1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name: TASK™ Anionic Surfactant Blend

Synonyms: TASK™

Product Form: Mixture

Recommended use of the chemical and restrictions on use

Recommended Use: Professional use, Industrial use. Surfactant, Remediation of Groundwater and Soil.
Restrictions on Use: Use as recommended by the label.

Details of the supplier and of the safety data sheet

Supplier
Tersus Environmental, LLC
1116 Colonial Club Rd
Wake Forest, NC 27587
Phone: +1-919-453-5577
Email: info@tersusenv.com

Emergency telephone number

For leak, fire, spill or accident emergencies, call:

+1-919-453-5577 (Tersus Office Hours, 8:00 AM to 5:00 PM Eastern)
+1-919-638-7892 (Tersus Outside office hours)
+1-800-424-9300 (Chemtrec 24 Hour Service – Emergency Only)
+1-703-527-3887 (Chemtrec Outside United States 24 Hour Service – Emergency Only)

2. HAZARD IDENTIFICATION

GHS classification
Acute Tox. 4 Oral, Eye Dam. 1, Flam. Liq. 3, Skin Irrit. 2, Skin Sens. 1

Label element

Hazard pictograms:

Signal word Danger

Hazard statement(s):

Flammable liquid, Category 3	H226 - Flammable liquid and vapor.
Acute toxicity, Category 4 Oral	H302 - Harmful if swallowed.
Skin irritation, Category 2	H315 - Causes skin irritation.
Skin sensitizer, Category 1	H317 - May cause an allergic skin reaction.
Serious Eye Damage, Category 1	H318 - Causes serious eye damage

Precautionary statement:

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting/equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash hands, forearms, and face thoroughly after handling.
P270 - Do not eat, drink, or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 - IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of water
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
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 POISON CENTER or doctor/physician.
P312 - Call a POISON CENTER/doctor/physician if you feel unwell.
P321 - Specific treatment (see first aid section on this label).
P330 - Rinse mouth.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use appropriate method to extinguish.
P391 - Collect spillage.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with national regulations.

Hazard(s) not otherwise classified (HNOC):

None

Supplemental information:

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Formula Mixture

Hazardous components

Chemical Name	CAS Number	Concentration (%)	GHS Symbols	GHS Statements
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt		25-50	GHS07	H302-315-320
2-propanol	67-63-0	10-25	GHS02-GHS07	H225-319-336
Benzenesulfonic Acid Mixture	65143-89-7	10-25	GHS05-GHS07	H227-317-318

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Synonyms are provided in Section 1.
Occupational exposure limits, if available, are listed in Section 8.

4. FIRST AID MEASURES

General Information	Check the vital functions. If unconscious place in recovery position and seek medical advice. In case of respiratory arrest, administer artificial respiration. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Take victim to a doctor if irritation persists. Remove affected person from source of contamination.
Eye Contact	Immediately flush eyes with water. Flush eyes with water for a minimum of 15 minutes, occasionally lifting and lowering upper lids. Get medical attention promptly. Remove contact lenses if worn.
Skin Contact	Remove contaminated clothing. Wash skin with soap and water. Get medical attention. Wash clothing separately and clean shoes before reuse.
Inhalation	Rescuers should put on appropriate protective gear. Remove from area of exposure. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Keep victim warm. Get immediate medical attention.
Ingestion	Rescuers should put on appropriate protective gear. Remove from area of exposure. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Keep victim warm. Get immediate medical attention.
Most important symptoms and effects, both acute and delayed	Symptoms/injuries after skin contact: Causes skin irritation. Symptoms/injuries after eye contact: Eye damage / irritation.
Indication of any immediate medical attention and special treatment needed	If exposed or concerned, get medical advice and attention.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use water (fog only), dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media	Do not use water stream, as this may spread fire.
Specific Hazards Arising from the Chemical or Mixture	Thermal decomposition can lead to releases of irritating gases and vapors.
Special Fire Fighting Procedures	Use typical firefighting equipment, special tightly sealed suits. Wear self-contained breathing apparatus for firefighting if necessary. Do not inhale explosion and/or combustion gases.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures	Stop or contain leak at the source, if safe to do so. Ventilate area of leak or spill. Keep upwind of spill. Wear protective clothing as described in Section 8 of this safety data sheet. Do not smoke or use open fire or other sources of ignition. Contact with walking surface may result in formation of slippery film/falling hazard. Keep unnecessary personnel from entering the area.
Environmental Precautions	Should not be released into the environment. Do not discharge into drains, sewers, or watercourses or onto the ground. Inform the relevant authorities if this occurs.
Methods for Containment and Clean Up	Wipe up with absorbent material (e.g., cloth, fleece). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling	Do not get in eyes or on skin or clothing. See Section 8, Exposure Control / Personal Protection. Do not breath mist or vapor. Use with adequate ventilation. Remove contaminated clothing and wash before use.
Hygiene measures	Do not eat, drink, or smoke when working. Wash hands before breaks and after work.
Conditions for safe storage, including any incompatibilities	Storage in a cool, well-ventilated area. Protect from freezing and physical damage. Keep in properly labelled tightly sealed containers.

