CA2023 Dimer Acid
Safety Data Sheet

SECTION 1: Identification of the substance or mixture and the company or undertaking

1.1 Product identifier

Product type : Mixture.
Trade name : CA2023 Dimer Acid
Label name : CA2023 Dimer Acid
Chemical name Fatty acids, C18 unsaturated, dimers, hydrogenated.
CAS number : 61788-89-4
EC number : 500-148-0

1.2 Recommended and restricted uses of the substance or mixture

Recommended uses : Industrial, coatings, lubricants, plastics.
Restricted uses : None known.

1.3 Company identification

Company name : Chemical Associates – A Division of Univar USA Inc.
Company address : 1270 South Cleveland Massillon Road
                 : Copley, OH 44321-1683
Company telephone : 330-666-5200

1.4 Emergency telephone number

Company emergency telephone : 800-347-2891
CHEMTREC telephone : 800-424-9300

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Appendix A)
GHS physical hazard : None.
GHS health hazard : None.
GHS environmental hazard : None.

2.2 Label warnings of the substance or mixture

Signal word : None.
Hazard statements : None.
Precautionary statements : P264 Wash hands thoroughly after handling.
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Hazard symbol (pictogram) : None.

2.3 Hazards not otherwise classified

Other hazards : No additional information available.

SECTION 3: Composition/information on ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name</th>
<th>Percent</th>
<th>CAS number</th>
<th>Health hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatty acids, C18 unsaturated, dimers, hydrogenated.</td>
<td>Dimer Acid</td>
<td>87</td>
<td>61788-89-4</td>
<td>None</td>
</tr>
<tr>
<td>Fatty acids, C18 unsaturated, trimers, hydrogenated.</td>
<td>Trimer Acid</td>
<td>10</td>
<td>68937-90-6</td>
<td>None</td>
</tr>
<tr>
<td>Fatty acids, C16 -18 and C18 unsaturated, branched and linear.</td>
<td>Monomer Acid</td>
<td>3</td>
<td>68955-98-6</td>
<td>None</td>
</tr>
</tbody>
</table>

3.2 Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name</th>
<th>Typical %</th>
<th>CAS number</th>
<th>Health hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatty acids, C18 unsaturated, dimers, hydrogenated.</td>
<td>Dimer Acid</td>
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<td>None</td>
</tr>
</tbody>
</table>

SECTION 4: First-aid measures

4.1 Description of first-aid measures

<table>
<thead>
<tr>
<th>Exposure route</th>
<th>First-aid measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Remove the victim into fresh air. Observe victim’s breathing. If breathing is labored seek immediate medical attention.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Wash immediately with soap and water. If irritation develops, seek medical attention. Launder contaminated clothing.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Rinse immediately with plenty of water for 15 minutes. Remove contact lenses if present and easy to do. If irritation persists, seek immediate medical attention (ophthalmologist) attention.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Rinse mouth with plenty of water. For ingestion of large quantities seek immediate medical attention. Do not induce vomiting. Contact poison control center.</td>
</tr>
</tbody>
</table>

4.2 Most important symptoms and effects, both acute and delayed

| Symptoms after inhalation | ON HEATING: Irritation of the nose and throat. |
| Symptoms after skin contact | Mild irritation of the skin may occur. |
| Symptoms after eye contact | Irritation of the eye tissue. |
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Symptoms after ingestion:
- May cause corneal inflammation.
- Mild tingling of the tongue and mouth.
- May cause gastrointestinal irritation, nausea and vomiting.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment after inhalation:
If breathing is labored seek immediate medical attention.

Treatment after skin contact:
If skin irritation persists seek immediate medical attention.

Treatment after eye contact:
If eye irritation persists seek immediate ophthalmologist attention.

Treatment after ingestion:
If ingestion of a large quantity seek immediate poison control center.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable media:
Carbon dioxide, alcohol resistant foam and water spray.

Unsuitable media:
None known.

5.2 Specific hazards arising from the substance or mixture

Direct fire hazard:
Combustible.

Indirect fire hazard:
Heating increases the fire hazard.

Explosive hazard:
- Dust is explosive with air, dust cloud can be ignited by spark
- Exposure to temperature above the flash point (295°C).

Reactivity:
Reactivity with strong oxidizers.

Combustion products:
Carbon dioxide and carbon monoxide.

5.3 Special protective equipment and precautions for fire-fighters

Protective equipment:
Full protective clothing.

Precautions:
- Material will burn, but not ignite readily.
- Inhalation of material may be harmful. Contact may cause burns to skin and eyes.
- Fire may produce irritating, corrosive and/or toxic gases.
- Runoff from fire control may cause pollution.

Emergency response guide:
ERG 171.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions:
Mixture is an irritant. If mixture is a mist, stay upwind.

Protective equipment:
Wear rubber gloves, rubber boots, face shield and chemical hazard suit. If material is a mist wear dust mask or self contained breathing apparatus.
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Emergency procedures: As an immediate precautionary measure, isolate spill or leak area in all directions for at least 50 meters. Mark the spill area with hazard tape or cones. Contain the spill area with suitable absorbent (dry earth, sand, clay, chemical absorbent, vermiculite and carbon).

