

# SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006

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

| 1.1. Product identifier             |   |
|-------------------------------------|---|
| Trade name or designation           | FERODO Brake Fluid  |
| of the mixture                      |   |
| Registration number                 | -   |
| Synonyms                            | DOT 5.1 - All grades, DOT 4 - grades with Wet Boiling Points > 165 °C.  |
| Product code                        | FBE050, FBE050A, FBE050B, FBL100, FBL100A, FBL100B, FBL500, FBL500A, FBL500B, FBZ025, FBZ050, FBZ050A, FBZ050B, FBZ100, FBZ100A, FBZ100B, FBZ500, FBZ500A, FBZ500B, FBZ2000 |
| Issue date                          | 09-November-2020  |
| Version number                      | 03  |
| Revision date                       | 18-June-2024  |
| Supersedes date                     | 13-May-2024   |
| 1.2. Relevant identified uses of t  | he substance or mixture and uses advised against  |
| Identified uses                     | Hydraulic fluid in automotive brake/clutch system.  |
| Uses advised against                | None known.   |
| 1.3. Details of the supplier of the | e safety data sheet   |
| Manufacturer/Supplier               |   |
| Company name                        | Federal-Mogul Global Aftermarket EMEA bv  |
| Address                             | Prins Boudewijnlaan 5   |
|                                     | B-2550 Kontich  |
|                                     | Belgium   |
| Telephone                           | +32 3 450 83 10   |
| Contact person                      | Braking_EMEA@DRiV.com   |
| 1.4. Emergency telephone number     | 3E Global Incident Response Hotline   |
|                                     | +44 20 35147487   |
|                                     | Access code: 335908   |
| General emergency                   | 112 or 999 SDS/Product information may not be available for the Emergency Service.  |
| Non-emergency medical<br>helpline   | 111 SDS/Product information may not be available for the Emergency Service.   |

# **SECTION 2: Hazards identification**

### 2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

### Classification according to Regulation (EC) No 1272/2008 as amended

#### Health hazards

| Reproductive toxicity (fertility, the unborn | Category 2 |
|--|------------|
| child)                                       |            |

H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child.

# 2.2. Label elements

### Label according to Regulation (EC) No. 1272/2008 as amended

Contains:

Tris[2-[2-(2-methoxyethoxy) ethoxy]ethyl] orthoborate

Hazard pictograms

Warning

Hazard statements

Signal word

| H361fd                                | Suspected of damaging fertility. Suspected of damaging the unborn child.   |
|---------------------------------------|--|
| Precautionary statements              |  |
| Prevention                            |  |
| P101<br>P102<br>P280                  | If medical advice is needed, have product container or label at hand.<br>Keep out of reach of children.<br>Wear protective gloves/protective clothing/eye protection/face protection.              |
| Response                              |  |
| P308 + P313                           | IF exposed or concerned: Get medical advice/attention.   |
| Storage                               |  |
| P405                                  | Store locked up.   |
| Disposal                              |  |
| P501                                  | Dispose of contents/container in accordance with local/regional/national/international regulations.  |
| Supplemental information on the label | None.  |
| 2.3. Other hazards                    | This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. |