8. EXPOSRE CONTROL / PERSONAL PROTECTION

Control parameters

Name	STD	TWA – 8 Hrs		STEL – 15 Min		Notes
Isopropyl alcohol (IPA)	WEL	400 ppm	999 mg/m3	500 ppm	1250 mg/m3	

WEL = Workplace Exposure Limit.

DNEL

Industry	Dermal	888	mg/kg/day
Industry	Inhalation.	500	mg/m3
Consumer	Dermal	319	mg/kg/day
Consumer	Inhalation.	89	mg/m3
Consumer	Oral	26	mg/kg/day

PNEC

Freshwater	140.9	mg/l
Marine water	140.9	mg/l
Sediment	552	mg/kg
Soil	28	mg/kg

Name	STD	TWA – 8 Hrs.		Notes
Propylene glycol	WEL	150 ppm total vapor and particulates	10 mg/m3 particulates 474 mg/m3 total vapor and particulates	Propane-1,2-diol

Diethylhexyl sodium sulfosuccinate

DNEL

Industry	Dermal	Long Term	Systemic Effects	31.3 mg/kg/day
Industry	Inhalation.	Long Term	Systemic Effects	44.1 mg/m3
Consumer	Dermal	Long Term	Systemic Effects	18.8 mg/kg/day
Consumer	Inhalation.	Long Term	Systemic Effects	13 mg/m3
Consumer	Oral	Long Term	Systemic Effects	18.8 mg/kg/day

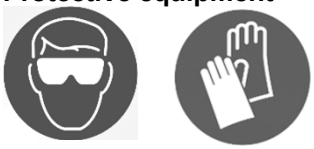
PNEC

Freshwater	Long Term	0.0066	mg/l
Marinewater	Long Term	0.00066	mg/l
Sediment marine	Long Term	0.0653	mg/kg dwt
Soil	Long Term	0.138	mg/kg dwt
Sewage Treatment		122	mg/l

Safe Handling: See Section 7
Additional Information To date, no national critical limit values exist.

Exposure Control

Protective equipment



Appropriate engineering controls Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients. Do not allow uncontrolled discharge of product into the environment.

Eye/face protection The following protection should be worn: Chemical splash goggles.

Hand protection Neoprene. Rubber (natural, latex), Butyl rubber. Wear protective gloves made of the following material: Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. Polyvinyl chloride (PVC). Manufactured/tested in accordance with EN 374, Avoid the following conditions: Polyvinyl alcohol (PVA).

Other skin and body protection Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures Wash promptly if skin becomes contaminated. Wash hands at the end of each work shift and before eating, smoking, and using the toilet. When using do not eat, drink, or smoke.

Respiratory protection If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Particulate filter, type P2.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Color	Water white to light amber
Appearance	Clear & Free of Matter
Odor	Alcohol odor
Odor threshold	Specific data not available
pH	(10% in water): 6.0-10.5 @ 25 °C
Melting point (°C)	Specific data not available
Boiling point (°C)	100°C (212°F)
Flash Point	31°C (closed cup)
Evaporation rate	Specific data not available
Specific gravity (water = 1)	1.0349 – 1.0664
Water solubility (%)	>10 Organic solvents miscible with water
Viscosity	500cSt at 40°C (104°F)

10. STABILITY AND REACTIVITY

Reactivity	No dangerous reaction known under conditions of normal use.
Chemical stability	Stable under normal conditions and use.
Possibility of hazardous reactions	No dangerous reactions known.
Conditions to avoid	No further relevant information available.
Incompatible materials	Strong oxidizing agents. Strong acids. Peroxides and other radical forming substances.
Hazardous decomposition products	Carbon monoxide, carbon dioxide.
Hazardous Polymerization	Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Acute toxicity (oral)	LD50 Species: Rat (male/female) Dose: >2.000 mg/kg Method: OECD 423
Skin	Acute toxicity estimate: 3,571 mg/kg Method: Calculation method
Serious Eye Damage/Irritation	Not classified
Respiratory or Skin Sensitization	Not classified
Ingestion	Not classified
Germ Cell Mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive Toxicity	Not classified
Specific Target Organ Toxicity – Single Exposure	Not classified
Specific Organ Toxicity – Repeated Exposure	Not classified
Aspiration Hazard	Not classified
General Remarks	Not classified

Additional Toxicological Information
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

Carcinogenic Categories

IRAC (International Agency for Research on Cancer): No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH (American Conference of Governmental Industrial Hygienists): No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by ACGIH.

NTP (National Toxicology Program): No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA (Occupational Safety & Health Administration): No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

12. ECOLOGICAL INFORMATION

The data below is for individual components. There is no ecological information available for the final product mixture.

