Rierden Chemical & Trading Company

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Safety Data Sheet

Distilled Fatty Acid

I IDENTIFICATION

Synonyms	**fatty acids, C8-18 and C18-unsaturated**
CAS #	**67701-05-7**
Europe EC #	**266-929-0**
Material Use	**lubricants, soaps**

EMERGENCY INFORMATION		
In the U.S.A.	***Call CHEMTREC***	***(800) 424-9300***
In Canada	***Call CANUTEC (collect)***	***(613) 996-6666***

II HAZARD IDENTIFICATION

GHS Class	***eye irritation****	***skin irritation****
(Category)	***(2A)***	***(3)***
Signal Words	***WARNING***	***WARNING***
		No Hazard Symbol
Hazard Statements	*causes serious eye irritation (H319)*	*causes mild skin irritation (H316)*

** **NOTE:** May not be irritating; irritancy depends on the amount of Caprylic Acid present; see Part XI (i)*

GHS Precautionary Statements for Labelling

P262, P264	**Do not get in eyes or on skin. Wash thoroughly after handling.**
P280	**Wear eye protection, protective gloves and clothing of nitrile or "Viton".**
P313 & P333	**If skin irritation or rash occurs, get medical advice/attention.**
P362, P364	**Take off contaminated clothing and wash it before reuse.**
P305, P351, P338	**Rinse cautiously with water for several minutes. Remove contact lenses if present & easy to do. Continue rinsing.**

III COMPOSITION

	CAS NUMBER	%	TLV ppm / mg/m^3	LD_{50} (*mg/kg*) ORAL	LD_{50} (mg/kg) SKIN	LC_{50} ppm INHALATION
Fatty Acids, C8-18 and C18-unsaturated	67701-05-7	100%	not listed	>5000	>2000	not known

IV FIRST AID

SKIN: Wash with soap and plenty of water. Remove contaminated clothing and do not reuse until thoroughly cleaned or laundered. Seek medical help promptly if there is persistent itching or redness in the affected area.

EYES: Wash eyes with plenty of water, holding eyelids open. Seek medical assistance promptly if there is irritation.

INHALATION: Remove from contaminated area promptly. **CAUTION: Rescuer must not endanger himself!** If victim's breathing stops, administer artificial respiration and seek medical aid promptly.

INGESTION: Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

NOTE: Inadvertent inhalation of vomited material may seriously damage the lungs. The danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity product. The stomach should only be emptied under medical supervision, after the installation of an airway to protect the lungs.

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V FLAMMABILITY & FIRE-FIGHTING

Flash Point	approx. 160ºC / 320ºF (Cleveland open cup)[1] – *for Lauric Acid, the majority (~50%) component*
Autoignition Temperature	250ºC / 482ºF[1]
Flammable Limits	not known
Combustion Products	carbon monoxide, nitrogen oxides, irritating smoke & fumes, part oxidised hydrocarbon fragments
Firefighting Precautions	as for an oil fire (*water fog, alcohol-resistant foam, dry chemical*); firefighters must wear SCBA
Static Discharge	cannot accumulate a static charge

VI ACCIDENTAL RELEASE MEASURES

Leak Precaution	dyke to control spillage and prevent environmental contamination
Handling Spill	ventilate contaminated area; recover free liquid with explosion-proof pumps; absorb residue on an inert sorbent, pick up using non-sparking plastic or aluminium shovel, & store in closed containers for disposal

VII HANDLING & STORAGE

Store and use in a cool environment away from oxidising agents & alkalis. Avoid prolonged contact with skin. Wash work clothes frequently. An eye bath & safety shower should be available near the workplace.

VIII EXPOSURE CONTROL & PERSONAL PROTECTION

ACGIH TLV	not listed	ACGIH STEL	not listed
OSHA PEL	not listed	OSHA STEL	not listed
Ventilation	no special mechanical ventilation required		
Hands	wear nitrile or "Viton" gloves – *other types also protect; always confirm suitability with supplier*		
Eyes	safety glasses with side shields or chemical goggles – *always protect eyes!*		
Clothing	choose suitable protective (*hands, above*) clothing (*apron, boots, etc*) to prevent skin contact		

IX PHYSICAL AND CHEMICAL PROPERTIES

NOTE: *for Flash Point, Autoignition Temp, & Flammable Limits see Part 5.*

Odour & Appearance	white to pale yellow paste with faint fatty odour (*liquid on a hot summer day*)
Odour Threshold	not known – nearly odourless
Vapour Pressure	<0.1mmHg / <0.013kPa (20ºC/ 68ºF)
Evaporation Rate (*Butyl Acetate = 1*)	not known – not volatile
Vapour Density (air = 1)	~10 – *theoretical value*
Decomposition Temperature	not known – *no decomposition below the boiling point*
Boiling Point	>450ºC / >842ºF – *decomposition begins at ~400ºC / 750ºF*
Melting Point	22-26ºC / 72-79ºF
Density	0.85kg/litre
Water Solubility	almost nil; *approx. 1-5milligrams/litre (20ºC / 68ºF)*
- in other solvents	ether, acetone, most hydrocarbons, carbon tetrachloride
Log $P_{o/w}$ (*Octanol/H_2O Partition Coefficient*)	not known
Viscosity	not applicable – semi-solid material
pH	none – *does not yield hydrogen ions in solution*
Molecular Weight	not known – mixture of fatty acids; *average ~220grams per mole*

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X REACTIVITY

Dangerously Reactive With	strong oxidising agents, strong reducing agents
Also Reactive With	strong alkalis cause saponification which may become vigorous enough to cause heating & fire; reactive metals (eg: Na, Ca, K), finely divided aluminum; gradually corrodes brass
Chemical Stability	stable; will not polymerize
Decomposes in Presence of	ultraviolet light, slowly
Decomposition Products	irritating short-chain aldehydes & ketones
Mechanical Impact	not sensitive

