



## SAFETY DATA SHEET

### Unilink 4230

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200.

#### 1. Identification

##### Product identifier

**Product name** Unilink 4230

##### Recommended use of the chemical and restrictions on use

**Application** Chain extender. For industrial use only.

##### Details of the supplier of the safety data sheet

**Manufacturer** Dorf Ketal Specialty Catalysts LLC  
 11200 Westheimer Road  
 Suite 400  
 Houston, Texas 77042  
 Phone= +1 713 343 2377  
 Fax= +1 832 649 7615  
 Email: ehss@dorketal.com

##### Emergency telephone number

**Emergency telephone** For Chemical Emergency ONLY (in the case of fire, leak, spill, exposure or accident) call CHEMTREC at +1(703) 527- 3887 or CHEMTREC India at 000-800-100-7141. For ALL other emergencies call DORF KETAL Emergency Control Room +91 2838 660532 & +91 260 2668784 .

#### 2. Hazard(s) identification

##### Classification of the substance or mixture

**OSHA Regulatory Status** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Physical hazards** Not Classified

**Health hazards** Acute Tox. 4 - H302

**Environmental hazards** Not Classified

##### Label elements

##### **Hazard symbols**



**Signal word** Warning

**Hazard statements** H302 Harmful if swallowed.

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**Precautionary statements** P264 Wash contaminated skin thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P301+P312 If swallowed: Call a poison center/ doctor if you feel unwell.  
 P330 Rinse mouth.  
 P501 Dispose of contents/ container in accordance with national regulations.

**Contains** Organic compound

### Other hazards

This product does not contain any substances classified as PBT or vPvB.

### 3. Composition/information on ingredients

#### Mixtures

<b>Organic compound</b>	<b>&gt;95%</b>
CAS number: Proprietary	
M factor (Acute) = 1	M factor (Chronic) = 1
<b>Classification</b> Acute Tox. 4 - H302 Skin Sens. 1 - H317 STOT RE 2 - H373 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	

The full text for all hazard statements is displayed in Section 16.

### 4. First-aid measures

#### Description of first aid measures

**General information** Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.

**Inhalation** Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Loosen tight clothing such as collar, tie or belt. Get medical attention if symptoms are severe or persist.

**Ingestion** Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Keep affected person under observation. Get medical attention if symptoms are severe or persist.

**Skin Contact** It is important to remove the substance from the skin immediately. In the event of any sensitization symptoms developing, ensure further exposure is avoided. Remove contamination with soap and water or recognized skin cleansing agent. Get medical attention if symptoms are severe or persist after washing.

**Eye contact** Remove any contact lenses and open eyelids wide apart. Rinse with water. Get medical attention if any discomfort continues.

**Protection of first aiders** First aid personnel should wear appropriate protective equipment during any rescue.

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

**Inhalation** Harmful if swallowed.

#### Indication of immediate medical attention and special treatment needed

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**Notes for the doctor** Treat symptomatically.

### 5. Fire-fighting measures

#### Extinguishing media

**Suitable extinguishing media** The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

#### Special hazards arising from the substance or mixture

**Specific hazards** None known.

**Hazardous combustion products** None known.

#### Advice for firefighters

**Protective actions during firefighting** Avoid breathing fire gases or vapors. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

**Special protective equipment for firefighters** Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

### 6. Accidental release measures

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

**Personal precautions** Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Avoid contact with skin and eyes.

#### Environmental precautions

**Environmental precautions** Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water.

#### Methods and material for containment and cleaning up

**Methods for cleaning up** Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Provide adequate ventilation. Small Spillages: Collect spillage. Large Spillages: Absorb spillage with non-combustible, absorbent material. The contaminated absorbent may pose the same hazard as the spilled material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. For waste disposal, see Section 13.

**Reference to other sections** For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

### 7. Handling and storage

#### Precautions for safe handling

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**Usage precautions** Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimize spills. Keep container tightly sealed when not in use. Avoid the formation of mists. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

**Advice on general occupational hygiene** Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

### Conditions for safe storage, including any incompatibilities

**Storage precautions** Store away from incompatible materials (see Section 10). Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.

