Safety Data Sheet (SDS)

Oil-Flo™ Safety Solvent Cleaner

Titan Laboratories, Inc.

1. PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

Titan Laboratories
2935 Irving Blvd., #209
Dallas, TX 75247

Contact: Titan Laboratories
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Product Name: Oil-Flo™
Revision Date: January 3, 2022
Version: 1.4
SDS Number: 170
Common Name: Solvent-Based Cleaner
CAS Number: MIXTURE
Chemical Family: Solvent-Surfactant Blend
Chemical Formula: *** PROPRIETARY ***
Synonyms: Safety Solvent Cleaner

Emergency Phone: +1-800-255-3924

2. HAZARDS IDENTIFICATION

NFPA:
HMIS III:

Health = 2, Fire = 2, Reactivity = 0
H*2/F2/PH0

GHS Signal Word:
DANGER

GHS Hazard Pictograms:

GHS Classifications:
Physical, Flammable Liquids, 3
Health, Acute toxicity, 4 Oral
Health, Aspiration hazard, 1
Health, Acute toxicity, 4 Dermal
Health, Skin corrosion/irritation, 2

Health, Serious Eye Damage/Eye Irritation, 1
Health, Acute toxicity, 4 Inhalation
Health, Specific target organ toxicity - Single exposure, 3
Health, Germ cell mutagenicity, 1
Health, Carcinogenicity, 1

GHS Phrases:
H226 - Flammable liquid and vapor
H302 - Harmful if swallowed
H304 - May be fatal if swallowed and enters airways
H312 - Harmful in contact with skin
H315 - Causes skin irritation
H318 - Causes serious eye damage
H332 - Harmful if inhaled
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness
H340 - May cause genetic defects
H350 - May cause cancer

GHS Precautionary Statements:
P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/light/equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P262 - Do not get in eyes, on skin, or on clothing.
P264 - Wash skin thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
P308+313 - IF exposed or concerned: Get medical advice/attention.
P321 - Specific treatment (see supplementary first aid instructions on this label).
P332+313 - If skin irritation occurs: Get medical advice/attention.
P337+313 - If eye irritation persists: Get medical advice/attention.
P362 - Take off contaminated clothing and wash before reuse.
P370+378 - In case of fire: Use water spray, water fog, alcohol-resistant foam, dry chemical or carbon dioxide for extinction.
P403+235 - Store in a well ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container to an approved waste disposal plant.

Additional Hazard Statements (EU):
EUH066 - Repeated exposure may cause skin dryness or cracking.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

CAS #	Percentage	Chemical Name
64742-95-6	30-40%	Solvent naphtha, petroleum, light arom.
95-63-6	20-30%	1,2,4-Trimethylbenzene
None	20-35%	Trade Secret*
111-76-2	10-15%	2-Butoxyethanol
108-67-8	0-5%	1,3,5-Trimethylbenzene
68603-42-9	1.5-5%	Amides, coco, N,N-bis(hydroxyethyl)
1330-20-7	1.5-5%	Xylene
98-82-8	1.5-5%	Cumene
25340-17-4	1.5-5%	Diethylbenzene

*The specific chemical identities of the ingredients of this mixture labeled as "Trade Secret" are considered to be proprietary and are withheld in accordance with the provisions of 29CFR1910.1200 Sect. (i) Trade Secrets.

4. FIRST AID MEASURES

Inhalation: If inhaled, move person into fresh air. Monitor respiratory function. If breathing is difficult, provide oxygen. If not breathing, give artificial respiration. If symptoms persist, obtain medical attention.

Skin Contact: Promptly flush skin with water for at least 15 minutes to ensure all chemical is removed. Remove contaminated clothing and wash before reuse. Consult a physician if irritation persists.

Eye Contact: Flush with large amounts of water for at least 15 minutes, lifting upper and lower lids occasionally. Remove contact lenses is present and easy to do so. Get immediate medical attention.

Ingestion: Rinse mouth with water. Do NOT induce vomiting unless instructed to do so. Material can enter lungs (aspiration hazard) during swallowing or vomiting resulting in lung inflammation or other lung injury. Never give anything by mouth to an unconscious person. Get immediate medical attention.