# **SECTION 3: Composition/information on ingredients**

### 3.2. Mixtures

### **General information**

| Chemical name  | %  | CAS-No. / EC No.                               | <b>REACH Registration No.</b>  | Index No.                              | Notes                    |
|--|--|--|--|--|--------------------------|
| Tris[2-[2-(2-methoxyethoxy)<br>ethoxy]ethyl] orthoborate                             | 80 - 95  | 30989-05-0<br>250-418-4                        | 01-2119462824-33-XXXX  | -                                      |                          |
| Classif  | ication: Repr. 2;H3                                  | 861fd  |  |  |                          |
| Triethylene glycol monobutyl e   | ther 10 - 15   | 143-22-6<br>205-592-6                          | 01-2119475107-38-XXXX  | 603-183-00-0                           |                          |
|  | ication: Eye Dam.                                    |  |  |  |                          |
| Specific Concentration   | Limits: Eye Dam.                                     | 1;H318: C ≥ 30 %, E                            | ye Irrit. 2;H319: 20 % ≤ C < 3   | 30 %                                   |                          |
| 3,6,9,12-Tetraoxahexadecan-  | I-ol 1 - 3   | 1559-34-8<br>216-322-1                         | 01-2120768763-41-XXXX  | -                                      |                          |
| Classif  | ication: Eye Irrit. 2                                | ;H319  |  |  |                          |
| 2-(2-Methoxyethoxy)ethanol   | < 1  | 111-77-3<br>203-906-6                          | 01-2119475100-52-XXXX  | 603-107-00-6                           | #                        |
|  | i <b>cation:</b> Repr. 1B;H                          |  |  |  |                          |
| Specific Concentration   | Limits: Repr. 1B;H                                   | 1360D: C ≥ 3 %                                 |  |  |                          |
| Composition comments<br>SECTION 4: First aid meas<br>General information             | percent by volume<br><b>ures</b>                     | e. The full text for all                       | eight unless ingredient is a ga<br>H-statements is displayed in<br>are of the material(s) involved | section 16.                            |                          |
|  |  |  | cerned: Get medical advice/a   |  |                          |
| 4.1. Description of first aid meas   |  |  |  |  |                          |
| Inhalation   | Move injured pers<br>if any discomfort of            |  | keep person calm under obs   | ervation. Get me                       | dical attention          |
| Skin contact   | Remove contamir<br>irritation develops               |  | se skin thoroughly with water  | . Get medical atte                     | ention if                |
| Eye contact  |  |  | vater for at least 15 minutes.<br>ng. If eye irritation persists: G                                |  |                          |
| Ingestion  |  | oughly with water and<br>tion if any discomfor | d give large amounts of milk o<br>t continues.   | or water, if perso                     | n is conscious.          |
| 4.2. Most important symptoms<br>and effects, both acute and<br>delayed               | Exposed individua<br>nervous system. I<br>swallowed. | als may experience e<br>Headaches, dizzines    | ye tearing, redness, and disc<br>s and nausea. May cause ab  | comfort. Defats th<br>dominal discomfo | e skin. Centra<br>ort if |
| 4.3. Indication of any<br>mmediate medical attention<br>and special treatment needed | Provide general s                                    | upportive measures                             | and treat symptomatically. Sy  | ymptoms may be                         | delayed.                 |
| FERODO Brake Fluid   |  |  |  | 9                                      | DS Great Britair         |

# **SECTION 5: Firefighting measures**

| 0 0  |  |
|--|--|
| General fire hazards                                       | Will burn if involved in a fire.   |
| 5.1. Extinguishing media                                   |  |
| Suitable extinguishing media                               | Alcohol resistant foam. Dry powder. Carbon dioxide (CO2). Water mist.  |
| Unsuitable extinguishing media                             | Water jet.   |
| 5.2. Special hazards arising from the substance or mixture | During fire, gases hazardous to health may be formed.  |
| 5.3. Advice for firefighters                               |  |
| Special protective equipment for firefighters              | Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. |
| Special fire fighting<br>procedures                        | Use standard firefighting procedures and consider the hazards of other involved materials.<br>Containers close to fire should be removed immediately or cooled with water.   |

### **SECTION 6:** Accidental release measures

| 6.1. Personal precautions, protective equipment and emergency procedures |  |  |
|--|--|--|
| For non-emergency<br>personnel   | Follow standard emergency procedure. Avoid breathing mist/vapours. Wear appropriate personal protective equipment (See Section 8).   |  |
| For emergency responders   | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Avoid contact with skin and eyes. Ensure adequate ventilation. Wear appropriate protective equipment and clothing during clean-up. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS. |  |
| 6.2. Environmental precautions   | Avoid discharge into drains, water courses or onto the ground.   |  |
| 6.3. Methods and material for containment and cleaning up                | Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.  |  |
|  | Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.   |  |
|  | Never return spills to original containers for re-use.   |  |
| 6.4. Reference to other sections   | For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.  |  |

