

SAFETY DATA SHEET

1. IDENTIFICATION

Product identifier used on the label

: **Flottec 440 Processing Aid**

Recommended use of the chemical and restrictions on use

: Filter and dewatering aids

Chemical family

: Proprietary surfactant blend

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party:

Flottec, LLC

338 West Main Street
Boonton, NJ 07005 U.S.A.
www.flottec.com

Information Telephone # : (973) 588 4717

24 Hr. Emergency Tel # : Chemtrec 1-800-424-9300 (Within Continental U.S.); Chemtrec 703-527-3887 (Outside U.S.)

2. HAZARDS IDENTIFICATION

Classification of the chemical

- Flammable liquids (Category 4)
- Skin corrosion/irritation (Category 2)
- Serious eye damage/eye irritation (Category 1)
- Reproductive toxicity (Category 2)

Label elements

Signal Word

Danger

Hazard statement(s)

- H227: Combustible liquid
- H318: Causes serious eye damage
- H315: Causes skin irritation
- H361: Suspected of damaging fertility or the unborn child
- H402: Harmful to aquatic life

Precautionary statement(s)

- P201: Obtain special instructions before use.
- P202: Do not handle until all safety precautions have been read and understood.
- P210: Keep away from heat, sparks, open flames and hot surfaces. No smoking.
- P264: Wash face, hands and any exposed skin thoroughly after handling.
- P273: Avoid release to the environment.
- P280: Wear eye protection, gloves and other protective clothing that are adapted to the task being performed and the risks involved.
- P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P302+352: IF ON SKIN: Wash with soap and water.
- P332+313: If skin irritation occurs: Get medical advice or attention.
- P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- P310: Immediately call a doctor/physician.
- P362+ P364: Take off contaminated clothing and wash before reuse.
- P370+378: In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide for extinction.
- P403: Store in a well-ventilated place.
- P405: Store locked up.
- P501: Dispose of contents and container to a licensed chemical disposal agency in accordance with local, regional and national regulations.

Hazard pictogram(s)



Other hazards

Acute hazard to the aquatic environment (Category 3)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Common name	CAS #	Concentration / wt %
Sodium docusate	577-11-7	36 - 43
2-Ethylhexanol	104-76-7	7 - 13
Ethyl Alcohol	64-17-5	3 - 7

The exact concentrations of the above listed chemicals are being withheld as a trade secret.

4. FIRST-AID MEASURES

Description of first aid measures

- Ingestion* : DO NOT induce vomiting, unless recommended by medical personnel. If victim is conscious wash out mouth with water and give 1-2 glasses of water to drink. Never give anything by mouth if victim is unconscious or convulsing. If spontaneous vomiting occurs, keep head below hips level to prevent aspiration into the lungs. Seek medical attention or contact a Poison Centre immediately.
- Inhalation* : Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen by trained personnel. If a problem develops or persists, seek medical attention.
- Skin Contact* : Flush with water for at least 15 minutes. Remove contaminated clothing and wash before reuse. Avoid touching eyes with contaminated body parts. If a problem develops or persists, seek medical attention.
- Eye Contact* : IMMEDIATELY flush with plenty of water. Remove contact lenses. Flush with water for at least 15 minutes. Hold eyelids apart to rinse properly. If a problem develops or persists, seek medical attention.

Symptoms : May cause severe eye irritation or eye damage. May cause redness and irritation of the skin. May cause irritation to nose, throat and respiratory tract. Swallowing will cause digestive tract disturbances resulting in nausea, vomiting, cramps and diarrhea.

Notes to the physician : Treat according to person's condition and specifics of exposure. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media : Dried powder, water spray, carbon dioxide (CO₂), chemical foam.

Unsuitable extinguishing media : Do not use direct water jet.

Special hazards arising from the substance or mixture

: Combustible liquid and vapors. May be ignited by heat, sparks, flame or static electricity. Emits toxic and corrosive fumes under fire conditions.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters : Firefighters must wear self-contained breathing apparatus with full face mask. Firefighting suit may not be efficient against chemicals.

Special fire-fighting procedures

- : Use water spray to cool fire-exposed containers. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- : Do not touch spilled material. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet.

Environmental precautions

- : Prevent entry in sewer and other enclosed area. For a large spillage, consult the Department of Environment or the relevant authorities.