Most important symptoms and effects, both acute and delayed: The most important known symptoms and effects are described in the labelling (see Section 2) and/or Section 11. Inhalation of high concentrations of this material, as could occur in enclosed spaces or improper use, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This material has
as aspiration hazard. Any potential danger from aspiration must be weighed against possible oral toxicity when determining whether to induce vomiting. Consider activated charcoal and/or gastric lavage.

Indication of any immediate medical attention and special treatment needed: No data available.

5. FIRE FIGHTING MEASURES

Flammability: Combustible Liquid Class II
Flash Point: 109 °F (43 °C)
Flash Point Method: (TCC)
Burning Rate: No data available
Autoignition Temp: No data available
LEL: No data available
UEL: No data available

Extinguishing Media:
Water Spray Water Fog Carbon Dioxide
Alcohol-Resistant Foam
Dry Chemical

Special Hazards Arising From the Substance or Mixture:

Aldehydes Carbon Oxides Hydrocarbon particulate Ketones
Nitrogen Oxides (NOx) Organic acids
Sulfur Oxides

Advice for Firefighters:
Firefighters should wear full-face, positive-pressure respirators.

Further Information:
If incinerated, may release toxic fumes. Use water spray to cool unopened containers. Do NOT use high volume water jet to extinguish fire, as the force of the water jet may cause fire to spread. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. See Section 7 for more information on safe handling. See Section 8 for more information on personal protection equipment. See Section 13 for disposal information.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Use personal protective equipment. Keep from contacting skin or eyes. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Remove all sources of ignition. If any equipment is necessary, ensure that it is non-sparking and electrically-protected.

Environmental Precautions: Prevent further release (leakage/spillage) if safe to do so. Do not allow product to enter drains. Do not allow to drain to environment.

Methods and Materials for Containments and Cleaning Up: Ensure adequate ventilation. Contain spillage and absorb with liquid-binding material (sand, diatomite, universal binders, vermiculite) and placed in container for disposal. Spill may also be diluted with equal volume of water and absorbed (as above) or collect with an electrically-protected vacuum cleaner or by wet-brushing. Collected waste should then be placed in container for disposal. Dispose of contaminated material according to Section 13.

Reference to Other Sections: See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for information on proper disposal.

7. HANDLING AND STORAGE

Handling Precautions: Avoid breathing vapors or mist. Avoid contact with eyes, skin, or clothing. Keep containers closed when not in use. Do not expose containers to open flame, excessive heat, or direct sunlight. Keep away from sources of ignition. Do not smoke while using material. Take measures to prevent the buildup of electrostatic charge. Do not puncture or drop containers. Handle with care and avoid spillage on the floor (slippage). Keep material out of reach of children. Keep material away from incompatible materials. Wash thoroughly after handling.

Storage Requirements: Keep container tightly closed. Avoid inhalation of vapors or mist upon opening container. Store in a well-ventilated place. Do not store at elevated temperatures. Do not store in direct sunlight. Store away from strong acids, strong bases, strong oxidizing agents, strong reducing agents, Amines, Ammonia, Halogens, reactive metals (Zinc & Aluminum) and their alloys (Brass), Alkali metals, Alkali salts, liquid Chlorine, Oxygen and Chlorates.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Use local exhaust at filling zones and where leakage and dust formation is probable. Use mechanical (general) ventilation for storage areas. Use appropriate ventilation as required to keep Exposure Limits in Air below TLV & PEL limits.

Personal Protective Equip:
Eye/face protection: When using material use safety goggles, gloves, apron and vapor respirator according to HMIS PP, H. All safety equipment should be tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection: Handle with gloves made from PVC, butyl-rubber, neoprene, nitrile or fluorinated-rubber. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact. Dispose of contaminated gloves according to applicable laws and laboratory practices.

Body Protection: Chemically resistant gloves, apron, safety goggles and vapor respirator are recommended. Type of protective equipment should be selected based on concentration amount and conditions of use of this material.

Respiratory protection: Full-face vapor respirator may be required as backup to engineering controls when proper engineering controls are not in place to keep TLV and PEL limits below defined thresholds.

Control of environmental exposure: Prevent leakage or spillage if safe to do so. Do not let material enter drains.