# **SECTION 7: Handling and storage**

| 7.1. Precautions for safe handling                                      | Obtain special instructions before use. Do not handle until all safety precautions have been read<br>and understood. Avoid breathing mist/vapours. Avoid contact with skin and eyes. Avoid prolonged<br>exposure. Pregnant or breastfeeding women must not handle this product. Provide adequate<br>ventilation. Wear appropriate personal protective equipment. For personal protection, see Section<br>8 of the SDS. Observe good industrial hygiene practices. |
|---|---|
| 7.2. Conditions for safe<br>storage, including any<br>incompatibilities | Store locked up. Keep container in a well-ventilated place. Store between 15°C - 30°C (60°F - 86°F). Store away from incompatible materials (see section 10 of the SDS).  |
| 7.3. Specific end use(s)  | Hydraulic fluid in automotive brake/clutch system.  |

# **SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

#### **Occupational exposure limits**

UK. OELs. Workplace Exposure Limits (WELs) (EH40/2005 (Fourth Edition 2020)), Table 1

| Components                                   | Туре                                      | Value             |                        |
|--|---|-------------------|------------------------|
| 2-(2-Methoxyethoxy)ethanol<br>(CAS 111-77-3) | TWA                                       | 50.1 mg/m3        |                        |
|  |   | 10 ppm            |                        |
| Biological limit values                      | No biological exposure limits noted for t | he ingredient(s). |                        |
| Recommended monitoring<br>procedures         | Follow standard monitoring procedures.    |                   |                        |
| Derived no effect levels (DNELs              | )   |                   |                        |
| General population                           |   |                   |                        |
| Components                                   | Value                                     | Assessment factor | Notes                  |
| 2-(2-Methoxyethoxy)ethanol (                 | CAS 111-77-3)                             |                   |                        |
| Long-term, Systemic, De                      | rmal 1.33 mg/kg bw/day                    | 30                | Repeated dose toxicity |
| FERODO Brake Fluid                           |   |                   | SDS Great Britain      |
| 956310 Version #: 03 Revision d              | ate: 18-June-2024 Issue date: 09-November | -2020             | 3/9                    |

