

SAFETY DATA SHEET

1. IDENTIFICATION of the SUBSTANCE / MIXTURE and COMPANY / UNDERTAKING

Product name: DTF Flush Solution - 1 Liter

Product code: DTF-Flush-Liter

Synonyms: None

Relevant identified uses of the substance or mixture and uses advised against:

Identified uses: ink or inkjet chemical

Supplier: ColDesi / Colman & Company, Inc.

12198 44th Street North, Clearwater, FL 33762 / 800-891-1094

IN EMERGENCY: Call CHEMTREC, in USA or Canada, call 800-424-9300

Outside of USA or Canada, call 703-527-3887

2. HAZARDS IDENTIFICATION

Classification of the chemical in accordance with paragraph (d) of 29 CFR 1910.1200:

Hazard class	Hazard category	Route of exposure
Eye irritation	Category 2A	--
Specific target organ toxicity - repeated exposure	Category 2	Oral
Acute aquatic toxicity	Category 3	--

GHS-Labeling

Contains:

Ethylene glycol (107-21-1), Ethoxylated tetramethyldecynediol (9014-85-1), 1,2-Benzisothiazol-3(2H)-one (2634-33-5)

Symbol(s):



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Signal word: Warning

Hazard statements: Causes serious eye irritation. May cause damage to organs through prolonged or repeated exposure if swallowed. (Kidney.) Harmful to aquatic life.

Precautionary statements:

Prevention: Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash hands thoroughly after handling. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. Get medical advice/ attention if you feel unwell.

Storage: Store locked up.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulation.

HMIS IV Hazard Ratings: Health - 2*, Flammability - 0, Physical Hazard - 0

NFPA Hazard Ratings: Health - 2, Flammability - 0, Instability - 0

NOTE: HMIS IV and NFPA 704 (2007) hazard indexes involve data review and interpretation that may vary among companies. They are intended only for rapid, general identification of the magnitude of the potential hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

3. COMPOSITION / INFORMATION on INGREDIENTS

Weight percent	Components - (CAS-No.)
7 - 13	Ethylene glycol (107-21-1)
1 - < 3	Ethoxylated tetramethyldecynediol (9014-85-1)
0.5 - 1.5	Triethanolamine (102-71-6)
0.01 - < 0.05	1,2-Benzisothiazol-3(2H)-one (2634-33-5)

4. FIRST AID MEASURES

Inhalation: If symptomatic, move to fresh air. Get medical attention if symptoms persist.

Eyes: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If easy to do, remove contact lens, if worn. If eye irritation persists: Get medical advice/ attention.

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Skin: Wash off immediately with soap and plenty of water. Get medical attention if symptoms occur.

Ingestion: If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur.

Most important symptoms and effects, both acute and delayed: Eye Irritation: Signs/symptoms may include localized redness, swelling, lachrymation, itching, dryness, and pain.

Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Indication of any immediate medical attention and special treatment needed:

Treatment: No information available.

5. FIREFIGHTING MEASURES

Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment..

Special hazards arising from the substance or mixture

Hazardous Combustion Products: Carbon oxides, Aldehydes, Nitrogen oxides (NOx)

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective suit. Fire or excessive heat may produce hazardous decomposition products.

Unusual Fire and Explosion Hazards: None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Refer to protective measures listed in sections 7 and 8.

Methods and materials for containment and cleaning up: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

Environmental precautions: Prevent runoff from entering drains, sewers, or streams.

For Large Spills: Prevent runoff from entering drains, sewers, or streams.

7. HANDLING and STORAGE

Precautions for safe handling

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Personal precautions: Avoid contact with eyes, skin, and clothing. Avoid breathing mist or vapour. Use only with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

Prevention of Fire and Explosion: Keep from contact with oxidizing materials.

Ventilation: Match ventilation rates to conditions of use so as not to exceed any applicable exposure limits (see Section 8).