XI TOXICITY INFORMATION

i. *ACUTE EXPOSURE*

Skin Contact	little to no effect in humans; slightly irritating to rabbits (48hr exposure)[1]*
Skin Absorption	slight; toxic effects unlikely by this route
Eye Contact	irritating to eyes (rabbit test)[1]*
Inhalation	*not possible – semi-solid paste; cannot form dust or vapour, & mist formation is unlikely*
Ingestion	large quantities (100g or more) may cause fatty diarrhoea – *not a route of industrial exposure*
LD_{50} (oral)	>5000mg/kg (rat) – *no mortality reported*[1]
LD_{50} (skin)	>2000mg/kg (rabbit) – *no mortality reported*[1]
LC_{50} (inhalation)	not known

**** NOTE: The degree of irritancy depends on the presence of Caprylic Acid; product may irritate if more than 10% is present; generally ~7% to 8%.***

ii. *CHRONIC EXPOSURE*

General	28-day application to shaved rabbit skin caused scar tissue to form indicating corrosive effect[1]
Sensitising	not a sensitiser – *3 fatty acids tested*[1]
Carcinogen/Tumorigen	not known to be a tumorigen or a carcinogen in humans or animals[1]
Reproductive Effect	no known effect on humans or animals[1]
Mutagen/Teratogen	not known to be a mutagen or teratogen in humans or animals[1]
Synergistic With	not known

XII ECOLOGICAL INFORMATION

Bioaccumulation	readily metabolised; cannot bioaccumulate
Biodegradation	various fatty acids are readily biodegradable; rates from 60% to 93% in 28 days[1]
Abiotic Degradation	based on similar materials, expected ½-life in air should be 15-20 hours
Mobility in soil, water	water insoluble; immobile in soil and the water column

Aquatic Toxicity

This material is not expected to be toxic to aquatic life. A low density solid, it cannot spread over surface water to exclude air. Its ability to coat animals entering or leaving the water is limited & low. Virtually water insoluble, it cannot be absorbed via gills, ***Ingested, it is readily digestible by animal life****.*

LC_{50} (Fish 96 hr)	>1000mg/litre (Danio rerio), >10,000mg/litre (Leuciscus idus)[1]
NOEC (Crustacea, 48hr)	>3.2, >4.8 & >32mg/litre (Daphnia magna)[1]; >20mg/litre (Artemia salina)[1]
EC_{50} (Algae, 96hr)	>0.9, > 2.1 & >7.6mg/litre (Pseudokirchneriella subcapitata)[1]
LC_0 (Microorganisms)	>883, >912, >1000 & >10,000mg/litre (Pseudomonas putida)[1] – *no effect seen at these dose*

XIII DISPOSAL CONSIDERATIONS

Waste Disposal	**do not flush to sewer**; local regulations may permit disposal in sanitary landfill; may be incinerated in approved facility with flue gas monitoring & scrubbing
Containers	**Drums** should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use. **Pails** must be vented and thoroughly dried prior to crushing and recycling. **IBCs** (intermediate bulk containers): polyethylene bottle must be pressure tested & recertified at 30 months. Replace at 60 months (5 years). Steel containers must be inspected, pressure tested & recertified every 5 years. ***Warning: never cut, drill, weld or grind on or near this container, even if empty.***

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XIV TRANSPORT INFORMATION

USA 49 CFR & Canada TDG

Product Identification Number	**UN – not regulated for transport**
Shipping Name	**not regulated for transport**
Classification	**not regulated for transport**
Marine Pollution	***not a marine pollutant***
ERAP Required	***No***
Reportable Quantity (RQ)	***none***

XV REGULATIONS

Canada DSL	**on inventory**
U.S.A. TSCA	**ACTIVE**
Europe EINECS	**on inventory**

SARA

Physical Hazards

- ☐ Explosive
- ☐ Flammable
- ☐ Oxidizer (liquid, solid, or gas)
- ☐ Self-reactive
- ☐ Pyrophoric
- ☐ Self-heating
- ☐ Organic peroxide
- ☐ Corrosive to metal
- ☐ Gas under pressure (compressed gas)
- ☐ In contact with water emits flammable gas
- ☐ Combustible dust
- ☐ Hazard Not Otherwise Classified

Chemical Hazards

- ☐ Acute toxicity (any route of exposure)
- ☐ Skin corrosion or irritation
- ☒ Serious eye damage or eye irritation
- ☐ Respiratory or skin sensitization
- ☐ Germ cell mutagenicity
- ☐ Carcinogenicity
- ☐ Reproductive toxicity
- ☐ Aspiration hazard
- ☐ Simple asphyxiant
- ☐ Hazard Not Otherwise Classified

XVI OTHER INFORMATION

Date of Preparation **July 2011**
Date of Revision **July 2013, July 2016, February 2019, February 2021 (Section XV)**

Prepared for Rierden Chemical & Trading Company, by **Peter Bursztyn**

With data from Registry of Toxic Effects of Chemical Substances (RTECS - USA), Hazardous Substance Data Base (HSDB - USA), Cheminfo (CCOHS - Canada), OSHA website, European Chemicals Agency (EChA) dossiers & other sources (below if used), as required/available.

(1) European Chemicals Agency (EChA) dossier for Fatty Acids C_{16}-C_{18} & C_{18} unsaturated:
http://echa.europa.eu/registration-dossier/-/registered-dossier/14937

last page of SDS

PLEASE ENSURE THAT THIS MSDS IS GIVEN TO, AND EXPLAINED TO PEOPLE USING THIS PRODUCT.

EMERGENCY INFORMATION: Call CHEMTREC (800) 424-9300