**Storage class** Miscellaneous hazardous material storage.

### Specific end uses(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.

## 8. Exposure controls/Personal protection

### Control parameters

#### Occupational exposure limits

No exposure limits known for ingredient(s).

### Exposure controls

#### Protective equipment



**Appropriate engineering controls** Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients.

**Eye/face protection** Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

**Hand protection** It is recommended that chemical-resistant, impervious gloves are worn. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

**Other skin and body protection** May cause skin sensitization or allergic reactions in sensitive individuals. Wear appropriate clothing to prevent repeated or prolonged skin contact.

**Hygiene measures** Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.

**Respiratory protection** Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.

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<b>Environmental exposure controls</b>	Keep container tightly sealed when not in use. 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.
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### 9. Physical and chemical properties

#### Information on basic physical and chemical properties

<b>Appearance</b>	Viscous liquid.
<b>Color</b>	Amber.
<b>Odor</b>	Hydrocarbons.
<b>Initial boiling point and range</b>	351°C
<b>Flash point</b>	177°C
<b>Vapor pressure</b>	<0.13 kPa @ (room temperature)°C
<b>Vapor density</b>	> 1 g/cm <sup>3</sup> (> 8.345 lbs/gal)
<b>Relative density</b>	1.01 g/cm <sup>3</sup> (8.428 lbs/gal) @ °C
<b>Solubility(ies)</b>	Not miscible or difficult to mix.
<b>Viscosity</b>	230 cSt, Kinematic @ 40°C
<b>Other information</b>	No data available.

### 10. Stability and reactivity

<b>Reactivity</b>	See the other subsections of this section for further details.
<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
<b>Possibility of hazardous reactions</b>	No potentially hazardous reactions known.
<b>Conditions to avoid</b>	There are no known conditions that are likely to result in a hazardous situation.
<b>Materials to avoid</b>	Oxidizing materials. Reducing agents.
<b>Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### 11. Toxicological information

#### Information on toxicological effects

##### Acute toxicity - oral

**Summary** Harmful if swallowed.

**ATE oral (mg/kg)** 515.46

##### Acute toxicity - dermal

**Summary** Based on available data the classification criteria are not met.

##### Acute toxicity - inhalation

**Summary** Based on available data the classification criteria are not met.

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### Skin corrosion/irritation

**Summary** Based on available data the classification criteria are not met.

### Serious eye damage/irritation

**Summary** Based on available data the classification criteria are not met.

### Respiratory sensitization

**Summary** Based on available data the classification criteria are not met.

### Skin sensitization

**Summary** Based on available data the classification criteria are not met.

### Germ cell mutagenicity

**Summary** Based on available data the classification criteria are not met.

### Carcinogenicity

**Summary** Based on available data the classification criteria are not met.

### IARC carcinogenicity

None of the ingredients are listed or exempt.

### NTP carcinogenicity

Not listed.

### OSHA Carcinogenicity

Not listed.

### Reproductive toxicity

**Summary** Based on available data the classification criteria are not met.

### Specific target organ toxicity - single exposure

**Summary** Based on available data the classification criteria are not met.

### Specific target organ toxicity - repeated exposure

**Summary** Based on available data the classification criteria are not met.

### Aspiration hazard

**Summary** Based on available data the classification criteria are not met.

## 12. Ecological information

### Acute aquatic toxicity

**Summary** Based on available data the classification criteria are not met.

### Chronic aquatic toxicity

**Summary** Based on available data the classification criteria are not met.

### Persistence and degradability

**Persistence and degradability** The degradability of the product is not known.

### Bioaccumulative potential

**Bio-Accumulative Potential** No data available on bioaccumulation.

### Mobility in soil

**Mobility** No data available.

### Other adverse effects

**Other adverse effects** None known.

## 13. Disposal considerations

### Waste treatment methods

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<b>General information</b>	The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.
<b>Disposal methods</b>	Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

### 14. Transport information

**General** The product is not regulated as per international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

#### UN Number

**UN No. (International)** Not regulated.

**UN No. (DOT)** Not regulated

#### UN proper shipping name

**Proper shipping name (International)** Not regulated.

**Proper shipping name (DOT)** Not regulated

#### Transport hazard class(es)

**Transport Labels (International)** No transport warning sign required.

#### DOT transport labels

No transport warning sign required.

