

MATERIAL SAFETY DATA SHEET

SECTION 1: IDENTIFICATION AND COMPANY DETAILS

2013-2-1

Company Name: SteelWick AS.

Address: Brynsveien 18, 0667 Oslo, Norway.

Tel: +47 930 55330

Website: www.tenderflame.com

Product Name: Tenderfuel also Cosflames

Product description Non flammable fuel in plastic bottles.

Use in well ventilated area.

SECTION 2: COMPOSITION OF INGREDIENTS

Proprietary active Cas # Weight 95 to 99%

Proprietary active Cas# Weight 5 to 1%

Proprietary formula.

Non Hazardous material, see section 3.

SECTION 3: HAZARD IDENTIFICATION

Emergency Overview

This material is NOT HAZARDOUS by OSHA Hazard Communication definition.

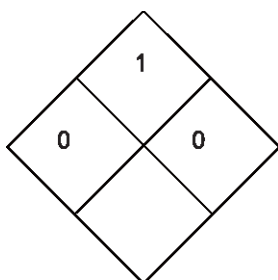
Signal Word

Caution.

Hazards

Slightly combustible liquid. Do not handle near heat, sparks, or open flame. May cause minor eye irritation. High aerosol concentrations may cause mild irritation of the nose and throat as well as central nervous system depression. Not expected to cause skin irritation. Not expected to be a sensitizer.

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Health	I	0
Flammability		1
Reactivity		0

Physical State

Liquid.

Color

Clear, colorless.

Odor

Little or no odor.

Odor Threshold

No value available.

Potential Health Effects**Routes of Exposure**

Eye Skin. Inhalation

Signs and Symptoms of Acute Exposure

See component summary.

Skin

Not a skin irritant. Not expected to be a sensitizer.

Eye

May cause minor eye irritation. Effects of eye irritation are reversible.

Ingestion

Ingestion of high doses may cause discomfort and irritation of the gastrointestinal tract and CNS depression (fatigue, dizziness and possibly loss of concentration, with collapse, coma and death in cases of severe over-exposure).

Chronic Health Effects

See component summary.

Repeated or prolonged exposure of the skin to this material may cause defatting and drying of the skin. Prolonged or repeated breathing of high concentrations may cause symptoms of central nervous system depression.

Conditions Aggravated by Exposure

This material or its emissions may aggravate pre-existing eye disease.

SECTION 4: FIRST AID MEASURES

General

Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. For specific information refer to the Emergency Overview in Section 3 of this MSDS.

Skin

Not expected to present a significant skin hazard under anticipated conditions of normal use. If skin contact occurs, remove contaminated clothing and wash skin thoroughly.

Inhalation

Not expected to present a significant inhalation hazard under anticipated conditions of normal use. If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain medical attention if breathing difficulty persists.

Eye

Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.

Ingestion

Ingestion unlikely. If large quantity swallowed, give lukewarm water (pint/ 1/2 litre) if victim completely conscious/alert. Obtain medical attention.

Note to Physician

Treat symptomatically. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: FIRE FIGHTING MEASURES

Flammable Properties

Classification

OSHA/NFPA Class IIIB combustible liquid.

Flash Point:

over ~ 104°C (220 °F) (PMCC) (Aqueous solution).

Auto-Ignition Temperature

over ~ 365 °C (690 °F)

Lower Flammable Limit

~ 2.4 vol%

Upper Flammable Limit

~ 17.4 vol%

Extinguishing Media

Suitable: SMALL FIRE: Use dry chemicals, CO₂, water spray or alcohol-resistant foam. LARGE FIRE: Use water spray, water fog or alcohol-resistant foam.

Unsuitable: Do not use solid water stream.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Release Response

In case of accidental spill, may contaminate water supplies/pollute public waters. Evacuate/limit access. Equip responders with proper protection. Extinguish ignition sources; stop release; prevent flow to sewers or public waters. Notify fire and environmental authorities. Restrict water use for cleanup. Slippery walking/spread granular cover or soak up. Impound/recover large land spill; soak up small spill with inert solids. Use suitable disposal containers. On water, material is soluble and will disperse rapidly unless contained and collected quickly to minimize dispersion. Report per regulatory requirements.

SECTION 7: HANDLING AND STORAGE

Handling

Hygroscopic. Handle with care. After handling, always wash hands thoroughly with soap and water. Always drain and flush systems containing fuel with water.

Wear recommended personal protective equipment. Observe precautions pertaining to confined space entry.

Storage

Hygroscopic. Keep container tightly closed to prevent contamination. Store away from heat, sparks, open flames, strong oxidizing agents and direct sunlight. Store at 65-90°F (18-32°C).

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls

No special ventilation is recommended under anticipated conditions of normal use beyond that needed for normal comfort control.

Personal Protection

Inhalation No special respiratory protection is recommended under anticipated conditions of normal use with adequate ventilation. A respiratory protection program that meets OSHA's 29 CFR 1910.134 or ANSI Z88.2 requirements must be followed whenever workplace conditions warrant respirator use.

Skin Wear chemical resistant gloves such as: Neoprene. Where use can result in skin contact, practice good personal hygiene. The equipment must be cleaned thoroughly after each use.

Eye Use splash goggles when eye contact due to splashing or spraying liquid is possible.

Additional Remarks

Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove soiled clothing/wash thoroughly before reuse.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Liquid. Clear, colorless.

Odor: Little or no odor.

Odor Threshold: No value available.

pH: ~ 7

Boiling Point/Boiling Range: ~ 188 °C (370.4 °F) @ 760 mm Hg

Freezing Point/Melting Point: ~ -60 °C (-76 °F)

Flash Point: over~ 104 °C (220 °F) (PMCC) (Aqueous solution).