Component	Freshwater Algae	Freshwater	Fish Microtox	Water Flea
Benzenesulfonic acid, hexadecyl(sulfophenoxy)-, disodium salt	EC50 = 42 mg/L 72 h EC50 = 100 mg/L 72 h	LC50 = 0.42 mg/L 96 h LC50 = 0.86 mg/L 96 h	-	EC50 = 6.95 mg/L 48 h
Sodium sulfate	-	-	-	EC50 = 2564 mg/L 48 h EC50 = 4547 mg/L 96 h

Sodium Dioctyl Sulfosuccinates

Algae Test Results

Test: Growth Inhibition (OECD 201)
Duration: 0-72 hr
Species: Green Algae (Selenastrum capricornutum)
118 mg/L EbC50

Test: Growth Inhibition (OECD 201)
Duration: 24-72 hr
Species: Green Algae (Selenastrum capricornutum)
272 mg/L ErC50

Fish Test Results

Test: Acute toxicity, freshwater (OECD 203)
Duration: 96 hr
Species: Bluegill Sunfish (Lepomis macrochirus)
54.5 mg/L LC50

Test: Acute toxicity, freshwater (OECD 203)
Duration: 96 hr
Species: Rainbow Trout (Oncorhyncus mykiss)

35.4 mg/L LC50

Invertebrate Test Results

Test: Acute Immobilization (OECD 202)
Duration: 48 hr
Species: Water Flea (Daphnia magna)
35.9 mg/L EC50
DEGRADATION

Test: Closed Bottle (OECD 301D)
Duration: 29-day Procedure: Ready biodegradability
39.5 %
Test: DOC Die-away (OECD 301A)
Duration: 28-day Procedure: Ready biodegradability
95 %

Degradation

Test: Closed Bottle (OECD 301D)
Duration: 29-day Procedure: Ready biodegradability 39.5 %

Test: DOC Die-away (OECD 301A)
Duration: 28-day Procedure: Ready biodegradability 95 %

Ecotoxicity effects: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Chemical Fate Information
Product is readily biodegradable in wastewater treatment systems.

Biodegradability
Slow, not readily degradable Method: OECD 301 D
Chemical Oxygen Demand: 2.324 mg/g DIN 38409 T.31

Bioaccumulative potential
No data available

Aquatoxicity, invertebrates
Species: Daphnia magna
Exposure duration: 48 h
EC50: > 100 mg/l
Method: OECD 202

Aquatoxicity, algae / aquatic plants
Species: Scenedesmus subspicatus
Exposure duration: 72 h
EbC50: 341 mg/l
Method: OECD 201

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose according to federal, state, and local laws. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Authority. Waste is suitable for incineration.

14. TRANSPORTATION INFORMATION

U.S. (D.O.T.)

Proper Shipping Name: Flammable liquids, n.o.s. (Isopropanol, mono-and-dihexadecyl disulfonated diphenyl oxide)
Hazard Class: 3
UN/NA: UN1993
Packing Group: II
Labels:

15. REGULATORY INFORMATION

Federal EPA

SARA Title III:

Section 302/304 Extremely Hazardous Substances: None
Section 311 Hazardous Categorization:
Acute√ Chronic√ Fire√ Pressure Reactive N/A
Section 313 Toxic Chemicals: None

CERCLA Hazardous Substances: None
Volatile Organic Compounds: Isopropanol, 1,2-Propylene glycol
TSCA Status: All chemicals in this product are on the TSCA Chemical Substances Inventory.

State Right-to-Know

New Jersey: Subject to the New Jersey labeling requirements on package and bulk storage tanks.

International Regulations

Global Status: AICS, Australia; Canadian DSL & NDSL; PICCS, Philippines listed.

EU-Regulation
Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list.
Contains no REACH Annex XIV substances

Other information, restriction, and prohibition: according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 453/2010. Labelling according to Regulation (EC) No. 1272/2008 [CLP]. This product may impact SEVESO storage regulations. Dangerous Substances Directive 67/548/EEC.

Guidance: Workplace Exposure Limits EH40. CHIP for everyone HSG228. Safety Data Sheets for Substances and Preparations. Approved Classification and Labeling Guide (Sixth Edition) L13

National Regulations
The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
Control of Substances Hazardous to Health Regulations 2002 (as amended).
Water hazard class (WGK): 2 – hazard to waters
Regulatory reference: To date, no national critical limit values exist.

16. OTHER INFORMATION

Abbreviations:
DNEL Derived No-Effect Level
PEL Permissible Exposure Limit
PNEC Predicted No Effect Concentration
TWA Time-Weighted Average
WEL Workplace Exposure Limit.

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All recommendations for the use of our products, whether given by us, orally or to be implied from data or lab tests results by us, are based on the current state of our knowledge at the time those recommendations are made. When additional information is obtained, these recommendations may be updated. They may also be influenced by circumstances outside our control. Notwithstanding, such recommendation the user is responsible that the product as supplied by us is suitable to the process or purpose he/she intends to use it.

Due to the proliferation of sources for information such as manufacturer specific SDSs, we are not and cannot be responsible for SDSs obtained from any source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.

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End of Safety Data Sheet