

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name C-670
 Manufacturer The Procter & Gamble Company
 Procter & Gamble Chemicals
 Sharon Woods Innovation Center
 11530 Reed Hartman Highway
 Cincinnati, Ohio 45241
 1-800-477-8899 or 1-513-626-6882
 PGChemMSDS.IM@pg.com
 CHEMTREC: 1-800-424-9300 U.S. and Canada
 CHEMTREC: 1-703-527-3887 For calls originating elsewhere

version # 03
 Revision date 05-01-2010
 CAS # Mixture
 MSDS Number LC101
 Product Code 60041430
 Product use Production of cutting oils, specialty soaps, and chain terminators.
 Synonym(s) Mixture of Caproic and Caprylic Acid

2. Hazards Identification

Emergency overview **DANGER -- CORROSIVE**
CONCENTRATED PRODUCT CAUSES SEVERE BURNS.

If product is heated, vaporization can occur. Eye, skin, and upper respiratory irritation/burns expected to occur.

OSHA regulatory status This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects

Eyes	Liquid splash may cause severe irritation, burns, or serious permanent eye injury. Vapor exposure may cause irritation or pain.
Skin	Short contact (minutes) with concentrated liquid may cause severe irritation or a burn. Prolonged exposure to vapors may cause irritation.
Inhalation	Vapors may cause coughing and irritation of nose and throat. May cause irritation of respiratory tract.
Ingestion	Causes burns to mucous membranes.

3. Composition / Information on Ingredients

Components	CAS #	Percent
OCTANOIC ACID	124-07-2	25 - 33
HEXANOIC ACID	142-62-1	67 - 75

4. First Aid Measures

First aid procedures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
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Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash clothing separately before reuse. Destroy contaminated shoes. Get medical attention if any sensations occur.
Inhalation	Move to fresh air. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Ingestion	Remove material from mouth. DO NOT induce vomiting. Get medical attention immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to a victim who is unconscious or is having convulsions.

5. Fire Fighting Measures

Extinguishing media

Suitable extinguishing media	SMALL FIRES: Use CO2 or dry chemical. LARGE FIRES: Use foam.
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Protection of firefighters

Specific hazards arising from the chemical	Thermal decomposition or burning may produce carbon monoxide and/or carbon dioxide.
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Special protective equipment for fire-fighters	Wear self-contained breathing apparatus and protective clothing.
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Specific methods	Cool containers with flooding quantities of water until well after fire is out.
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6. Accidental Release Measures

Personal precautions	An appropriate NIOSH/MSHA approved respirator should be used if a mist, vapor or dust is generated. Wear suitable protective clothing, gloves and eye/face protection. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
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Environmental precautions	Minimize contamination of drains, surface and ground waters.
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Methods for cleaning up	Absorb spillage onto inert materials (eg. sand) and collect into suitably labeled containers for disposal at an approved site. Residues and small spillages may be washed away with water and detergent. or Cover contaminated surface with soda ash or sodium bicarbonate. Mix. Flood with water and flush down drain. Wash site with sodium bicarbonate solution.
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7. Handling and Storage

Handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Since emptied containers retain product residue, follow label warnings even after container is emptied. Keep away from sources of ignition.
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Storage	Keep away from possible contact with incompatible substances. Store in acid resistant vessels such as stainless steel, aluminum, or steel coated with resin lining such as Lithcote LC-19 or Kanigen. Store in original tightly closed container. For quality reasons: Avoid elevated temperatures.
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8. Exposure Controls 1 Personal Protection

Engineering controls	Local exhaust is recommended. Mechanical - may be necessary if working at elevated temperatures or in enclosed areas.
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Personal protective equipment

General	Observe good industrial hygiene practices. Avoid breathing (heated) vapors.
Eye 1 face protection	Boots. Apron. Provide eyewash station and safety shower. Wear suitable protective clothing. Goggles or face shield with goggles, dependent upon potential exposure.

Skin protection	Rubber or plastic gloves. Dependent upon degree of potential exposure, additional personal protective equipment may be required, such as chemical boots and full protective clothing.
Respiratory protection	An appropriate NIOSH/MSHA approved air-purifying respirator should be used if a mist or vapor is generated. A NIOSH/MSHA approved self-contained breathing apparatus or air-supplied respirator is recommended if the concentration exceeds the capacity of cartridge respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

9. Physical & Chemical Properties

Appearance	Liquid.
Color	Water white to Light yellow.
Odor	Sharp, Musty, Rancid.
Odor threshold	Not available.
Physical state	Liquid.
Form	Liquid.
pH	Not available.
Melting point	Not available.
Freezing point	Not available.
Boiling point	430 °F (221.1 °C)
Flash point	250 °F (121.1 °C) Pensky-Martens Closed Cup
Evaporation rate	< 0.1 BuAc
Flammability limits in air, upper, / by volume	Not available.
Flammability limits in air, lower, / by volume	Not available.
Vapor pressure	< 1 mm Hg @ 72 F (22 C)
Vapor density	4
Specific gravity	Not available.
Relative density	0.93 @ 20/20 C
Solubility (water)	1 % @ 72 F (22 C)
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
VOC	Not available.