| Long-term, Systemic, Inhalation<br>Long-term, Systemic, Oral | 30.1 mg/m3<br>7.5 mg/kg bw/day  | 120                              | Repeated dose toxicity |
|--|---------------------------------|----------------------------------|------------------------|
| 3,6,9,12-Tetraoxahexadecan-1-ol (CAS 155                     |                                 |                                  |                        |
| Long-term, Systemic, Oral                                    | ,<br>3 mg/kg bw/day             | 200                              | Repeated dose toxicity |
| Triethylene glycol monobutyl ether (CAS 14                   |                                 |                                  |                        |
| Long-term, Systemic, Dermal                                  | ,<br>125 mg/kg/day              | 40                               | Repeated dose toxicity |
| Long-term, Systemic, Inhalation                              | 117 mg/m3                       | 10                               | Repeated dose toxicity |
| Long-term, Systemic, Oral                                    | 12.5 mg/kg/day                  | 40                               | Repeated dose toxicity |
| Tris[2-[2-(2-methoxyethoxy) ethoxy]ethyl] or                 | rthoborate (CAS 30989           | 9-05-0)                          |                        |
| Long-term, Systemic, Dermal                                  | 10 mg/kg                        | 100                              | Repeated dose toxicity |
| Long-term, Systemic, Oral                                    | 10 mg/kg                        | 100                              | Repeated dose toxicity |
| <u>Workers</u>   |                                 |                                  |                        |
| Components   | Value                           | Assessment factor                | Notes                  |
| 2-(2-Methoxyethoxy)ethanol (CAS 111-77-3                     | 3)                              |                                  |                        |
| Long-term, Systemic, Dermal Long-term, Systemic, Inhalation  | 2.22 mg/kg bw/day<br>50.1 mg/m3 | y 18                             | Repeated dose toxicity |
| Triethylene glycol monobutyl ether (CAS 14                   | -                               |                                  |                        |
| Long-term, Systemic, Dermal                                  | 208 mg/kg/day                   | 24                               | Repeated dose toxicity |
| Long-term, Systemic, Inhalation                              | 195 mg/m3                       | 6                                | Repeated dose toxicity |
| Tris[2-[2-(2-methoxyethoxy) ethoxy]ethyl] or                 | 0                               |                                  | repeated door toxicity |
| Long-term, Systemic, Dermal                                  | 16.7 mg/kg                      | 60                               | Repeated dose toxicity |
|  | TO.7 HIG/Kg                     | 00                               | Repeated dose toxicity |
| edicted no effect concentrations (PNECs)                     | N. I                            |                                  | Netes                  |
| Components   | Value                           | Assessment factor                | Notes                  |
| 2-(2-Methoxyethoxy)ethanol (CAS 111-77-3                     |                                 | 100                              |                        |
| Freshwater<br>Intermittent releases                          | 12 mg/l                         | 100                              |                        |
| Marine water   | 12 mg/l<br>1.2 mg/l             | 1000                             |                        |
| Secondary poisoning  | 0.09 g/kg                       | 200                              | Oral                   |
| Sediment (freshwater)  | 44.4 mg/kg                      |                                  |                        |
| Sediment (marine water)                                      | 0.44 mg/kg                      |                                  |                        |
| Soil   | 2.1 mg/kg                       |                                  |                        |
| STP  | 10000 mg/l                      | 1                                |                        |
| 3,6,9,12-Tetraoxahexadecan-1-ol (CAS 155                     |                                 |                                  |                        |
| Freshwater   | 2.5 mg/l                        | 1000                             |                        |
| Marine water   | 0.25 mg/l                       | 1000                             |                        |
| Sediment (freshwater)<br>Sediment (marine water)             | 9.49 mg/kg<br>0.9 mg/kg         |                                  |                        |
| Soil   | 0.46 mg/kg                      |                                  |                        |
| Triethylene glycol monobutyl ether (CAS 14                   |                                 |                                  |                        |
| Freshwater   | 2 mg/l                          | 50                               |                        |
| Intermittent releases  | 8.4 mg/l                        | 30                               |                        |
| Marine water   | 0.2 mg/l                        | 500                              |                        |
| Secondary poisoning  | 111 mg/kg                       | 90                               | Oral                   |
| Sediment (freshwater)  | 7.7 mg/kg                       |                                  |                        |
| Sediment (marine water)                                      | 0.77 mg/kg                      |                                  |                        |
| Soil   | 0.47 mg/kg                      | 10                               |                        |
| STP  | 200 mg/l                        | 10                               |                        |
| Tris[2-[2-(2-methoxyethoxy) ethoxy]ethyl] or                 | ,                               | ,                                |                        |
| Freshwater   | 0.211 mg/l                      | 1000                             |                        |
| Intermittent releases<br>Marine water                        | 2.112 mg/l<br>0.021 mg/l        | 10000                            |                        |
| Sediment (freshwater)  | 0.76 mg/kg                      | 10000                            |                        |
| Sediment (marine water)                                      | 0.076 mg/kg                     |                                  |                        |
| Soil   | 0.028 mg/kg                     |                                  |                        |
| STP  | 100 mg/l                        | 10                               |                        |
| posure guidelines  |                                 |                                  |                        |
| UK EH40 WEL: Skin designation                                |                                 |                                  |                        |
| 2-(2-Methoxyethoxy)ethanol (CAS 111-                         | -77-3) Ca                       | an be absorbed through the skin. |                        |
| 2. Exposure controls   | ,                               | <b>J</b>                         |                        |
| ••••••••••••••   |                                 |                                  |                        |

| Appropriate engineering controls | Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide easy access to water supply and eye wash facilities.  |
|----------------------------------|---|
| Individual protection measures,  | such as personal protective equipment   |
| General information              | Personal protection equipment should be chosen according to the CEN standards and in<br>discussion with the supplier of the personal protective equipment.  |
| Eye/face protection              | Wear safety glasses with side shields (or goggles). Eye protection should meet standard EN 166.   |
| Skin protection                  |   |
| - Hand protection                | Wear appropriate chemical resistant gloves. Full contact: Glove material: Butyl rubber. Use gloves with breakthrough time of >480 minutes minutes. Minimum glove thickness 0.3 mm. Nitrile. Use gloves with breakthrough time of > 480 minutes. Minimum glove thickness 0.2 mm. Always wear chemical-resistant protective gloves that comply with EN 374 to handle this product. Observe good industrial hygiene practices and wash gloves with soap and water before removing them. Assess the working conditions and always consult your glove supplier for information on the most suitable type of glove for each task and the required material, thickness, and breakthrough time specifications. The use of type-B gloves in accordance with EN 374 is recommended as a minimum protection against intermittent or splash contact. Consult your supplier to find the most suitable option for the product in question. The requirements of EN 388 must be taken into account for applications involving mechanical hazards with the risk of abrasion or incision. The requirements outlined in EN 407 must be taken into consideration for tasks involving thermal hazards. |
| - Other                          | Wear appropriate clothing to prevent repeated or prolonged skin contact.  |
| Respiratory protection           | In case of inadequate ventilation or when the product is heated, use suitable respiratory equipment with gas filter (type A2). Respiratory protection should meet standard EN 14387. Appropriate respirator selection should be made by a qualified professional.   |
| Thermal hazards                  | When material is heated, wear gloves to protect against thermal burns.  |
| Hygiene measures                 | Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Observe any medical surveillance requirements.  |
| Environmental exposure controls  | Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.  |
| SECTION & Developed and          |   |