#### Packing group

**Packing group (International)** Not regulated.

**DOT packing group** Not regulated

#### Environmental hazards

##### **Environmentally Hazardous Substance**

No.

#### Special precautions for user

Not applicable.

**IMDG Code segregation group** None

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

### 15. Regulatory information

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**Regulatory References** OSHA Hazard Communication Standard 29 CFR §1910.1200

**Chemical safety assessment** No chemical safety assessment has been carried out.

### US Federal Regulations

**SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

None of the ingredients are listed or exempt.

**CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)**

None of the ingredients are listed or exempt.

**SARA Extremely Hazardous Substances EPCRA Reportable Quantities**

None of the ingredients are listed or exempt.

**SARA 313 Emission Reporting**

None of the ingredients are listed or exempt.

**CAA Accidental Release Prevention**

None of the ingredients are listed or exempt.

**FDA - Essential Chemical**

None of the ingredients are listed or exempt.

**FDA - Precursor Chemical**

None of the ingredients are listed or exempt.

**SARA (311/312) Hazard Categories**

Acute toxicity (any route of exposure)

**OSHA Highly Hazardous Chemicals**

None of the ingredients are listed or exempt.

### US State Regulations

**California Proposition 65 Carcinogens and Reproductive Toxins**

None of the ingredients are listed or exempt.

**California Air Toxics "Hot Spots" (A-I)**

None of the ingredients are listed or exempt.

**California Air Toxics "Hot Spots" (A-II)**

None of the ingredients are listed or exempt.

**California Directors List of Hazardous Substances**

None of the ingredients are listed or exempt.

**Massachusetts "Right To Know" List**

None of the ingredients are listed or exempt.

**Rhode Island "Right To Know" List**

None of the ingredients are listed or exempt.

**Minnesota "Right To Know" List**

None of the ingredients are listed or exempt.

**New Jersey "Right To Know" List**

None of the ingredients are listed or exempt.



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### Pennsylvania "Right To Know" List

None of the ingredients are listed or exempt.

### Inventories

#### US - TSCA

All the ingredients are listed or exempt.

#### US - TSCA 12(b) Export Notification

Not listed.

### 16. Other information

#### Abbreviations and acronyms used in the safety data sheet

TDG: The transport of dangerous goods act

IATA: International air transport association.

ICAO: Technical instructions for the safe transport of dangerous goods by air.

IMDG: International maritime dangerous goods.

CAS: Chemical abstracts service.

ATE: Acute toxicity estimate.

LC<sub>50</sub>: Lethal concentration to 50 % of a test population.

LD<sub>50</sub>: Lethal dose to 50% of a test population (median lethal dose).

EC<sub>50</sub>: 50% of maximal effective concentration.

PBT: Persistent, bioaccumulative and toxic substance.

vPvB: Very persistent and very bioaccumulative.

#### Classification abbreviations and acronyms

Acute Tox. = Acute toxicity

Skin Sens. = Skin sensitisation

STOT RE = Specific target organ toxicity-repeated exposure

Aquatic Chronic = Hazardous to the aquatic environment (chronic)

#### Training advice

Only trained personnel should use this material.

#### Revision date

11/4/2022

#### Revision

2

#### Supersedes date

4/20/2015

#### SDS No.

5794

#### Hazard statements in full

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

#### File Name:

Unilink 4230\_SDS\_US\_en\_NOV-04-2022

#### NFPA - health hazard

2

#### NFPA - flammability hazard

1

#### NFPA - instability hazard

0

#### ACA HMIS Health rating.

2

#### ACA HMIS Flammability rating.

1

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ACA HMIS Physical hazard rating. 0

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.