Keep away from streams, rivers and lakes. If mixture is a mist, alert immediate neighborhood to close windows and doors. Contain and dissipate mist via spraying with water.

6.2 Environmental precautions

Precautions: No supplementary information available.

6.3 Methods and materials for containment and cleanup

Methods: Use chemical absorbent pigs or manually spread chemical absorbent onto spill area. After the mixture is absorbed, dispose in approved waste facility.

Materials: Approved materials include dry earth, sand, clay, chemical absorbent, vermiculite and carbon.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling temperature: From 5°C to 30°C

Handling equipment: Rubber hoses, aluminum, carbon steel or stainless steel (grade 304) lines. Stainless steel (grade 304) for pumps.

7.2 Conditions for safe storage, including any incompatibilities

Storage area: Keep container in well-ventilated area. Keep out of direct sunlight. Protect from temperatures below 5°C. Protect from temperatures above 40°C.

Packaging materials: Steel with plastic inner lining, stainless steel, aluminum

Incompatibilities: Strong oxidizers, inorganic acids and halogens.

SECTION 8: Exposure controls/personal protection

8.1 Exposure controls

OSHA PEL: None.
ACGIH TLV: None.
NIOSH REL: None.

8.2 Appropriate engineering controls

Engineering controls: If mist exists, install ventilation equipped with carbon canisters. Ventilation should be 10 air exchanges per hour. Local exhaust
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8.3 Personal protection equipment

Personal protective equipment: Rubber gloves, protective clothing and safety glasses.
Personal protective equipment pictograms:

<table>
<thead>
<tr>
<th>☥️</th>
<th>👨‍💼</th>
</tr>
</thead>
</table>

SECTION 9: Physical and chemical properties

9.1 Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Dark brown, viscous liquid.</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild fatty odor.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available.</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Melting point</td>
<td>-18°C (pour point)</td>
</tr>
<tr>
<td>Boiling point</td>
<td>&gt; 260°C</td>
</tr>
<tr>
<td>Flash point</td>
<td>295°C, Open cup.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available.</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not flammable.</td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>No data available.</td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>No data available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>0.05 mm Hg @ 225°C</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available.</td>
</tr>
<tr>
<td>Density</td>
<td>0.95 @ 20°C</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water.</td>
</tr>
<tr>
<td>Partition coefficient for n-octanol/water</td>
<td>Study does not need to be conducted.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>250 - 500 cP @ 60°C</td>
</tr>
</tbody>
</table>

9.2 Other information

Other information: No additional information available.

SECTION 10: Stability and reactivity

Reactivity: May react violently with oxidizers.
Chemical stability: Stable under storage conditions.
Possibility of hazardous reactions: Hazardous polymerization does not occur.
SECTION 11: Toxicological information

11.1 Information on the likely routes of exposure

Inhalation exposure: From mist or spray.
Skin exposure: From mist or spray. From splashing.
Ingestion exposure: Not a likely route of exposure.
Eye contact: From mist or spray. From splashing.

11.2 Symptoms related to the physical, chemical and toxicological characteristics

Inhalation: Labored breathing and irritation of the lungs may occur.
Skin contact: Mild skin irritation may occur.
Ingestion: Mild irritation of the mouth, tongue, esophagus and stomach may occur.
Eye contact: Mild eye irritation may occur.

11.3 Delayed and immediate effects and also chronic effects from short and long term exposure

Inhalation: Chronic effects are not known.
Skin contact: Chronic effects are not known.
Ingestion: Chronic effects are not known.
Eye contact: Chronic effects are not known.

11.4 Numerical measures of toxicity

Oral LD50: Rat > 5000 mg/kg. OECD 401.
Skin LD50: Not classified.
Ingestion LD50: Not classified.
Inhalation LD50: Not classified.
Skin primary irritation: Rabbit: Result: non-irritant. OECD 404.

11.5 Carcinogenicity

National Toxicology Program: Not listed.
International Agency for Research on Cancer: Not listed.
OSHA: Not listed.
NIOSH: Not listed.
11.6 Other toxicological information

Reproductive toxicity: Assessment of carcinogenicity: The whole of the information assessable provides no indication of a carcinogenic effect.
Germ cell mutagenicity: Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture.
Respiratory or skin sensitization: Guinea pig: Result: non-sensitizing. OECD 406.
Specific target organ toxicity, single exposure: Based upon available information there is no specific target organ toxicity to be expected after a single exposure.
Specific target organ toxicity, repeated exposure: No data available.
Aspiration hazard: No aspiration hazard expected.

