

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name C-698K
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 # 02
Revision date 05-01-2010
CAS # 142-62-1
MSDS Number LC121
Product Code 98977850
Product use Production of cutting oils, specialty soaps, and chain terminators.
Synonym(s) Caproic 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.

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.

Ingestion Causes burns to mucous membranes.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Hexanoic acid	142-62-1	99-100

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.

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.

Protection of firefighters

Specific hazards arising from the chemical Thermal decomposition or burning may produce carbon monoxide and/or carbon dioxide.

Special protective equipment for fire-fighters Wear self-contained breathing apparatus and protective clothing.

Specific methods Cool containers with flooding quantities of water until well after fire is out.

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.

Environmental precautions Minimize contamination of drains, surface and ground waters.

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.

7. Handling and Storage**Handling**

Handle in accordance with good industrial hygiene and safety practice.
Avoid contact with eyes, skin, and clothing.
Since emptied containers retain product residue, follow label warnings even after container is emptied.
Keep away from sources of ignition.

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 closed original container in a dry place.
For quality reasons: Avoid elevated temperatures.

Specific uses

Follow bulk handling and storage procedures as noted above.

8. Exposure Controls / Personal Protection**Engineering controls**

Local exhaust is recommended.
Mechanical - may be necessary if working at elevated temperatures or in enclosed areas.

Personal protective equipment**General**

Observe good industrial hygiene practices.
Avoid breathing (heated) vapors.

Boots. Apron. Eye wash fountain and emergency showers are recommended. Wear suitable protective clothing.

Eye / face protection

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.

Environmental exposure controls

Contact Procter and Gamble for specific Community information.

9. Physical & Chemical Properties

Appearance	Not available.
Color	Not available.
Odor	Not available.
Odor threshold	Not available.
Physical state	Liquid.
Form	Liquid.
pH	Not available.
Melting point	Not available.
Freezing point	Not available.
Boiling point	402 °F (205.6 °C) @ 760 mm Hg (101.3kPa)
Flash point	230 °F (110 °C) Pensky-Martens Closed Cup
Evaporation rate	< 0.01
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	< 1 mm Hg @ 72F (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	716 °F (380 °C)
Decomposition temperature	Not available.
VOC	Not available.

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Materials to avoid	Strong alkalis.
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****Product**

Hexanoic acid (142-62-1)

Test Results

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

Impurities

OCTANOIC ACID (124-07-2)

Test Results

Acute Dermal LD50 Rabbit: > 5 g/kg
Acute Oral LD50 Rat: > 10 g/kg

12. Ecological Information

Ecotoxicological data

Product

Hexanoic acid (142-62-1)

Test Results

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

Impurities

OCTANOIC ACID (124-07-2)

Test Results

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

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.

Contaminated packaging

Observe local regulations.

14. Transport Information

DOT

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



DOT

15. Regulatory Information

US federal regulations

All components are on the U.S. EPA TSCA Inventory List.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

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

HMIS® ratings
Health: 3
Flammability: 1
Physical hazard: 2

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.

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