Conditions for safe storage, including any incompatibilities: Keep in a dry, cool and well-ventilated place. Cool conditions (5 - 30°C). Keep container tightly closed. Keep away from food, drink and animal feeding stuffs. Keep away from incompatible substances (see Incompatibility section.)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls

Chemical name	Regulatory List	Value Type	Value
Ethylene glycol	ACGIH	Time weighted average	25 ppm <i>Form of exposure: vapor fraction</i>
Ethylene glycol		Short term exposure limit	50 ppm <i>Form of exposure: vapor fraction</i>
		Short term exposure limit	10 mg/m3 <i>Form of exposure: inhalable particulate matter, aerosol only</i>
		Ceiling Limit Value	50 ppm 125 mg/m3 <i>Form of exposure: vapor</i>
Triethanolamine	ACGIH	Time weighted average	5 mg/m3

Appropriate engineering controls: Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Controls should be sufficient so that applicable occupational exposure limits are not exceeded.

Individual protection measures, such as personal protective equipment

Eye protection: Wear safety glasses with side shields (or goggles).

Hand protection: Wear protective gloves/ protective clothing.

Respiratory protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

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9. PHYSICAL and CHEMICAL PROPERTIES

Physical form: liquid

Colour: clear

Odour: No data available - testing not performed

Specific gravity: No data available - testing not performed

Vapour pressure: No data available - testing not performed

Vapour density: No data available - testing not performed

Water solubility: soluble

pH: No data available - testing not performed

Flash point: No data available - testing not performed

Evaporation rate: No data available - testing not performed

Flammability (Solid; gas): No data available - testing not performed

Upper explosion limit: No data available - testing not performed

Lower explosion limit: No data available - testing not performed

Partition coefficient: n-octanol/water: No data available - testing not performed

Auto-ignition temperature: No data available - testing not performed

Decomposition temperature: No data available - testing not performed

Viscosity: No data available - testing not performed

Explosive properties: No data available - testing not performed

Oxidizing properties: No data available - testing not performed

10. STABILITY AND REACTIVITY

Reactivity: No data available

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Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Hazardous polymerisation does not occur.

Conditions to avoid: No data available

Incompatible materials: Strong oxidizing agents, Strong acids, Strong bases.

Hazardous decomposition products: None under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Effects of Exposure

General advice:

Contains: Ethylene glycol. severe effects after repeated or prolonged exposure Can cause kidney damage.

Contains: Triethanolamine. Based on animal data, may cause adverse effects on the following organs/systems: kidney, liver. Data is not sufficient for GHS classification.

Inhalation: Expected to be a low hazard for recommended handling.

Eyes: Causes serious eye irritation.

Skin: Expected to be a low hazard for recommended handling.

Ingestion: May cause damage to organs through prolonged or repeated exposure if swallowed.

Data for Ethylene glycol (CAS 107-21-1):

Acute Toxicity Data:

Oral LDLo (Humans): 1,600 mg/kg

- Oral LD50 (Rat): 4,700 mg/kg
- Inhalation LC50 (Rat): > 2.5 mg/l / 6 hr
- Dermal LD50 (Rabbit): 10,607 mg/kg
- Dermal LD50 (Rat): 10,600 mg/kg
- Dermal LD50 (Mouse): > 3,500 mg/kg
- Skin irritation: Mild skin irritation
- Sensitisation (human): none
- Sensitisation (Guinea pig): none
- Eye irritation: none

Data for Ethoxylated tetramethyldecynediol (CAS 9014-85-1):

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Acute Toxicity Data:

Oral LD50 (Rat): 6,300 mg/kg

- Inhalation LC50 (Rat): > 20 mg/l / 1 hr
- Dermal LD50 (Rabbit): > 2,000 mg/kg (Highest dose tested - no evidence of absorption at this dose level.)
- Skin irritation: Mild skin irritation
- Eye irritation: severe

Definitions for the following section(s): LOEL =lowest-observed-effect level, LOAEL = lowest-observed-adverse-effect, NOAEL = no observed-adverse-effect level, NOEL =no-observed-effect level.

