

SAFETY DATA SHEET

1. Identification

| | | |
|---------------------------------|--|--|
| GHS product identifier | CO-1270 | |
| SDS number | ALCH411 | |
| Product Code | 98864909, 10220267 | |
| Version # | 04 | |
| Issue date | 11-18-2009 | |
| Revision date | 10-23-2014 | |
| Supersedes date | 10-06-2010 | |
| Product use | Intermediate. Aluminum rolling lubricants. Cosmetics. | |
| Recommended Restrictions | Not available. | |
| Synonym(s) | Lauryl/Myristyl Alcohol | |
| Manufacturer | <p>The Procter & Gamble Company Procter & Gamble Chemicals Sharon Woods Innovation Center 11530 Reed Hartman Highway Cincinnati, OH 45241 United States For Quality Service or Product Related Questions Call: 1-800-477-8899 PGChemMSDS.IM@pg.com For Emergency Contact CHEMTREC: 1-800-424-9300 U.S. and Canada For Calls Originating Elsewhere CHEMTREC: 1-703-527-3887</p> | |

2. Hazards identification

| | | |
|------------------------------|--|-------------|
| GHS classification | | |
| Physical hazards | Not classified. | |
| Health hazards | Serious eye damage/eye irritation | Category 2A |
| Environmental hazards | Hazardous to the aquatic environment, acute hazard | Category 1 |
| | Hazardous to the aquatic environment, long-term hazard | Category 2 |

GHS label elements

Signal words Warning

Symbols



Hazard statement Causes serious eye irritation. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention Wear protective gloves/protective clothing/eye protection/face protection. Wash face, hands and any exposed skin thoroughly after handling. Avoid release to the environment.

Response IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Collect spillage.

Storage No special storage precautions noted.

Disposal

Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Specific hazards

Causes serious eye irritation. Very toxic to aquatic organisms. May cause long-term adverse effects in the environment.

3. Composition/information on ingredients

| Components | CAS # | Percent |
|------------------|------------|---------|
| ALCOHOLS, C10-16 | 67762-41-8 | 100 |

4. First aid measures**First aid procedures****Eye**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops or persists.

Skin

Wash off with soap and plenty of water.

Inhalation

Remove from area of exposure. Move to fresh air. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen. Consult a physician for specific advice.

Ingestion

Consult a physician. Do not induce vomiting without advice from poison control center or doctor.

Notes to physician

Not available.

General advice

If you feel unwell, seek medical advice (show the label where possible). Take off all contaminated clothing immediately.

5. Fire-fighting measures**Extinguishing media****Suitable extinguishing media**

Water spray. Dry chemical. Foam. Carbon dioxide (CO2).

Unsuitable extinguishing media

Do not use water jet.

Protection of firefighters**Specific hazards arising from the chemical**

Irritating and toxic gases or fumes may be released during a fire.

Protective equipment and precautions for firefighters

Wear self-contained breathing apparatus and protective clothing.

Fire fighting equipment/instructions

Wear self-contained breathing apparatus and protective clothing. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. Accidental release measures**Personal precautions**

Wear appropriate protective equipment and clothing during clean-up.

Environmental precautions

The compound is readily biodegradable and is mineralized within wastewater treatment plants. Release of long chain alcohols by wastewater microbes is expected as a result of natural microbial metabolism. The safety of long chain alcohols is demonstrated for all environmental compartments.

Methods for containment

Dam and absorb spillage with sand, sawdust or other absorbent.

Methods for cleaning up

Absorb with sand or other inert absorbent. Sand. Silica gel. Acid binder. Universal binder. Sawdust.

7. Handling and storage**Handling**

Wear personal protective equipment. Handle in accordance with good industrial hygiene and safety practice.

Storage

Keep away from heat, sparks and open flame. Store in a cool dry place. Keep away from possible contact with incompatible substances.

8. Exposure controls / personal protection

Control parameters

ACGIH

No relevant exposure guidelines for ingredients.

U.S. - OSHA

No relevant exposure guidelines for ingredients.

Engineering controls

Mechanical ventilation or local exhaust ventilation may be required.

Personal protective equipment

General

Observe good industrial hygiene practices. Wear suitable protective clothing, gloves and eye/face protection. Avoid contact with eyes.

Eye/face protection

Tightly fitting safety goggles.

Skin protection

Wear suitable protective clothing and eye/face protection. Wear suitable gloves.

The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Neoprene gloves nitrile-butadiene rubber (NBR) gloves. Observe instructions regarding permeability and breakthrough time provided by supplier. Consider conditions under which the product is used, danger of cuts, scrapes and contact time.

