SAFETY DATA SHEET

Product name: Design

Revision Date: 08/23/15

Safety Data Sheet
May be used to comply with OSHA’s Hazard Communication Standard, 29 CFR 1910.1200, standard must be consulted for specific requirements.

SECTION I – PRODUCT AND COMPANY IDENTIFICATION

Product Name: Design

Recommended use of the chemical: Industrial Detergent. We recommend that you use this product in a manner consistent with the stated use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

Company Identification:
Monaghan Corp.
2017 Dean Avenue
Des Moines, Iowa 50317
United States of America

Customer information number: 515-266-2120
Emergency phone number: Chemtrec 800-424-9300 CC14908

SECTION II – HAZARDS IDENTIFICATION

GHS Classification
Eye irritation – Category 2
Skin mild irritation – Category 3

GHS label elements
hazard pictograms/symbols

Signal word: Warning

Hazard statement:
H320: Causes eye irritation.
H316: Cause mild skin irritation.
H303: May be harmful if swallowed.

Precautionary Statements:

Prevention:
P262: Do not get in eyes, on skin, or on clothing.
P264: Wash all exposed external body areas thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection

Response:
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P302+P352: IF ON SKIN: Wash with plenty of water and soap.
P362+P364: Take off contaminated clothing and wash it before reuse.

storage: P404: Store in a closed container.

disposal: P501: Dispose of contents/container to be specified in accordance with regulation.
SECTION III – INFORMATION OF INGREDIENTS

If present IARC, NTP and OSHA carcinogens and chemical subject to the reporting requirements of SARA Title III Section 313 are identified in this section.

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>CAS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Glycol Monobutyl Ether</td>
<td>111-76-2</td>
</tr>
<tr>
<td>Poly (oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy</td>
<td>9016-45-9</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
</tr>
</tbody>
</table>

SECTION IV – FIRST AID AND MEASURES

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin Contact: Remove contaminated clothes. Wash skin with plenty of water.

Eye Contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of first aid measures above and Indication of immediate medical attention and special treatment needed below, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis.

SECTION V – FIRE FIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Unsuitable extinguishing media: No information available.

Special hazards arising from the substance or mixture

Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

SECTION VI – ACCIDENTAL RELEASE MEASURES

Personal Precautions, protective equipment and emergency procedures:

Isolate area. Keep unnecessary and unprotected personnel from entering the area. Spilled material may cause a slipping hazard. Use appropriate safety equipment. For additional information, refer to section 8, Exposure Controls and Personal Protection. Refer to Section 7, Handling, for additional precautionary

Environmental Precautions:

Prevent from entering into soil, ditches, sewers, water ways and/or groundwater. See section 12, ecological information.

Methods and materials for containment and Cleaning Up:

Contain spillage material if possible. Small spills: Absorb with material such as: Non-combustible material. Clay. Zorb-all. Large spill: Dike area to contain spill. Collect in suitable and properly labeled containers. See section 13, Disposal Considerations, for additional information.
**SECTION VII – HANDLING AND STORAGE**

**General Handling:**
Do not swallow. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Wash thoroughly after handling. Keep away from heat, sparks and flame. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**Storage:**
No specific requirements. Additional storage and handling information on this product may be obtained by calling your sales or customer service contact. The shelf life given is for unopened containers stored under moderate temperature conditions.

**Storage stability**
- **Storage Period:** Steel drums, 24 Month
  - Bulk, 6 Month

**SECTION VIII – EXPOSURE CONTROLS/ PERSONAL PROTECTION**

**Control parameters**
Exposure limits are listed below, if they exist.

<table>
<thead>
<tr>
<th>Component</th>
<th>Regulation</th>
<th>Type of listing</th>
<th>Value/Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol monobutyl</td>
<td>ACGIH</td>
<td>TWA</td>
<td>20 ppm</td>
</tr>
</tbody>
</table>

**Exposure controls**

**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

**Individual protection measures**

**Eye/face protection:** Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

**Skin protection**

**Hand protection:** Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). Avoid gloves made of: Polyvinyl alcohol ("PVA"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