# **SECTION 9: Physical and chemical properties**

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

| Appearance                              |                                 |
|---|---------------------------------|
| Physical state                          | Liquid.                         |
| Form                                    | Liquid.                         |
| Colour                                  | Amber.                          |
| Odour                                   | Mild.                           |
| Odour threshold                         | Not available.                  |
| рН                                      | 7 - 10.5                        |
| Melting point/freezing point            | < -50 °C (< -58 °F)             |
| Initial boiling point and boiling range | > 260 °C (> 500 °F)             |
| Flash point                             | > 120 °C (> 248 °F)             |
| Evaporation rate                        | 0.01 (n-butylacetate = 100)     |
| Flammability (solid, gas)               | Not applicable.                 |
| Upper/lower flammability or exp         | losive limits                   |
| Explosive limit - lower ( %)            | Property has not been measured. |
| Explosive limit – upper<br>(%)          | Property has not been measured. |
| Vapour pressure                         | 1 mbar                          |
| Vapour density                          | Property has not been measured. |
| Relative density                        | 1.02 - 1.07                     |
| Solubility(ies)                         |                                 |
| Solubility (water)                      | Soluble in water.               |
| Partition coefficient                   | 1.5                             |
| (n-octanol/water)                       |                                 |
| FERODO Brake Fluid                      |                                 |

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| Auto-ignition temperature | > 280 °C (> 536 °F)             |
|---------------------------|---------------------------------|
| Decomposition temperature | 300 °C (572 °F)                 |
| Viscosity                 | Property has not been measured. |
| Explosive properties      | Not explosive.                  |
| Oxidising properties      | Not oxidising.                  |
| 9.2. Other information    |                                 |
| Kinematic viscosity       | 5 - 10 cSt (20 °C (68 °F))      |

# **SECTION 10: Stability and reactivity**

| 10.1. Reactivity                          | The product is stable and non reactive under normal conditions of use, storage and transport.                       |
|---|---|
| 10.2. Chemical stability                  | Stable under normal temperature conditions. Glycol Ethers can form peroxides on storage – do not distil to dryness. |
| 10.3. Possibility of hazardous reactions  | Will not occur.   |
| 10.4. Conditions to avoid                 | Avoid exposure to high temperatures or direct sunlight. Contact with incompatible materials.                        |
| 10.5. Incompatible materials              | Strong oxidizers, strong acids, and strong bases. Strong reducing agents.   |
| 10.6. Hazardous<br>decomposition products | Fire or high temperatures create: Carbon monoxide. Carbon dioxide.  |

# **SECTION 11: Toxicological information**

|                     | • |  |
|---------------------|---|--|
| General information |   | Occupational exposure to the substance or mixture may cause adverse effects. |

| Information on likely routes of exposure |  |  |  |
|--|--|--|--|
| Inhalation                               | Glycol does not easily form a vapour at normal temperatures. Therefore, it must be heated or misted before inhalation exposure can occur.  |  |  |
| Skin contact                             | Prolonged or repeated contact may dry skin and cause dermatitis.   |  |  |
| Eye contact                              | Based on available data, the classification criteria are not met.  |  |  |
| Ingestion                                | May cause discomfort if swallowed.   |  |  |
| Symptoms                                 | Exposed individuals may experience eye tearing, redness, and discomfort. Defats the skin.<br>Central nervous system. Headaches, dizziness and nausea. May cause abdominal discomfort if swallowed. |  |  |