SECTION 12: Ecological information

12.1 Ecotoxicity aquatic

Fish LC50: > 350 mg/l (96 h) Brachydanio rerio. (OECD 203; ISO 7346; 84/449/EEC, C.1, static) Nominal concentration. Tested above maximum solubility.
Daphnia EL50: > 1,000 mg/l (48h), Daphia magna (OECD guideline 202, part 1, static). No toxic effects occur within the range of solubility. The value meets the highest applied test concentration. The product has low solubility in the test medium. An eluate has been tested. Nominal concentration.
Rotifer EC50: No data available.
Algae EL50: > 1,000 mg/l (48 h) growth rate, Selenastrum capricornutum (OECD guideline 201, static). The product has low solubility in the test medium. An eluate has been tested. The value meets the highest applied test concentration. No toxic effects occur within the range of solubility. Nominal concentration.

12.1.2 Ecotoxicity terrestrial

Ecotoxicity terrestrial: No environmental hazard.

12.2 Persistence and degradability

Assessment (H2O): Not readily biodegradable (by OECD criteria). The product has not been tested. The statement has been delivered from the properties of the individual components.

12.3 Bio-accumulative potential

Log Pow: Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is possible.

< 10% CO2 formation relative to the theoretical value (28 d) (OECD
12.4 Mobility in soil

Surface tension : No data available.
Soil mobility : Assessment transport between environmental compartments. The substance will not evaporate into the atmosphere from the water surface. Adsorption to solid phase is possible. The product has not been tested. The statement has been delivered from the properties of the individual components.

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment : No data available.

12.6 Other adverse effects

Air : Not dangerous to the ozone layer.
Water : No data available.

SECTION 13: Disposal considerations

13.1 Description of waste residues

Storage tank residues : Liquid residue from tank cleaning.
Empty package residues : Liquid residue remaining in emptied package container.
Transport trailer residues : Liquid residue from transport trailer cleaning.
Absorbent material : Solid absorbent containing mixture from a spill.

13.2 Safe handling of waste residues

Storage tank residues : Refer to section 7 for safe handling.
Empty package residues : Refer to section 7 for safe handling.
Transport trailer residues : Refer to section 7 for safe handling.
Absorbent material : Refer to section 7 for safe handling.

13.3 Methods of disposal

Storage tank residues : Dispose via an approved incineration facility.
Empty package residues : Dispose via an approved land fill facility.
Transport trailer residues : Dispose only in accordance with local, state and federal regulations.
Empty package residues : Dispose only in accordance with local, state and federal regulations.
Transport trailer residues : Clean transport trailer at an approved cleaning facility.
Transport trailer residues : Disposal of cleaning residues must be in accordance with local, state and federal regulations.
Absorbent material: Dispose via an approved incineration facility.
: Dispose via an approved land fill facility.
: Dispose only in accordance with local, state and federal regulations.

### 13.4 Hazardous waste classification (RCRA)

<table>
<thead>
<tr>
<th>Classification</th>
<th>Regulation</th>
<th>Listed</th>
<th>Hazardous waste number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ignitability</td>
<td>40CFR261.21</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Corrosivity</td>
<td>40CFR261.22</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Reactivity</td>
<td>40CFR261.23</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Toxicity</td>
<td>40CFR261.24</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

### SECTION 14: Transport information

#### 14.1 UN number

UN number: Not regulated.

#### 14.2 UN proper shipping name

Proper shipping name: None.

#### 14.3 Transport hazard class

Hazard class: None.
Hazard label: None.
Hazard pictogram: None.

#### 14.4 Packing group

Packing group: None.

#### 14.5 Environmental hazards

Marine pollutant: Not listed, per 49CFR172.101 Appendix B.

#### 14.6 Transport in bulk

US DOT: Not regulated.
IMDG: Not regulated.
IATA: Not regulated.
MARPOL 73/78: Not regulated.
IBC code: Not regulated.

#### 14.7 Special precautions for user

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Special precautions: No additional information available.

SECTION 15: Regulatory information

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

15.1.1 US regulations

SARA 313 (40CFR372.65): Not listed.
CERCLA (40CFR302.4): Not listed.
California proposition 65: Not listed.
German WGK class: 1 (hazard to waters).

15.1.2 Chemical inventories

TSCA USA: Listed.
AICS Australia: Listed.
DSL Canada: Listed.
EC Europe: Listed.
ECL Korea: Listed.
IECSC China: Listed.
ENCS Japan: Unknown.
NzloC New Zealand: Listed.
PICCS Philippines: Listed.
SWISS Switzerland: Unknown.

15.2 Chemical safety assessment

Safety assessment: No additional information available.

SECTION 16: Other information

16.1 Hazard ratings

<table>
<thead>
<tr>
<th></th>
<th>Health</th>
<th>Flammability</th>
<th>Physical hazards</th>
<th>Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS (USA)</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>NFPA (USA)</td>
<td>1</td>
<td>1</td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>

16.2 Safety Data Sheet information

Revision date (MM/DD/YY): 06/09/2015
16.3 Notice to reader

The information presented herein is believed to be factual as it has been derived from the works and opinions of persons believed to be qualified experts; however, nothing contained in this information is to be taken as a warranty or representation for which Chemical Associates – A Division of Univar USA Inc. bears responsibility. The user should review any recommendations in the specific context of the intended use to determine whether they are appropriate.