Methods and material for containment and cleaning up

- : Remove sources of ignition. Ventilate well the area. Stop leak, if it's possible to do so without risk. Absorb with inert material (soil, sand, vermiculite) and place in an appropriate waste disposal clearly identified. Use non-sparkling and antistatic tools. Dispose via a licensed waste disposal contractor. Finish cleaning by rinsing with water contaminated surface.

7. HANDLING AND STORAGE

Precautions for safe handling

- : Keep away from heat, sparks and open flame. Turn off all pilot lights, flames, stoves, heaters, electric motors, welding equipment and other sources of ignition. Use non-sparkling and antistatic tools. Ground/bond all containers when transfer large quantities (5 gallons US or 20 L and more). Use only in well ventilated area. Do not breathe vapors, mists or aerosols. Avoid contact with skin, eyes and clothing. Wear eye protection, gloves and other protective clothing that are adapted to the task being performed and the risks involved. Keep in the workplace only the quantities necessary for the work being performed. Keep containers tightly closed when not used. Do not eat, do not drink and do not smoke during use. Wash hands, forearms and face thoroughly after handling this compound. Remove contaminated clothing and wash before reuse.

Conditions for safe storage

- : Storage and handling should follow the NFPA 30 Flammable and/or Combustible Liquids Code and the National Fire Code of Canada (NFCC). Ground or bond large containers. Store tightly close and in properly labelled containers in a cool, dry and well ventilated place. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Keep away from direct sunlight and heat. Store away from oxidizing materials and incompatible materials (see section 10).

Storage temperature

- : 10 to 30°C (50 to 86°F)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Immediately Dangerous to Life or Health

- : Ethyl alcohol: 3300 ppm.

Exposure limits

Ethyl Alcohol

- | | | | |
|------------|----------|----------------|------|
| : STEL | 1000 ppm | ACGIH , BC, ON | |
| : TWA (8h) | 1000 ppm | 1880 mg/m3 | RSST |
| | 1000 ppm | 1900 mg/m3 | OSHA |

Exposure controls

Appropriate engineering controls :

- Provide sufficient mechanical ventilation (general and/or local exhaust) to keep the airborne concentrations of vapors, mists, aerosols or dust below their respective occupational exposure limits.

Respiratory protection

- : Respiratory protection is not required in normal use. Respiratory protection equipment (PPE) must be selected, fitted, maintained and inspected in accordance with regulations and CSA Standard Z 94.4 and approved by NIOSH / MSHA. In case of insufficient ventilation or in confined or enclosed space and for an assigned protection factor (APF) up to 10 times of exposure limit, wear a half mask respirator with organic vapors cartridges. For an APF until maximum 100 times of exposure limit, wear a full face mask respirator with organic vapors cartridges.

Skin protection

- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Wear normal work clothing covering arms and legs as required by employer code. Wear an apron or long-sleeve protective coverall suit. To clean up a spill, if necessary, wear a synthetic polyethylene coveralls such as the Tychem (DuPont) or equivalent coveralls manufactured to provide protection against liquid chemical.

Eye / face protection

- : Wear chemical splash goggles. If respiratory hazards exist, a full face respirator may be required instead.

- Hands** : Chemical-resistant, impervious gloves should be worn at all times when handling this chemical product. Wear Neoprene gloves. Before using, user should confirm impermeability. Discard gloves that show tears, pinholes, or signs of wear. Gloves must only be worn on clean hands. Wash gloves with water before removing them. After using gloves, hands should be washed and dried thoroughly.
- Other protective equipment** : Wear safety shoes. Wear rubber boots to clean up a spill.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Liquid	Flammability limits (% by vol.)	: N/Av
Color	: Clear	Flash point	: >61°C (141,8°F)
Odor	: Mile Odor	Auto-ignition temperature	: N/Av
Odor threshold	: N/Av	Sensibility to electrostatic charge	: N/Av
pH	: Und	Sensibility to sparks/friction	: No
Melting/Freezing point	: Und	Vapor density (Air = 1)	: Und
Boiling point/range	: 100°C (212°F)	Relative density (Water = 1)	: 1.09 kg/L @ 25°C (77°F)
Solubility in water	: Soluble	Partition coefficient (n-octanol/water)	
Evaporation rate (BuAc = 1)	: N/Av		: N/Av
Vapor pressure	: N/Av	Decomposition temperature	: N/Av
Volatiles (% by weight)	: 50%	Viscosity	: Und
Flammability (solid, gas)	: Combustible	Molecular mass	: N/Av