Auto-ignition: over ~ 365 °C (690 °F)

Flammability: OSHA/NFPA Class IIIB combustible liquid.

Lower Flammable Limit: ~ 2.4 vol%

Upper Flammable Limit: ~ 17.4 vol%

Explosive Properties: No Data Available.

Oxidizing Properties: No Data Available.

Vapor Pressure: < 0.1 mm Hg @ 25 °C (77 °F)

Evaporation Rate: 0.01 (butyl acetate = 1)

Relative Density: ~ 1.04 @ 25 °C (77 °F)

Relative Vapor Density: ~ 2.6 @ ~ 15 - 32 °C (59 - 89.6 °F) (Air = 1.0)

Viscosity: ~ 46 mPa.s @ 25 °C (77 °F) (Brookfield).

Solubility (Water): Complete (In All Proportions).

Partition Coefficient (Kow): ~ -0.92

Additional Physical and Chemical Properties: Volatile Characteristics: Slight: 0.1 to 1.0% Hygroscopic. Additional properties may be listed in Sections 3 and 5.

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability

Stable.

Conditions to Avoid

High temperatures, oxidizing conditions. May degrade when exposed to light or other radiation sources.

Substances to Avoid

Reacts with strong oxidizing agents. Strong acids. Isocyanates.

Decomposition Products

Carbon Monoxide and other toxic vapors.

Hazardous Polymerization

Not expected to occur.

Reactions with Air and Water

Not expected to occur.

SECTION 11: TOXICOLOGICAL INFORMATION

PRODUCT INFORMATION

Product Summary

No additional toxicology information is available for this product itself. (See Component Toxicity Information).

COMPONENT INFORMATION

Acute Toxicity - Lethal Doses

<u>LD50 (Oral)</u>	Rat	22,000 MG/KG BWT
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<u>LD50 (Skin)</u>	Rabbit.	20,800 MG/KG BWT
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Irritation

Skin Not a skin irritant. Repeated or prolonged contact with skin may cause dermatitis.

Eye May cause minor eye irritation. Effects of eye irritation are reversible.

Sensitization

Not expected to cause sensitization by skin contact, however skin reactions of unknown etiology have been described in some hypersensitive individuals following topical application.

Target Organ Effects

Skin. Repeated or prolonged contact with skin may cause defatting and drying of the skin which may result in dermatitis.

Repeated Dose Toxicity

No adverse systemic changes were reported in rats or dogs following repeated dietary exposure to high concentrations of propylene glycol. Cats responded with species-specific hematological changes (Heinz body formation) yet all other tissues were unaffected. Overall this formula is of low inherent toxicity following repeated oral or inhalation exposure.

Reproductive Effects

No adverse effect on reproductive performance was seen in male and female mice exposed continuously to high doses of propylene glycol in drinking water for up to 3 months.

Developmental Effects

Results from studies in pregnant rats, mice, hamsters and rabbits demonstrate that this formula is not teratogenic or fetotoxic.

Genetic Toxicity

Negative for genotoxicity both in vitro and in vivo tests.

Carcinogenicity

No increase in tumors was noted in rats and dogs exposed to high concentrations of this formula via the diet for up to 2 years. The incidence of skin tumors was unaltered in mice following dermal application over a lifetime. Not listed by IARC, NTP, or OSHA.

SECTION 12: ECOLOGICAL INFORMATION

PRODUCT INFORMATION

Ecotoxicity

This material is expected to be non-hazardous to aquatic species.

Environmental Fate and Pathway

See component summary.

COMPONENT INFORMATION

Ecotoxicity

This material is expected to be non-hazardous to aquatic species.

Acute toxicity to fish

LC50 / 96 HOUR fathead minnow 51,400 mg/l

LC50 / 96 HOUR salmon 51,600 mg/l

Acute toxicity to aquatic invertebrates

EC50 / 48 HOUR Daphnia magna. 43,500 mg/l

EC50 / 48 HOUR saltwater mysid. 27,300 mg/l

Toxicity to aquatic plants

EC50 / 72 HOUR Freshwater Algae. 24,200 mg/l

EC50 / 72 HOUR Marine algae 19,300 mg/l

Toxicity to microorganisms

Summary: No Data Available.

Chronic toxicity to fish

Summary: No Data Available.

Chronic toxicity to aquatic invertebrates

IC25 / waterflea. 13,470 mg/l

Summary: A three generation reproductive study.

Environmental Fate and Pathway

Mobility

Transport between environmental compartments: Environmental releases of this formula will tend to partition to water and soil, with little potential for evaporation.

Persistence and Degradability

Biodegradation: Readily biodegradable in aerobic conditions. There is evidence that it is degraded under anaerobic conditions.

Bioaccumulation: This material is not expected to bioaccumulate. BCF < 1.5

Other Adverse Effects

No additional information available.

SECTION 13: DISPOSAL CONSIDERATIONS

Comply with federal, state, or local regulations for disposal. Landfill solids at permitted sites. Burn concentrated liquids, diluting with clean, low viscosity fuel. Avoid flameouts and assure that emissions comply with all applicable standards/regulations. Dilute aqueous waste may biodegrade. Assure effluent complies with applicable regulations.

SECTION 14: TRANSPORT INFORMATION

DOT Classification: Not a DOT controlled material.

Special provisions for transportation: Not applicable

SECTION 15: REGULATORY INFORMATION

SARA 302/304

This product is not known to contain any chemicals which are expected to be subject to the requirements and regulations contained in 40 CFR 302.

SARA 311/312

Acute Health Hazard : No

Chronic Health Hazard: No

Fire Hazard: No

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the De Minimis reporting levels established by SARA Title III, Section 313 and 40 CFR 372.

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