Respiratory protection

No protection is ordinarily required under normal conditions of use and with adequate ventilation. In case of inadequate ventilation or risk of inhalation of vapors, use suitable respiratory equipment with combination filter (type A2/P2).

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Avoid contact with eyes.

Environmental exposure controls

The compound is readily biodegradable and is mineralized within wastewater treatment plants. Release of long chain alcohols by wastewater microbes is expected as a result of natural microbial metabolism. The safety of long chain alcohols is demonstrated for all environmental compartments.

9. Physical and chemical properties

Appearance

Physical state

Liquid.

Color

Water white.

Odor

Fresh, Waxy.

Odor threshold

Not available.

pH

Not available.

Melting point/Freezing point

70 °F (21.1 °C)

Boiling point

> 350 °F (> 176.67 °C) @ 760 mm Hg (101.3kPa)

Flash point

280.00 °F (137.78 °C) Pensky-Martens Closed Cup

Evaporation rate

Not available.

Flammability (solid, gas)

Not available.

Flammability limits in air, lower, % by volume

Not available.

Flammability limits in air, upper, % by volume

Not available.

Vapor pressure

< 10 mm Hg @ 72 °F (22 °C)

Vapor density

Not available.

Relative density

Not available.

Solubility (H2O)

Negligible @ 72 °F (22 °C)

Partition coefficient (n-octanol/water)

Not available.

Auto-ignition temperature

Not available.

| | |
|----------------------------------|-----------------|
| Decomposition temperature | Not available. |
| Viscosity | Not available. |
| Specific gravity | 0.82 @ 35/22 °C |

10. Stability and reactivity

| | |
|---|--|
| Chemical stability | Material is stable under normal conditions. |
| Possibility of hazardous reactions | Hazardous polymerization does not occur. |
| Conditions to avoid | Direct sources of heat. Contamination. Sunlight. Ionizing radiation. |
| Incompatible materials | Strong oxidizing agents. |
| Hazardous decomposition products | No decomposition if stored normally. |

11. Toxicological information

Toxicological data

| Constituents | Species | Test Results |
|---|-----------------|--|
| 1-TETRADECANOL (112-72-1) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | 8000 mg/kg, 24 hours, bw |
| <i>Inhalation</i> | | |
| LC50 | Rat | > 1.5 mg/l, 1 hr, air. |
| <i>Oral</i> | | |
| LD50 | Rat | > 2000 mg/kg, bw OECD 401 |
| 1-DODECANOL (112-53-8) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | 8000 - 12000 mg/kg, 24 hours, bw. OECD 402. |
| <i>Inhalation</i> | | |
| LC50 | Rat | > 71 mg/l, 1 hr, air. Read-across 112-30-1. |
| <i>Oral</i> | | |
| LD50 | Rat | > 2000 mg/kg, bw. OECD 401. |
| Impurities | Species | Test Results |
| 1-DECANOL (112-30-1) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rat | > 5000 mg/kg, 24 hours, /bw. EPA OPPTS 870.1200. |
| <i>Inhalation</i> | | |
| LC50 | Rat | > 71 mg/l, 1 hr, /air. |
| <i>Oral</i> | | |
| LD50 | Rat | > 5000 mg/kg, /bw. EPA OPPTS 870.1100. |
| General information | Not available. | |
| Information on likely routes of exposure | | |
| Ingestion | Not classified. | |
| Inhalation | Not classified. | |
| Skin contact | Not classified. | |

| | |
|--|--|
| Eye contact | Causes serious eye irritation. |
| Sensitization | Not classified. |
| Sensitization | |
| 1-DODECANOL | In vivo, OECD 406. Result: Not sensitizing Species: Guinea pig |
| Skin sensitization | |
| 1-TETRADECANOL | In vivo, OECD 406. Result: Not sensitizing Species: Guinea pig |
| 1-DECANOL | In vivo, EPA OPPTS 870.2600. Result: Not sensitizing Species: Guinea pig Observation Period: 24 hours |
| Carcinogenicity | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. |
| Mutagenicity | Not classified. |
| Germ cell mutagenicity: Ames test | |
| 1-TETRADECANOL | 5000 In vitro, μ /plate. OECD 471. Result: Negative Species: Salmonella Typhimirium (Salmonella enterica) Test Duration: 48 hours |
| 1-DODECANOL | 0, OECD 471. Result: Negative Species: Salmonella Typhimirium (Salmonella enterica) |
| 1-DECANOL | In vitro, OECD 476. Read-across 104-76-7. Result: Negative Species: Salmonella Typhimirium (Salmonella enterica) |
| Germ cell mutagenicity: Chromosome aberration | |
| 1-TETRADECANOL | 500 mg/kg In vivo, bw. OECD 474. Read-across 661-19-8. Result: Negative Species: Mouse |
| 1-DODECANOL | In vitro, OECD 473. Read-across 67762-41-8 Result: Negative Species: Hamster |
| 1-DECANOL | In vivo, OECD 474. Read-across 112-53-8. Result: Negative Species: Mouse |
| Germ cell mutagenicity: Micronucleus | |
| 1-DODECANOL | In vivo, OECD 474. Result: Negative Species: Mouse |
| Reproductive effects | Not classified. |
| Fertility effects - Males and females | |
| 1-DODECANOL | 1127 - 1243 mg/kg/day NOAEL, Read-across 111-27-3. Result: No effects Species: Rat Test Duration: 13 weeks |