### 11.1. Information on toxicological effects

| Acute toxicity                    |                                  |   |  |
|-----------------------------------|----------------------------------|---|--|
| Product                           | Species                          | Test Results  |  |
| FERODO Brake Fluid (CAS Miz       | xture)                           |   |  |
| <u>Acute</u>                      |                                  |   |  |
| Dermal                            |                                  |   |  |
| LD50                              | Rabbit                           | > 3000 mg/kg  |  |
| Oral                              |                                  |   |  |
| LD50                              | Rat                              | > 5000 mg/kg  |  |
| Components                        | Species                          | Test Results  |  |
| 2-(2-Methoxyethoxy)ethanol (C     | AS 111-77-3)                     |   |  |
| <u>Acute</u>                      |                                  |   |  |
| Dermal                            |                                  |   |  |
| LD50                              | Rabbit                           | 8980 ml/kg  |  |
| Oral                              |                                  |   |  |
| LD50                              | Rat                              | 6700 ml/kg  |  |
| Triethylene glycol monobutyl et   | ther (CAS 143-22-6)              |   |  |
| Acute                             |                                  |   |  |
| Dermal                            |                                  |   |  |
| LD50                              | Rabbit                           | 3540 mg/kg  |  |
| Oral                              |                                  |   |  |
| LD50                              | Rat                              | 5300 mg/kg  |  |
| Skin corrosion/irritation         | Based on available data, the cla | Based on available data, the classification criteria are not met. |  |
| Serious eye damage/eye irritation | Based on available data, the cla | Based on available data, the classification criteria are not met. |  |
| Respiratory sensitisation         | Based on available data, the cla | assification criteria are not met.                                |  |

| Skin sensitisation                                 | Based on available data, the classification criteria are not met.  |
|--|--|
| Germ cell mutagenicity                             | Based on available data, the classification criteria are not met.  |
| Carcinogenicity                                    | Based on available data, the classification criteria are not met.  |
| Reproductive toxicity                              | Suspected of damaging fertility. Suspected of damaging the unborn child.   |
| Specific target organ toxicity - single exposure   | Based on available data, the classification criteria are not met.  |
| Specific target organ toxicity - repeated exposure | Due to partial or complete lack of data the classification is not possible.  |
| Aspiration hazard                                  | Based on available data, the classification criteria are not met.  |
| Mixture versus substance<br>information            | No information available.  |
| Other information                                  | Glycol ethers: Some glycol ethers cause adverse effects in animals that include the reproductive system, offspring, blood, kidney and liver. |

### **SECTION 12: Ecological information**

| 12.1. Toxicity   | Based on available data, the classification criteria are not met for hazardous to the aquatic environment.   |   |                                      |  |
|--|--|---|--------------------------------------|--|
| Components   | 5  | Species                                       | Test Results                         |  |
| Triethylene glycol monobutyl ether                             | (CAS 143-22-6)   |   |                                      |  |
| Aquatic  |  |   |                                      |  |
| Acute  |  |   |                                      |  |
| Fish   | LC50 F   | <sup>o</sup> imephales promelas               | 2400 mg/l, 96 hours                  |  |
| 12.2. Persistence and<br>degradability                         | Expected to be inherently biodegradable. Expected to be readily biodegradable. (OECD 302B).  |   |                                      |  |
| 12.3. Bioaccumulative potential                                | The product is n   | The product is not expected to bioaccumulate. |                                      |  |
| Partition coefficient<br>n-octanol/water (log Kow)             |  |   |                                      |  |
| FERODO Brake Fluid   |  | 1.5<br>-1.18                                  |                                      |  |
| 2-(2-Methoxyethoxy)ethanol (<br>Triethylene glycol monobutyl e | ,  |   |                                      |  |
| Bioconcentration factor (BCF)                                  | Not available.   |   |                                      |  |
| 12.4. Mobility in soil   | This product is water soluble and may disperse in soil.  |   |                                      |  |
| 12.5. Results of PBT and vPvB assessment                       | This substance/mixture contains no components considered to be either persistent,<br>bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of<br>0.1% or higher.   |   |                                      |  |
| 12.6. Other adverse effects                                    | None known.  |   |                                      |  |
| SECTION 13: Disposal cor                                       | nsiderations   |   |                                      |  |
| 13.1. Waste treatment methods                                  |  |   |                                      |  |
| Residual waste   | Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).  |   |                                      |  |
| Contaminated packaging   | Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. |   |                                      |  |
| EU waste code  | 16 01 13*<br>The Waste code should be assigned in discussion between the user, the producer and the waste<br>disposal company.   |   |                                      |  |
| Dispessel matheda/information                                  | Collect and real   | aim ar dianaga in goolad containare at lic    | oneed weete dieneed eite. Dieneee of |  |