Components with workplace control parameters: Component(s): Solvent naphtha, petroleum, light arom.; 1,2,4-Trimethylbenzene; 2-Butoxyethanol; 1,3,5- Trimethylbenzene; Xylene; Cumene; Diethylbenzene
CAS No(s): 64742-95-6; 95-63-6; 111-76-2; 108-67-8; 1330-20-7; 98-82-8; 25340-17-4
USA NIOSH (TWA/REL): 24 mg/m^3
USA ACGIH (TWA/TLV): 96 mg/m^3
USA ACGIH (STEL/TLV): 655 mg/m^3
USA OSHA (TWA/PEL): 2000 mg/m^3
USA OSHA - Table Z-1 Limits for Air Contaminants (TWA): 120 mg/m^3
USA OSHA - Table Z-1 Limits for Air Contaminants (STEL): 655 mg/m^3
USA OSHA Occupational Exposure Limits Table Z-1 Limits for Air Contaminants (TWA): 240 mg/m^3
USA Workplace Environmental Exposure Levels (WEEL): 27.45 mg/m^3

Biological occupational exposure limits:
Component: 2-Butoxyethanol
CAS-No: 111-76-2
Parameters: Butoxyacetic acid (BAA) Biological Specimen: Urine
USA ACGIH Biological Exposure Indices: 200 mg/g
Component: Xylene
CAS-No: 1330-20-7
Parameters: Methylhippuric acids
Biological Spoecimen: Urine
USA ACGIH Biological Exposure Indices: 1,500 mg/g

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, light-yellow liquid
Physical State: Liquid
Odor Threshold: Not determined
Particle Size: Not determined
Spec Grav./Density: 0.9095 g/ml (7.58 lbs/gal)
Viscosity: Not determined
Sat. Vap. Conc.: Not determined
Boiling Point: Not determined
Flammability: (solid, gas): Flammable
Partition Coefficient: Not determined
Vapor Pressure: (mm Hg @ 20 °C): 15
pH: n/a
Evap. Rate: (N-Butyl Acetate = 1): Not determined
Molecular weight: MIXTURE
Decomp Temp: Not determined
Odor: Hydrocarbon-like
Molecular Formula: MIXTURE
Solubility: Not determined
Softening Point: Not determined
Percent Volatile: 83.32%
Heat Value: Not determined
Freezing/Melting Pt.: Not determined
Flash Point: 109 °F (43 °C)
Octanol: Not determined
Vapor Density: (air = 1): > 1.0
VOC: 758 g/l
Bulk Density: Not determined

Auto-Ignition Temp: Not determined
UFL/LFL: Not determined

10. STABILITY AND REACTIVITY

Stability: Product is stable under normal conditions.
Conditions to Avoid: Incompatibilities, flames, ignition sources.

Materials to Avoid: Strong acids, strong bases, strong oxidizing agents, strong reducing agents, Amines, Ammonia, Halogens, reactive metals (Zinc & Aluminum) and their alloys (Brass), Alkali metals, Alkali salts, liquid Chlorine, Oxygen and Chlorates.

Hazardous Decomposition: Aldehydes, Carbon Oxides, Hydrocarbon particulate, Ketones, Nitrogen Oxides (NOx), Organic acids and Sulfur Oxides.

Hazardous Polymerization:
Will not occur.

11. TOXICOLOGICAL INFORMATION

Component(s): Solvent naphtha, petroleum, light arom.; 1,2,4-Trimethylbenzene; Trade Secret; 2-Butoxyethanol; 1,3,5-Trimethylbenzene; Amides, coco, N,N-bis(hydroxyethyl); Xylene; Cumene; Diethylbenzene
CAS No(s): 64742-95-6; 95-63-6; None; 111-76-2; 108-67-8; 68603-42-9; 1330-20-7; 98-82-8; 25340-17-4

Acute Toxicity:
LD50 Oral - Rat: 470 mg/kg NOAEL Feed - Rat: 535.8 mg/kg LD50 Dermal - Rabbit: 220 mg/kg
LD50 Intraperitoneal - Rat: 220 mg/kg
LD50 Intravenous - Rat: 307 mg/kg
LC50 Inhalation - Rat: 2175 mg/m^3 (4 h)

Skin Corrosion/Irritation: Rabbit skin - Irritating to skin (4 h).

Serious Eye Damage/Eye Irritation: Risk of serious damage to eyes.