Developmental effects

| | |
|----------------|--|
| 1-TETRADECANOL | 2000 mg/kg bw/day NOAEL, OECD 422. Read-across 112-53-8. Result: No effects Species: Rat |
| 1-DODECANOL | 2000 mg/kg bw/day NOAEL, Draft OECD 422. Result: No effects Species: Rat |
| 1-DECANOL | 1300 mg/kg bw/day NOAEL, OECD 414. Result: No effects Species: Rat Test Duration: 20 days |

Skin corrosion/irritation Not classified.

Irritation Corrosion - Skin

| | |
|----------------|--|
| 1-TETRADECANOL | In vivo, OECD 404. GLP. Result: Not irritating Species: Human Test Duration: 4 hours Observation Period: 72 hours |
| 1-DODECANOL | In vivo, OECD 404. Result: Not irritating Species: Human Test Duration: 4 hours |
| 1-DECANOL | In vivo, EPA OPPTS 870.2500. Result: Not irritating Species: Rabbit Test Duration: 4 hours Observation Period: 10 days |

Serious eye damage/eye irritation Causes serious eye irritation.

Irritation Corrosion - Eye

| | |
|----------------|--|
| 1-TETRADECANOL | 0.01 ml In vivo, OECD 405. Result: Moderately irritating Species: Rabbit Observation Period: 14 days |
| 1-DODECANOL | In vivo, OECD 405. Result: Irritating Species: Rabbit Test Duration: 24 hours Observation Period: 72 hours |
| 1-DECANOL | 28.3, EPA OPPTS 870.2400. Result: Moderately irritating Species: Rabbit Observation Period: 24 hours |

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Specific target organ toxicity - repeated exposure

| | |
|----------------|--|
| 1-TETRADECANOL | > 4275 mg/kg bw/day Subchronic NOAEL, Read-across 36653-82-4. Result: No effects Species: Rat Test Duration: 13 weeks |
| 1-DODECANOL | 2000 mg/kg bw/day Subchronic, NOAEL, OECD 422. Result: No effects Species: Rat Test Duration: 13 weeks |
| 1-DECANOL | 2000 mg/kg bw/day Subchronic NOAEL, Draft OECD 422. Result: No effects Species: Rat Organ: Oral |

Other information Not available.

12. Ecological information

Ecotoxicological data

| Constituents | | Species | Test Results |
|----------------------------------|------|---|--|
| 1-TETRADECANOL (112-72-1) | | | |
| <i>Aquatic</i> | | | |
| <i>Acute</i> | | | |
| Crustacea | EC50 | Water flea (Daphnia magna) | 3.2 mg/l, 48 hours, OECD 202. ISO 6341 15. |
| Fish | LC50 | Rainbow trout,donaldson trout (Oncorhynchus mykiss) | > 1 mg/l, 96 hours, OECD 203. EU Method C.1. |
| <i>Chronic</i> | | | |
| Algae | EL50 | Green algae (Desmodesmus subspicatus) | > 10 mg/l, 96 hours, OECD 201. DIN 38412 Pt 9. |
| Crustacea | NOEC | Water flea (Daphnia magna) | 1.6 µg/l, 21 days, OECD 211. |
| 1-DODECANOL (112-53-8) | | | |
| <i>Aquatic</i> | | | |
| <i>Acute</i> | | | |
| Algae | EC50 | Green algae (Desmodesmus subspicatus) | 0.66 mg/l, 72 hours, OECD 201. |
| Crustacea | EC50 | Water flea (Daphnia magna) | 0.765 mg/l, 48 hours, DIN38412. |
| Fish | LC50 | Fathead minnow (Pimephales promelas) | 1.01 mg/l, 96 hours, US EPA 1975. |
| <i>Chronic</i> | | | |
| Algae | NOEC | Green algae (Desmodesmus subspicatus) | 0.085 mg/l, 72 hours, OECD 201, EU Method C.3. |
| Crustacea | NOEC | Water flea (Daphnia magna) | 14 µg/l, 21 days, OECD 211. |
| Impurities | | | |
| 1-DECANOL (112-30-1) | | | |
| <i>Aquatic</i> | | | |
| <i>Acute</i> | | | |
| Algae | EC50 | Green algae (Desmodesmus subspicatus) | 1 - 10 mg/l, 72 hours, OECD 201. |
| Crustacea | EC50 | Harpacticoid copepod (Nitocra spinipes) | 3.1 mg/l, 96 hours, OECD 202. |
| | | Water flea (Daphnia magna) | 2.1 mg/l, 48 hours, OECD 211. |
| Fish | LC50 | Fathead minnow (Pimephales promelas) | 2.4 mg/l, 96 hours, US EPA 1975. |

