloves. Protective goggles.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses

Respiratory protection:

Wear appropriate mask



Other information:

Do not eat, drink or smoke during use.

| SECTION 9: Physical and chemical | |
|--|-------------------------------------|
| 9.1. Information on basic physical and | |
| Physical state | : Liquid |
| Color | : Colorless |
| Odor | : characteristic ammonia odor |
| Odor threshold | : No data available |
| рН | : 9-10 |
| Relative evaporation rate (butylacetate=1) | : <1 |
| Freezing point | : -11 °C (12 °F) |
| Boiling point | : > 100 °C (212 °F) |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : No data available |
| Vapor pressure | : Not Applicable |
| Relative vapor density at 20 °C | : 0.6 H2O, >1 |
| Specific Gravity | : 1.09 |
| Solubility | : Soluble in water. Water: 100 % |
| Log Pow | : No data available |
| Log Kow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive limits | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |
| 9.2. Other information | |
| No additional information available | |
| 01/01/2024 | EN (English) 2/6 |

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|---|--|
| SECTION 10: Stability and reactivity | |
| 10.1. Reactivity | |
| No dangerous reactions known under normal con | ditions of use. |
| 10.2. Chemical stability | |
| Stable under normal conditions. | |
| 10.3. Possibility of hazardous reactions | |
| Not established. | |
| 10.4. Conditions to avoid | |
| Not established. | |
| 10.5. Incompatible materials | |
| Strong acids. Strong bases. oxidizing agents (per | oxides, chromates, dichromates). |
| 10.6. Hazardous decomposition products | |
| Carbon monoxide. Carbon dioxide. Fume. | |
| SECTION 11: Toxicological informati | on |
| 11.1. Information on toxicological effects | |
| Acute toxicity | : Not classified |
| - | |
| urea (57-13-6) LD50 oral rat | 14300 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male, Experimental value) |
| ATE US (oral) | 14300 mg/kg bodyweight |
| Skin corrosion/irritation | : Not classified |
| | pH: 9 - 10 |
| Serious eye damage/irritation | : Not classified |
| | pH: 9 - 10 |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : Not classified |
| | |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |
| Potential adverse human health effects and symptoms | : Based on available data, the classification criteria are not met. |
| Symptoms/effects | : Not expected to present a significant hazard under anticipated conditions of normal use. |
| SECTION 12: Ecological information | |

SECTION 12: Ecological information

| 12.1. Toxicity | |
|----------------|--|
| urea (57-13-6) | |
| LC50 fish 1 | > 6,810.00 mg/l (96 h, Leuciscus idus, Experimental value, Nominal concentration) |
| EC50 Daphnia 1 | > 10,000.00 mg/l (DIN 38412-11, 24 h, Daphnia magna, Static system, Fresh water, Experimental value, Nominal concentration) |

12.2. Persistence and degradability

| urea (57-13-6) | |
|-------------------------------|------------------------------------|
| Persistence and degradability | Readily biodegradable in water. |
| ThOD | 0.27 g O ₂ /g substance |

12.3. **Bioaccumulative potential** urea (57-13-6) BCF fish 1 1.00 (72 h, Brachydanio rerio, Fresh water, Literature study)

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| urea (57-13-6) | |
|---------------------------|--|
| Log Pow | < -1.73 (Experimental value, EU Method A.8: Partition Coefficient) |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

12.4. Mobility in soil

| 12.4. Mobility in soil | |
|--|--|
| urea (57-13-6) | |
| Mobility in soil | Not applicable |
| Log Koc | -1.431.19 (log Koc, Calculated value) |
| Ecology - soil | Highly mobile in soil. |
| | |
| 12.5. Other adverse effects | |
| Effect on the ozone layer | : No additional information available |
| | |
| Other information | : Avoid release to the environment. |
| | |
| SECTION 13: Disposal consideration | S |
| 13.1. Waste treatment methods | |
| Product/Packaging disposal recommendations | : As a non-hazardous liquid waste, it should be solidified with stabilizing agents such as sand, fly ash, or clay absorbent, so that no free liquid remains before disposal to an industrial waste landfill. |
| Ecology - waste materials | : Avoid release to the environment. |
| SECTION 14: Transport information | |

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transportation of Dangerous Goods

Refer to current TDG Canada for further Canadian regulations

ADR

Not regulated

Transport by sea

In accordance with IMDG / IMO Not regulated

Air transport

In accordance with IATA / ICAO Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

| BlueDEF Diesel Exhaust Fluid | |
|--|---|
| EPA TSCA Regulatory Flag | Toxic Substances Control Act (TSCA): The intentional ingredients of this product are listed |
| CERCLA RQ | None. This material is not classified as hazardous under U.S. EPA regulations. |
| SARA Section 302 Threshold Planning Quantity (TPQ) | No extremely hazardous substances are in this product. |
| SARA Section 311/312 Hazard Classes | Urea. No hazards resulting from the material as supplied. |

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| urea (57-13-6) | |
|---|---|
| EPA TSCA Regulatory Flag | Toxic Substances Control Act (TSCA): The intentional ingredients of this product are listed |
| water (7732-18-5) | |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |

15.2. International regulations

| CANADA | |
|------------------------------|---|
| BlueDEF Diesel Exhaust Fluid | |
| WHMIS Classification | This SDS has been prepared according to the criteria of the Hazardous Products Regulations (HPR) (WHMIS 2015) and the SDS contains all of the information required by the HPR. Applicable GHS information is listed in section 2.2 of this SDS. |

15.3. US State regulations

California Proposition 65 - This product does not contain any substance(s) known to the state of California to cause cancer, developmental toxicity and/or reproductive toxicity

| Revision date | : 01/01/2024 |
|----------------------------|---|
| | |
| | |
| | |
| | |
| Full text of H-statements: | |
| | |
| NFPA health hazard | : 1 - Materials that, under emergency conditions, can cause significant irritation. |
| NFPA fire hazard | : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. |
| NFPA reactivity | : 0 - Material that in themselves are normally stable, even under fire conditions. |

SDS GHS US (GHS HazCom 2012) OWI

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