Respiratory or Skin Sensitization: May cause respiratory irritation. Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

Germ Cell Mutagenicity: *In vitro* studies show positive results of mutagenicity.

Carcinogenicity: *In vivo* studies show positive results of kidney cancer.

This product is or contains components that are possibly classifiable as to their carcinogenicity based on their IARC, ACGIH, NTP, or OSHA classification.

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Cumene). 2B - Group 2B: Possibly carcinogenic to humans (Amides, coco, N,N-bis(hydroxyethyl)). 3 - Group 3: Not classifiable as to its carcinogenicity to humans (2-Butoxyethanol). 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Xylene).
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive Toxicity:
NOEL Teratogenicity - Oral - Rat: 50 mg/kg Effects on development were observed. The significance of these findings for humans is not certain.

Specific Target Organ Toxicity - Single Exposure: No data available.

Specific Target Organ Toxicity - Repeated Exposure: No data available.

Aspiration Hazard: My be fatal if swallowed and enters airways.

Additional Information:
Component: Solvent naphtha, petroleum, light arom.; RTECS: WF3400000
Component: 1,2,4-Trimethylbenzene; RTECS: DC3325000
Component: 2-Butoxyethanol; RTECS: KJ8575000
Component: 1,2,5-Trimethylbenzene; RTECS: OX6825000
Component: Amides, coco, N,N-bis(hydroxyethyl); RTECS: GG6200000
Component: Xylene; RTECS: ZE2100000
Component: Cumene; RTECS: GR8575000
Component: Diethylbenzene; RTECS: CZ5600000

12. ECOLOGICAL INFORMATION

Component(s): Solvent naphtha, petroleum, light arom.; 1,2,4-Trimethylbenzene; Trade Secret; 2-Butoxyethanol; 1,3,5-Trimethylbenzene; Amides, coco, N,N-bis(hydroxyethyl); Xylene; Cumene; Diethylbenzene
CAS No(s): 64742-95-6; 95-63-6; None; 111-76-2; 108-67-8; 68603-42-9; 1330-20-7; 98-82-8; 25340-17-4

Toxicity:
Toxicity to fish:
LC50 - Oncorhynchus mykiss (Rainbow Trout): 4.8 mg/l (96 h) LC50 - Lepomis macrochirus (Bluegill Sunfish): 1.0 mg/l (96 h)
LC50 - Carassius auratus (Goldfish): 12.52 mg/l (96 h)
LC50 - Branchydanio rerio: 3.6 mg/l (96 h) LC50 - Morone saxatillis: 2 mg/l (96 h)
Mortality LOEC - Pimephales promelas (Fathead Minnow): 2.0 mg/l (144 h)

Mortality NOEC - Pimephales promelas (Fathead Minnow): 1.8 mg/l (144 h)
Flow-through test LC50 - Pimephales promelas (Fathead Minnow): 7.72 mg/l (96 h) Semi-static test LC50 - Oncorhynchus mykiss (Rainbow Trout): 0.673 mg/l (96 h)

Toxicity to daphnia and other aquatic invertebrates:
EC50 - Daphnia magna (Water Flea): 4.2 mg/l (24 h)
EC50 - Daphnia magna (Water Flea): 12.2 - 17.0 mg/l (48 h) EC50 - Daphnia: 2.14 mg/l (48 h)
Mortality NOEC - Daphnia magna (Water Flea): 10.0 mg/l (144 h) Mortality LOEC - Daphnia magna (Water Flea): 20.0 mg/l (144 h) Immobilization EC50 - Daphnia magna (Water Flea): 6 mg/l (48 h) Static test EC50 - Daphnia magna (Water Flea): 2.01 mg/l (48 h)

Toxicity to algae:
EC50 - Pseudokirchneriella subspicatus (Green Algae): 2.6 mg/l (72 h) EC50 - Pseudokirchneriella subspicatus (Green Algae): 72 mg/l (14 d) Growth Inhibition LOEC - Pseudokirchneriella subcapitata: 16.0 mg/l (96 h) Growth Inhibition NOEC - Pseudokirchneriella subcapitata: 8.0 mg/l (96 h)
Static test EC50 - Pseudokirchneriella subspicatus (Selenastrum capricornutum): 1.21 mg/l (72 h)

Toxicity to bacteria:
Respiration Inhibition NOEC - Sludge Treatment: > 1,000 mg/l (3 h)

Persistence and Degradability:
Not readily biodegradable.