| Impurities | Species | Test Results |
|---|--|--|
| Terrestrial | | |
| <i>Acute</i> | | |
| Other | EC0 | Soil bacterium (<i>Pseudomonas putida</i>) 10000 mg/l, 30 minutes |
| | EC50 | Springtail (<i>Collembola</i>) 320 mg/kg, 7 days, soil dw. Equivalent to OECD 207. |
| Ecotoxicity | Not available. | |
| Aquatic toxicity | Very toxic to aquatic life with long lasting effects. | |
| Persistence and degradability | Expected to be readily biodegradable. | |
| Photolysis | | |
| Half-life (Photolysis-atmospheric) | | |
| 1-TETRADECANOL | | 18.3 hours |
| 1-DODECANOL | | 21.2 hours, SRC AOPWIN v1.91. |
| 1-DECANOL | | 25.1 hours, AOPWIN v1.91. |
| Biodegradability | | |
| Percent degradation (Aerobic biodegradation) | | |
| 1-DODECANOL | | 69 %, OECD 301B. Result: Readily Biodegradable Test Duration: 28 days |
| 1-DECANOL | | 74.6 %, OECD 301D. Result: Readily biodegradable Test Duration: 28 days |
| Percent degradation (Aerobic biodegradation-ready) | | |
| 1-TETRADECANOL | | 15.9 mg/l, OECD 301B. Recovery Period: 82.2 %, 28 days |
| Percent degradation (Anaerobic biodegradation) | | |
| 1-DODECANOL | | 99.2 Test Duration: 48 hours |
| Bioaccumulative potential | Will not bio-accumulate. | |
| Octanol/water partition coefficient log Kow | | |
| 1-TETRADECANOL | | 5.5 |
| 1-DODECANOL | | 5.36 |
| Mobility in soil | Not available. | |
| Adsorption | | |
| Soil/sediment sorption - log Koc | | |
| 1-TETRADECANOL | | 4.71 |
| 1-DECANOL | | > 96, SRC PCKOCWIN. |
| Other adverse effects | None known. | |
| 13. Disposal considerations | | |
| Disposal methods | Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. | |
| Waste from residues / unused products | Dispose of in accordance with local regulations. | |
| Contaminated packaging | Offer rinsed packaging material to local recycling facilities. | |
| 14. Transport information | | |
| DOT | | |
| Not regulated as dangerous goods. | | |
| IATA | | |
| UN number | UN3082 | |

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Mixture, contains, Dodecanol) (1-Dodecanol)

Transport hazard class(es) 9

Packing group III

Environmental hazards Yes

IMDG

UN number UN3082

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Mixture, contains, Dodecanol) (1-Dodecanol)

Transport hazard class(es) 9

Packing group III

Environmental hazards

Marine pollutant Yes (P)

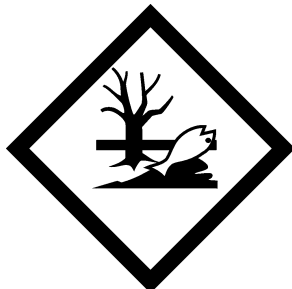
EmS No. F-A, S-F

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

IATA; IMDG



Marine pollutant



15. Regulatory information

US federal regulations All components are on the U.S. EPA TSCA Inventory List. This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. CERCLA/SARA Hazardous Substances - Not applicable.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
 Delayed Hazard - No
 Fire Hazard - Yes
 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 |
| Taiwan | Taiwan Inventory | No |
| 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 - New Jersey RTK - Substances: Listed substance

Contains no New Jersey Right To Know Substances

US - Pennsylvania RTK - Hazardous Substances: Listed substance

1-DECANOL (CAS 112-30-1) Listed.

16. Other information

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

HMIS® ratings
Health: 2
Flammability: 1
Physical hazard: 0

NFPA ratings
Health: 2
Flammability: 1
Instability: 0

Disclaimer The submission of the SDS 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.

This data sheet contains changes from the previous version in section(s): This document has undergone significant changes and should be reviewed in its entirety.