Section 1 - Product and Company Information

Product Name                       CAPROIC ACID  
Product Number                     21530       
Brand                              FLUKA       
Company                            Sigma-Aldrich Canada, Ltd  
Street Address                     2149 Winston Park Drive  
City, State, Zip, Country          Oakville ON L6H 6J8 CA  
Technical Phone:                   9058299500  
Emergency Phone:                   800-424-9300  
Fax:                               9058299292

Section 2 - Composition/Information on Ingredient

Substance Name                          CAS #                 SARA 313
CAPROIC ACID                            142-62-1              No

Formula         C6H12O2
Synonyms Butylacetic acid * n-Caproic acid * Capronic acid  
* Hexacid 698 * n-Hexanoic acid * n-Hexaoic acid *  
Kyselina kapronova (Czech) * Pentanecarboxylic  
acid * Pentiformic acid * Pentylfomic acid
RTECS Number:   MO5250000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Corrosive.  
Causes burns.  
Readily absorbed through skin.

HMIS RATING
HEALTH: 3  
FLAMMABILITY: 1  
REACTIVITY: 0  

NFPA RATING
HEALTH: 3  
FLAMMABILITY: 1  
REACTIVITY: 0  

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE
If swallowed, wash out mouth with water provided person is  
conscious. Call a physician. Do not induce vomiting.

INHALATION EXPOSURE
If inhaled, remove to fresh air. If not breathing give  
artificial respiration. If breathing is difficult, give oxygen.
DERMAL EXPOSURE
In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

EYE EXPOSURE
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLASH POINT
215.6 °F  102 °C  Method: closed cup

EXPLOSION LIMITS
Lower: 2 %  Upper: 10 %

AUTOIGNITION TEMP
380 °C

FLAMMABILITY
N/A

EXTINGUISHING MEDIA
Suitable: Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING
Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL
Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP
Cover with dry lime or soda ash, pick up, keep in a closed container, and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING
User Exposure: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE
Suitable: Keep tightly closed.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS
Safety shower and eye bath. Use only in a chemical fume hood.
PERSONAL PROTECTIVE EQUIPMENT
   Respiratory: Government approved respirator.
   Hand: Compatible chemical-resistant gloves.
   Eye: Chemical safety goggles.
   Other: Faceshield (8-inch minimum).

GENERAL HYGIENE MEASURES
   Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>At Temperature or Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>116.16 AMU</td>
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<tr>
<td>pH</td>
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<tr>
<td>BP/BP Range</td>
<td>204 – 205 °C</td>
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<tr>
<td>MP/MP Range</td>
<td>-3 °C</td>
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<td>Freezing Point</td>
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<tr>
<td>Vapor Pressure</td>
<td>0.18 mmHg</td>
<td>20 °C</td>
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<tr>
<td>Vapor Density</td>
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<tr>
<td>Saturated Vapor Conc.</td>
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<tr>
<td>SG/Density</td>
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<td>Bulk Density</td>
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<tr>
<td>Odor Threshold</td>
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<tr>
<td>Volatile%</td>
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<tr>
<td>VOC Content</td>
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<td></td>
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<tr>
<td>Water Content</td>
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<tr>
<td>Solvent Content</td>
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<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
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<tr>
<td>Viscosity</td>
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<td>20 °C</td>
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<tr>
<td>Surface Tension</td>
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<tr>
<td>Partition Coefficient</td>
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<tr>
<td>Decomposition Temp.</td>
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<td>Flash Point</td>
<td>215.6 °F 102 °C</td>
<td>Method: closed cup</td>
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<tr>
<td>Explosion Limits</td>
<td>Lower: 2 %</td>
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</tr>
<tr>
<td></td>
<td>Upper: 10 %</td>
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<tr>
<td>Flammability</td>
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<td>Autoignition Temp</td>
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<td>Refractive Index</td>
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<td>Optical Rotation</td>
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<td>Miscellaneous Data</td>
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<tr>
<td>Solubility</td>
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<td></td>
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</tbody>
</table>

N/A = not available

Section 10 - Stability and Reactivity

STABILITY
   Stable: Stable.
   Materials to Avoid: Bases, Oxidizing agents, Reducing agents.

HAZARDOUS DECOMPOSITION PRODUCTS
   Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION
   Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information
ROUTE OF EXPOSURE
Skin Contact: Causes burns.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: Causes burns.
Inhalation: Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. May be harmful if inhaled.
Ingestion: May be harmful if swallowed.

SIGNS AND SYMPTOMS OF EXPOSURE
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.
Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema.
Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

TOXICITY DATA

Oral
Rat
2050 UL/KG
LD50

Oral
Mouse
5000 mg/kg
LD50

Inhalation
Mouse
4,100 mg/m3
LC50

Intraperitoneal
Mouse
3180 MG/KG
LD50

Subcutaneous
Mouse
3180 MG/KG
LD50

Intravenous
Mouse
1725 MG/KG
LD50
Remarks: Behavioral: Convulsions or effect on seizure threshold.
Lungs, Thorax, or Respiration: Respiratory stimulation.

Skin
Rabbit
630 UL/KG
LD50

Skin
Guinea pig
5 ML/KG
LD50
IRRITATION DATA

Skin
Rabbit
10 mg
24H
Remarks: Open irritation test

Skin
Rabbit
465 mg
Remarks: Open irritation test

Eyes
Rabbit
0.75 mg
Remarks: Severe irritation effect

Section 12 - Ecological Information

ACUTE ECOTOXICITY TESTS

Test Type: LC50 Fish
Species: Pimephales promelas (Fathead minnow)
Time: 96 h
Value: 88 mg/l

Test Type: LC50 Fish
Species: Oryzias latipes
Time: 96 h
Value: 80 mg/l

Test Type: EC50 Daphnia
Species: Daphnia magna
Time: 24 h
Value: 22 mg/l

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: Caproic acid
UN#: 2829
Class: 8
Packing Group: Packing Group III
Hazard Label: Corrosive
PIH: Not PIH

IATA
Proper Shipping Name: Caproic acid
IATA UN Number: 2829
Hazard Class: 8
Packing Group: III
Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION
Symbol of Danger: C
Indication of Danger: Corrosive.
R: 34
Risk Statements: Causes burns.
S: 26 36/37/39 45
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US CLASSIFICATION AND LABEL TEXT
Indication of Danger: Corrosive.
Risk Statements: Causes burns.
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Take off immediately all contaminated clothing. Wear suitable protective clothing, gloves, and eye/face protection. Do not breathe vapor.
US Statements: Readily absorbed through skin.

UNITED STATES REGULATORY INFORMATION
SARA LISTED: No
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION
WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: Yes
NDSL: No

Section 16 - Other Information

DISCLAIMER
For R&D use only. Not for drug, household or other uses.

WARRANTY
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.
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