Repeated dose toxicity:

- Feeding study (28-day, Rat): NOEL; 6000 ppm
- Oral (90 days, Dog): NOEL; 200 mg/kg/day
- Oral (90 days, Dog): NOEL; 400 mg/kg/day (minor target organ effects: liver)

Reproductive Toxicity Data:

- Feeding Study (male and female Rat): NOEL for reproductive toxicity; 1,000 mg/kg/day

Data for Triethanolamine (CAS 102-71-6):

Acute Toxicity Data:

Oral LD50 (Rat): 9,119 mg/kg

- Dermal LD50 (Rabbit): > 20,000 mg/kg
- Skin irritation: none
- Sensitisation (Guinea pig): negative
- Eye irritation: none

Data for 1,2-Benzisothiazol-3(2H)-one (CAS 2634-33-5):

Acute Toxicity Data:

Oral LD50 (Rat): 454 mg/kg

- Dermal LD50 (Rat): > 2,000 mg/kg

Carcinogenicity

American Conference of Governmental Industrial Hygienists (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.

International Agency for Research on Cancer (IARC):

No component of this product present at levels greater than or equal to

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	0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
U.S. National Toxicology Program (NTP):	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
U.S. Occupational Safety and Health Administration (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.
California Prop. 65	WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

12. ECOLOGICAL INFORMATION

The following properties are ESTIMATED from the components of the preparations.

Potential Toxicity:

Toxicity to fish (LC50): 10 - 100 mg/l estimated

Toxicity to daphnia (EC50): 10 - 100 mg/l estimated

Persistence and degradability: Readily biodegradable

This product has not been tested for environmental effects.

Bioaccumulative potential

No data available

Mobility in soil

No information available.

13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

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14. TRANSPORT INFORMATION

Not regulated for all modes of transportation.

15. REGULATORY INFORMATION

Notification status

Regulatory List	Notification status
TSCA	All listed
DSL	All listed
NDSL	None listed
EINECS	Not all listed
ELINCS	None listed
NLP	Listed
AICS	All listed
IECS	All listed
ENCS	All listed
ECI	All listed
NZIoC	All listed
PICCS	All listed
TCSI	All listed

"Not all listed" indicates one or more component is either not on the public Inventory or is subject to exemption requirements.

Other regulations

U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances):

Ethylene glycol

U.S. - CERCLA/SARA - Section 302 (40 CFR § 355 Appendices A and B - The List of Extremely Hazardous Substances and Their Threshold Planning Quantities):

No components of this product are subject to the SARA Section 302 (40 CFR 355) reporting requirements.

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U.S. - CERCLA/SARA - Section 313 (40 CFR § 372.65 Toxic Chemical Release Reporting):	Ethylene glycol
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	Ethylene glycol
U.S. - California - 8 CCR Section 5200-5220 - Specifically Regulated Carcinogens:	No components found on the California Specifically Regulated Carcinogens List.
U.S. - California - 8 CCR Section 5203 Carcinogens:	No components found on the California Section 5203 Carcinogens List.
U.S. - California - 8 CCR Section 5209 Carcinogens:	No components found on the California Section 5209 Carcinogens List.
U.S. - Massachusetts - General Law Chapter 111F (MGL c 111F) - Hazardous Substances Disclosure by Employers (a.k.a. Right to Know Law):	Ethylene glycol , Triethanolamine
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Ethylene glycol , Triethanolamine
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	Ethylene glycol , Triethanolamine
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A):	Water , Ethylene glycol , Triethanolamine , Sodium hydroxide

16. OTHER INFORMATION

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

US/Canadian Label Statements:

Specialty Flushing Solution, Type FSDTG1

Contains:

Ethylene glycol (107-21-1), Ethoxylated tetramethyldecynediol (9014-85-1), 1,2-Benzisothiazol-3(2H)-one (2634-33-5)

Symbol(s):

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Signal word: Warning

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Precautionary statements:

Prevention: Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash hands thoroughly after handling. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. Get medical advice/ attention if you feel unwell.

Storage: Store locked up.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulation.

This Safety Data Sheet has been compiled and is solely intended for this product. The information is based upon the present state of our knowledge.

R-1, S-2, F-1, C-0