Bioaccumulative potential:
Most of the hydrocarbon blocks comprising Naphtha Solvents have a Log_{KOW} > 3, indicating that these constituents have a potential to bioaccumulate.

Mobility in Soil:
No data available.

Results of PBT and vPvB assessment:
Not required/conducted.

Other Adverse Effects:
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

Product: Hazardous wastes shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution, release into the environment or damage to people and animals. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated Packaging: Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT Class: Flammable Liquid (3) #3
UN #: UN 1993, Class: 3, Proper Shipping Name: Flammable liquids, n.o.s. (Aromatic petroleum naphtha)

DOT (US) Bulk >119 Gallons
UN Number: UN1993
Class: 3
Packing Group: III ERG #: 128
Proper Shipping Name: Flammable liquids, n.o.s. (Aromatic petroleum naphtha) Marine Pollutant: Yes
Poison Inhalation Hazard(s): No

DOT (US) Non-Bulk (less than 119 gallons)
Non-regulated material, liquid

IMDG
UN Number: UN1993
Class: 3
Packing Group: III EMS-No: F-E, S-E
Proper Shipping Name: Flammable liquids, n.o.s. (Aromatic petroleum naphtha) Marine Pollutant: Yes

IATA
UN Number: UN1993
Class: 3
Packing Group: III ERG #: 128
Proper Shipping Name: Flammable liquids, n.o.s. (Aromatic petroleum naphtha)

15. REGULATORY INFORMATION

COMPONENT / (CAS/PERC) / CODES
*Solvent naphtha, petroleum, light arom. (64742956 30-40%) NJHS, PA, PROP65, TSCA
*1,2,4-Trimethylbenzene (95636 20-30%) MASS, NJHS, PA, SARA311/312, SARA313, TSCA, TXAIR
*Trade Secret (None 20-35%) MA, NJHS, PA, SARA311/312, TSCA
*1,3,5-Trimethylbenzene (108678 5-10%) MASS, NJHS, PA, SARA311/312, TSCA
*2-Butoxyethanol (111762 10-15%) HAP, MASS, NJHS, OSHAWAC, PA, SARA311/312, SARA313, TSCA, TXAIR
*Amides, coco, N,N-bis(hydroxyethyl) (68603429 1.5-5%) PROP65, SARA311/312, TSCA
*Xylene (1330207 1.5-5%) CERCLA, CSWHS, EPCRAWPC, HAP, MASS, NJHS, OSHAWAC, PA, SARA313, TOXICRCRA, TSCA, TXAIR, TXHWL

*Cumene (98828 0.4-0.5%) CERCLA, HAP, MASS, NJHS, OSHAWAC, PA, PROP65, SARA313, TOXICRCRA, TSCA, TXAIR, TXHWL
*Diethylbenzene (25340174 1.5-5%) NJHS, PA, SARA311/312, TSCA, TXAIR

REGULATORY KEY DESCRIPTIONS
CERCLA = Superfund cleanup substance
CSWHS = Clean Water Act Hazardous substances
EPCRAWPC = EPCRA Water Priority Chemicals
HAP = Hazardous Air Pollutants
MASS = MA Massachusetts Hazardous Substances List
NJHS = NJ Right-to-Know Hazardous Substances
OSHAWAC = OSHA Workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
PROP65 = CA Prop 65
SARA313 = SARA 313 Title III Toxic Chemicals
TOXICRCRA = RCRA Toxic Hazardous Wastes (U-List)
TSCA = Toxic Substances Control Act
TXAIR = TX Air Contaminants with Health Effects Screening Level
TXHWL = TX Hazardous Waste List

16. OTHER INFORMATION

Disclaimer:

The data in this Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material in any process. The information set forth herein is furnished free of charge and is based on technical data that Titan Laboratories believes to be reliable. It is intended for use by persons having technical skill and at their own discretion and risk. Since conditions of use are outside of Titan Laboratories' control, Titan Laboratories makes no warranties, expressed or implied, and assumes no liability in connection with any use of this information. Nothing herein is to be taken as a license to operate under, or a recommendation to infringe upon, any patents.