10. STABILITY AND REACTIVITY

- Reactivity** : No information available for this product.
- Chemical stability** : Stable under recommended storage conditions.
- Possibility of hazardous reactions (including polymerizations)**
 : Hazardous polymerization will not occur.
- Conditions to avoid** : Avoid heat, flame and sparks. Avoid contact with incompatible materials.
- Incompatible materials** : Strong oxidizing agents (such as nitric acid, perchloric acid, peroxides, chlorates and perchlorates), strong acids, strong alkalis.
- Hazardous decomposition products**
 : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

Toxicological data

Chemical name	LC ₅₀ (Inhalation, Rat)	LD ₅₀ / mg/kg	
		(Oral, Rat)	(Dermal, Rabbit)
Sodium docusate	N/Av	>2100	>10000
2-Ethylhexanol	>2000 ppm/6h <5 mg/l/4h	2040	>2000
Ethyl Alcohol	39 mg/l/4h Mouse	7060	20000

Likely routes of exposure

- Skin** : Yes
- Eye** : Yes
- Inhalation** : Yes
- Ingestion** : Yes

Potential Health Effects:

Signs and symptoms of delayed, immediate and chronic effects

- Skin** : May cause redness and irritation of the skin. Sodium docusate causes skin irritation in rabbits (OECD TG 404), with effects still visible at 14 days. 2-Ethylhexanol causes skin irritation in rabbits (OECD TG 404). Severe erythema and oedema was reported in all treated animals at 24 hours after treatment, persisting until 72 hours. Liquid ethanol on the human skin is not irritating.

- Eye** : May cause severe eye irritation or eye damage. Sodium docusate causes irreversible eye damage in rabbits (OECD TG 405), including turbidity of the cornea, as evaluated 21 days after treatment. 2-Ethylhexanol causes eye irritation in rabbits (OECD TG 405). Severe iritis and moderate corneal opacity were seen in all animals at 24 and 48 hours after treatment. Liquid ethanol on the human eye causes an immediate sensation of burning and stinging. The acute discomfort subsides rapidly.
- Inhalation** : May cause irritation to nose, throat and respiratory tract.
- Ingestion** : Swallowing will cause digestive tract disturbances resulting in nausea, vomiting, cramps and diarrhea.
- Sensitization to material** : Ingredients present at levels greater than or equal to 0.1% of this product are skin or respiratory sensitizers.
- IRAC/NTP Classification** : No ingredients listed
- Carcinogenicity** : Ingredients present at levels greater than or equal to 0.1% of this product are not listed as a carcinogen by IARC, ACGIH, NIOSH, NTP or OSHA.
- Mutagenicity** : Ingredients in this product present at levels greater than or equal to 0.1% are not known to cause mutagenic effect.
- Reproductive Effects** : Sodium docusate was reported to cause developmental toxicity and teratogenicity, in rats following exposure via the oral route, in the presence of signs of marked maternal toxicity (OECD TG 414). 2-Ethylhexanol was reported to cause developmental toxicity, but not teratogenicity, in rats following exposure via the oral route, in the absence of signs of marked maternal toxicity (OECD TG 414). Studies in humans and especially in animals are indicative that ingestion of high doses of ethanol can affect the male and female fertilities.
- Specific target organ effects – single exposure**
: No target organ is listed.
- Specific target organ effects – repeated exposure**
: No target organ is listed
- Other information** : The oral and skin acute toxicity estimates (ATE) of the mixture were calculated to be greater than 2000 mg/kg. The acute toxicity estimate (ATE) by inhalation of the mixture was calculated to be greater than 20 mg/L/4h. These values are not classified according to WHMIS 2015 and OSHA HCS 2012.