**Respiratory protection:** For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge.

**SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance**
- Physical State: Liquid.
- Color: Blue
- Odor: Characteristic
- pH: Not available
- Melting Point: Not applicable to liquids
- Boiling Point (760 mmHg): Decomposes prior to boiling.
- Flammability (solid, gas): Not applicable to liquids
- Flammable Limits In Air:
  - Lower: No test data available
  - Upper: No test data available
- Solubility in water: 100 % Visual
- Autoignition Temperature: No test data available
- Decomposition Temperature: No test data available
Acute toxicity

Acute oral toxicity
Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.
LD50, Guinea pig, 1,400mg/kg
LD50, Rat, 1,300mg/kg

Acute dermal toxicity
Prolonged skin contact to animals which are less sensitive to hemolysis, as are humans, did not result in the absorption of harmful amounts.
LD50, Guinea pig, 2,000mg/kg

Acute inhalation toxicity
Excessive exposure may cause irritation to upper respiratory tract (nose and throat).
LC50, Guinea pig, 1 Hour, vapour, > 3.1 mg/l. No deaths occurred at this concentration.

Skin corrosion/irritation
Brief contact may cause slight skin irritation with local redness. May cause drying and flaking of the skin.

Serious eye damage/eye irritation
May cause moderate eye irritation. May cause moderate corneal injury. Effects may be slow to heal.
Vapor may cause eye irritation experienced as mild discomfort and redness.

Sensitization
Did not cause allergic skin reactions when tested in humans.
Did not cause allergic skin reactions when tested in guinea pigs.

Specific Target Organ Systemic Toxicity (Single Exposure) Relevant data not available.
Specific Target Organ Systemic Toxicity (Repeated Exposure) Relevant data not available.

Carcinogenicity Relevant data not available.
Teratogenicity Relevant data not available.
Reproductive toxicity Relevant data not available.
Mutagenicity Relevant data not available.
Aspiration Relevant data not available.

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 Hour, 1,474 mg/l,

Acute Toxicity to Aquatic Invertebrate :
EC50, Daphnia magna (Water flea), static test, 48 Hour, 1,550 mg/l,

Toxicity to algae /Aquatic Plant:
EbC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Biomass, 911 mg/l,

Persistence and Degradability:
Biodegradability:
Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).
10-day Window: Pass
Biodegradation: 90.4 %
Exposure time: 28 d
**SECTION XIII – DISPOSAL CONSIDERATIONS**

**Disposal methods:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

**SECTION XIV – TRANSPORT INFORMATION**

<table>
<thead>
<tr>
<th>DOT Non-Bulk</th>
<th>NOT REGULATED</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT Bulk</td>
<td>NOT REGULATED</td>
</tr>
<tr>
<td>IMDG</td>
<td>NOT REGULATED</td>
</tr>
<tr>
<td>ICAO/IATA</td>
<td>NOT REGULATED</td>
</tr>
</tbody>
</table>

**SECTION XV– REGULATORY INFORMATION**

**OSHA Hazard Communication Standard**
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312**
Fire Hazard
Acute Health Hazard
Chronic Health Hazard

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community, Right-to-Know Act of 1986),Section 313**
This product contains the following substances which are subject to, the reporting requirements of Section 313 of Title III of the Superfund Amendments, and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

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**Pennsylvania Worker and Community Right-To-Know Act:**
The following chemicals are listed because of the additional requirements of Pennsylvania law:

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**California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)**
This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

**United States TSCA Inventory (TSCA)**
All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

**SECTION XVI– OTHER INFORMATION**

**Hazard Rating System**

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health</th>
<th>Fire</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
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</table>

THE INFORMATION ON THIS SAFETY DATA SHEET IS BELIEVED TO BE ACCURATE AND IT IS THE BEST INFORMATION AVAILABLE TO NORCHEM CORPORATION. THIS DOCUMENT IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE PRECAUTIONS FOR HANDLING A CHEMICAL BY A PERSON TRAINED IN CHEMICAL HANDLING. NORCHEM CORPORATION MAKES NO WARRANTY OF MERCHANT ABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED WITH RESPECT TO SUCH INFORMATION OF THE PRODUCT TO WHICH THIS SAFETY DATA SHEET RELATES. USERS AND HANDLERS OF THIS PRODUCT SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION PROVIDED HEREIN FOR THEIR OWN PURPOSES.