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Materials to avoid	Strong oxidizing agents.
Hazardous decomposition products	Thermal decomposition or burning may produce carbon monoxide and/or carbon dioxide.
Hazardous polymerization	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data	
Components	Test Results
OCTANOIC ACID (124-07-2)	Acute Dermal LD50 Rabbit: > 5 g/kg Acute Oral LD50 Rat: > 10 g/kg
HEXANOIC ACID (142-62-1)	Dermal MLD Rabbit: 10 mg 24.00 hours Open Other Rabbit: 695 ug Eye-SEV Acute Dermal LD50 Rabbit: 630 mg/kg Acute Oral LD50 Rat: 3000 mg/kg

12. Ecological Information

Ecotoxicological data

Components

Test Results

OCTANOIC ACID (124-07-2)

EC50 Green algae (*Nitzschia closterium*): 144 mg/l 72.00 hours

EC50 Water flea (*Daphnia magna*): 550 mg/l 24.00 hours

LC0 Red killifish (*Oryzias latipes*): 57 mg/l 96.00 hours in freshwater

LC50 Bluegill (*Lepomis macrochirus*): 39.9 mg/l 96.00 hours

LC50 Ide, silver or golden orfe (*Leuciscus idus*): 173 mg/l 48.00 hours

LC50 Red killifish (*Oryzias latipes*): 105 mg/l 96.00 hours in seawater

HEXANOIC ACID (142-62-1)

LC50 Fathead minnow (*Pimephales promelas*): 88 mg/l 96.00 hours

LC50 Gammarus (*Hyale plumulosa*): 235 mg/l 96.00 hours

LC50 Red killifish (*Oryzias latipes*): 80 mg/l in freshwater

LC50 Red killifish (*Oryzias latipes*): 235 mg/l in seawater

LC50 Water flea (*Daphnia magna*): 22 mg/l 24.00 hours

13. Disposal Considerations

Disposal instructions

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

Do not dispose of via sinks, drains or into the immediate environment.

14. Transport Information

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Basic shipping requirements:

UN number	UN2829
Proper shipping name	Caproic acid
Hazard class	8
Packing group	III
Additional information:	

Special provisions	IB3, T4, TP1
Packaging exceptions	154
Packaging non bulk	203
Packaging bulk	241
ERG number	153



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15. Regulatory Information

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance
Contains no California Prop 65 chemicals.

US - New Jersey Community RTK (EHS Survey): Reportable threshold

US - Pennsylvania RTK - Hazardous Substances: Listed substance
HEXANOIC ACID (CAS 142-62-1) Listed.

16. Other Information

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings
Health: 3
Flammability: 1
Physical hazard: 0

NFPA ratings
Health: 3
Flammability: 1
Instability: 0

Bibliography
Sax's Dangerous Properties of Industrial Materials, 9th Ed. Richard J. Lewis.

V. R. Mattson, et al, "Acute Toxicity of Selected Organic Compounds to Fathead Minnows," EPA-600/3-76-097, Oct. 1976.

K. Verschuere. Handbook of Environmental Data on Organic Chemicals, 3rd Ed. 1998.

Acute Toxicity and Irritation Studies on a Series of Fatty Acids. J. Am. Oil Chem. Soc., 56(1979), p.760A.

BIBRA toxicity profile (1988) n-Octanoic acid.

BIBRA toxicity profile (1996) n-Decanoic acid.

Disclaimer

The submission of the MSDS may be required by law, but this is not an assertion that the substance is hazardous when used in accordance with proper safety practices and normal handling procedures. Data supplied are for use only in connection with occupational safety and health.

The information contained herein has been compiled from sources considered by Procter & Gamble to be dependable and is accurate to the best of the Company's knowledge. The information relates to the specific product designated herein, and does not relate to use in combination with any other material of any other process. Procter & Gamble assumes no responsibility for injury to the recipient or third persons, or for any damage to any property resulting from misuse of the controlled product.

Issue date

05-01-2010

This data sheet contains changes from the previous version in section(s):

Product and Company Identification: Product and Company Identification
Other Information: Disclaimer