12. ECOLOGICAL INFORMATION

- Ecotoxicity** :
- | | | |
|---|------------------|--------------------------------------|
| Fish - Golden Orfe | LC ₅₀ | 17.1 mg/L; 96h (2-Ethylhexanol) |
| Aquatic Invertebrate - Daphnia Magna, Water flea, fresh water | EC ₅₀ | 39 mg/L; 48h (2-Ethylhexanol) |
| Aquatic Plant - Algae, Scenedesmus subspicatus | EC ₅₀ | 11.5-16.6 mg/L; 72h (2-Ethylhexanol) |
| Fish - Zebrafish - Brachydanio rerio | LC ₅₀ | 49 mg/L; 96h (Sodium docusate) |
| Aquatic Invertebrate - Daphnia Magna, Water flea, fresh water | EC ₅₀ | 34.9 mg/L; 48h (Sodium docusate) |
| Algae - Desmodesmus subspicatus | EC ₅₀ | 39.3 mg/L; 72h (Sodium docusate) |
| Fish - Bluegill (Lepomis macrochirus) | LD ₅₀ | >100 mg/L ; 96 h (ethanol) |
| Crustaceans (Cenodaphnia quadrangular) | LD ₅₀ | 5012 mg/L ; 48 h (ethanol) |
| Aquatic Plant - Algae, Chlorella vulgaris | EC ₅₀ | 1000 mg/L ; 96 h (ethanol) |
- Persistence** : No information available for this product. No persistent in environment.
- Degradability** : No information available for this product. Sodium docusate is readily biodegradable (OECD TG 301F). Degradation by BOD (O₂ consumption) was reported as 73-78 % in 28 days. Sodium docusate is degraded very slowly by base-catalyzed hydrolysis. 2-Ethylhexanol is readily biodegradable (OECD TG 301C). Degradation by BOD (O₂ consumption) was reported as 79 % in 14 days.
- Bioaccumulation potential** : No information available for this product. Sodium docusate has a Bioconcentration Factor (BCF) value of <9.3, and its Log Kow value is 1.998, indicating its potential to bioaccumulate is low. 2-Ethylhexanol has a Bioconcentration Factor (BCF) value of 30, and its Log Kow value is 2.73, indicating its potential to bioaccumulate is low. Ethanol has a Bioconcentration Factor (BCF) value of <10, and its Log Kow value is <0, indicating its potential to bioaccumulate is low.
- Mobility in soil** : No information available for this product. The estimated Koc value of 9.37 suggests that Sodium docusate is expected to have very high mobility in soil (TOXNET Databases). The estimated Koc value of 35 suggests that 2-Ethylhexanol is expected to have very high mobility in soil (TOXNET Databases).
- Other adverse environmental effects**
: This chemical does not deplete the ozone layer.

13. DISPOSAL CONSIDERATIONS

Handling for Disposal : Important! Prevent waste generation. Use in full. DO NOT puncture, cut, heat or burn container, even after use. DO NOT throw residual to sewer, streams, sewers or drinking water supply. Return empty container properly labeled to supplier or everywhere there is a recovery program. Residues and empty containers must be considered as hazardous waste. Dispose via a licensed waste disposal contractor. Observe all federal, state/provincial and municipal regulations. If necessary consult the Department of Environment or the relevant authorities.

14. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
DOT	NA1993	COMBUSTIBLE LIQUID, N.O.S.* (ETHANOL)	3	III	Combustible
Additional Information		This material is not listed as a marine pollutant. Not regulated in containers less than 120 gallons (450 L)			
TDG	Not regulated				
Additional Information					
IMO/IMDG	Not regulated				
Additional Information					
IATA	Not regulated				
Additional Information					

15 - REGULATORY INFORMATION

US Federal Information:

- Toxic Substance Control Act (TSCA) :
All ingredients are listed in the TSCA Inventory or otherwise comply with TSCA requirements.
- EPCRA Section 313 Toxic Chemicals:
No material is listed.
- CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):
No material is listed.
- EPCRA Section 302/304 Extremely Hazardous Substances:
- Clean Water Act (CWA) 311 Hazardous Substances:
No material is listed.
- Clean Water Act (CWA) Priority Pollutants:
No material is listed.
- Clean Air Act (CAA) 111:
2-Ethylhexanol (CAS no 104-76-7).
- Clean Air Act (CAA 112b) HON - Hazardous Organic National Emission Air Pollutants:
No material is listed.
- Clean Air Act (CAA 112b) HAP - Hazardous Air Pollutants:
No material is listed.
- CAA 112(r) Regulated Chemicals for Accidental Release Prevention:
No material is listed.
- California Proposition 65:
Ethyl alcohol in alcoholic beverages,

Canadian Information:

- Canada DSL and NDSL:
All ingredients are listed in the Domestic Substances List (DSL).
- Canadian National Pollutant Release Inventory Substances (NPRI):
Ethanol (CAS no. 64-17-5).

WHMIS 1988:

Class B3 : Combustible Liquid

Class D2B : Toxic material causing other toxic effects

NFPA



16. OTHER INFORMATION

Other special considerations for handling : Provide adequate information, instruction and training for operators.

Prepared by: Flottec, LLC

Revised by:

REASON FOR REVISION:

DISCLAIMER

The above information is believed to be accurate and represents the best information currently available to us. However, we make no warrantee of merchantability or any other warrant, expressed or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular uses.

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