Disposal methods/informationCollect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of<br/>contents/container in accordance with local/regional/national/international regulations.Special precautionsDispose in accordance with all applicable regulations.

### **SECTION 14: Transport information**

### ADR

14.1. - 14.6.: Not regulated as dangerous goods.

### RID

14.1. - 14.6.: Not regulated as dangerous goods.

# ADN

14.1. - 14.6.: Not regulated as dangerous goods.

# 

14.1. - 14.6.: Not regulated as dangerous goods.

### IMDG

14.1. - 14.6.: Not regulated as dangerous goods.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

### **SECTION 15: Regulatory information**

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

- Retained direct EU regulations
  - Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended Not listed.

# Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not applicable.

### Not listed.

- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA Not listed.

### Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended Not listed.

#### **Restrictions on use**

# Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use, as amended - Conditions of restriction given for the associated entry number should be considered

2-(2-Methoxyethoxy)ethanol (CAS 111-77-3)

Tris[2-[2-(2-methoxyethoxy) ethoxy]ethyl] orthoborate (CAS 30989-05-0)

### Other regulations

This product is classified and labelled in accordance with the retained CLP Regulation (EC) No 1272/2008, as amended for Great Britain.

This Safety Data Sheet is compiled in accordance with REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758.

New or expectant mothers should not work with this product if there is a risk due to exposure, in accordance with the Management of Health and Safety at Work Regulations 1999 [SI 1999/3242], as amended.

Follow the requirements of the Control of Substances Hazardous to Health Regulations 2002 [SI 2002/2677], as amended, when using this material.

**15.2. Chemical safety** No Chemical Safety Assessment has been carried out. **assessment** 

### **SECTION 16: Other information**

List of abbreviations

ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS: Chemical Abstract Service.
CEN: European Committee for Standardization.
DNEL: Derived No-Effect Level.
EC50: Effective Concentration, 50%.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
IMO: International Maritime Organization.
LC50: Lethal Concentration, 50%.
LD50: Lethal Dose, 50%.
NOEC: No observed effect concentration.
PBT: Persistent, bioaccumulative and toxic.

|   | PNEC: Predicted No-Effect Concentration.<br>RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.<br>TWA: Time Weighted Average.<br>vPvB: Very persistent and very bioaccumulative.  |
|---|---|
| References  | HSDB® - Hazardous Substances Data Bank<br>ECHA: European Chemical Agency.<br>Registry of Toxic Effects of Chemical Substances (RTECS)   |
| Information on evaluation<br>method leading to the<br>classification of mixture | The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.   |
| Full text of any statements, which are not written out in full                  |   |
| under sections 2 to 15  | H318 Causes serious eye damage.<br>H319 Causes serious eye irritation.<br>H360D May damage the unborn child.<br>H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.   |
| This SDS contains revisions in the following section(s):                        | 1, 2, 3, 4, 6, 7, 8, 9, 11, 12, 15, 16.   |
| Training information  | Follow training instructions when handling this material.   |
| Further information   | UFI: CJ10-002F-C008-AENQ<br>UFI: 64A0-204C-000V-49WJ<br>UFI: DWKJ-348Q-W00U-9D1H  |
| Disclaimer  | The information provided on this data sheet was abstracted from supplier safety data sheets and standard references in occupational health and toxicology. Federal-Mogul makes no representation or warranty with respect to the information obtained from such references. The information is however, as of the date provided, true and accurate to the best of Federal-Mogul's knowledge, and should be used to make an independent determination of the methods to safeguard workers and the environment. |