



Technol® D-Ice

Product Description Sheet

Technol D-Ice is formulated to melt and prevent ice – PERIOD! If your fuel system is contaminated with water during cold climates applying D-Ice will prevent ice from forming. If your tank is already iced-up Technol D-Ice will melt existing ice and then keep working to prevent this free water from re-freezing.

This takes care of any ice that stop fuel flow, to prevent fuel gelling at these freezing temperatures apply Technol 050 Cold Flow Improver to prevent this fuel related cold flow problem from also stopping fuel flow.

How water enters the fuel system.

- Fuel oil contains absorbed water.
- Water can enter the fuel delivery system anywhere between the refinery to the oil dealer, and enter your tank during refueling when fuel oil is delivered.
- When tanks are not top off when spring arrives, hot summer days and cool nights cause condensation to form within the “open air space” above the fuel level within the tank. This condensation, or other water that enters the tank collects as a free water layer on the bottom of the tank and when left unchecked, becomes a water contamination problem.

Normal amounts of water do not cause a major problem, and high quality water separating fuel filters do a very good job of removing water from the fuel but must be checked or changed often, they also do nothing between the tank and the filter and if your filter is outside near the tank, the water within may freeze stopping fuel flow. This is

where Technol D-Ice comes into play. **Standard Fuel oil additives** are designed to combat only minor amounts of water or ice. Once ice is melted, they lack the protection of “melt water refreeze” that Technol D-Ice is capable of. There is no need to purchase a second product for this extended protection that Technol D-Ice affords.

Whether you have a minor water problem or a major reoccurring water problem, Technol D-Ice is the most cost effective way to keep ice from blocking fuel flow with the ability to handle gross amounts of water and ice far beyond normal fuel additives. For best results, use proactively, before freezing temperatures arrive to prevent downtime. Remove and properly dispose of any free water from the tank bottom and apply, Technol D-Ice and continue to apply to every refueling of the tank until the source of the water is alleviated or warm temperatures arrive. When ice is present apply Technol D-Ice directly to the ice. This may require pumping the product slowly through a tube to the where ice forms blocking the fuel pickup. Once the ice is melted it is recommended to pump off the free water, disposing of properly, and continue to apply to every refueling until the source of the water problem is found and alleviated or warm temperatures arrive.

Initial Application

1 gallon to every 600 gallons of fuel, or when ice is present

Maintenance Application

1 gallon to every 2400 gallons of fuel.



Technol D-Ice for superior de-icing and ice prevention

Bulleted Highlights

- Reduces ice plugging and frozen filters
- Contains premium quality polar solvents
- Eliminates the need for onsite heating equipment
- Will not harm fuel tanks, equipment or fuel lines
- Melts tank ice blockages in 10 to 30 minutes, depending on the thickness of the ice
- Emulsifies water by removing it from the tank through the combustion process
- Prolongs fuel line, filters, and equipment life
- Reduces equipment downtime and maintenance costs

Used by or in:

Home Owners ▲ Fuel Oil Supply Companies ▲ Bulk Fuel Storages



Technol® D-Ice

Technical Data Sheet

DESCRIPTION

Technol D-Ice is an effective and economical fuel conditioner that will rapidly melt ice and free frozen fuel tanks, lines and filters when fuel system failures occur due to ice blockages. Regular use of D-Ice will prevent future ice formation.

Technol D-Ice may be applied directly to bulk storage, saddle, or fuel tanks.

BENEFITS

- Enhances cold-climate fuel performance
- Reduces filter plugging and clogging
- Contains aircraft-quality de-icing agents
- Controls water and prevents ice formation in fuel
- Reduces equipment downtime and maintenance
- Works in 10-30 minutes in most cases

PHYSICAL & CHEMICAL PROPERTIES

Technol D-Ice :

Odor	: Mild Solvent
Material Is	: Liquid
Handle As	: Combustible Liquid
Appearance	: Pale Amber Color
Pounds per gallon	: 7.10
Flash Point, COC °F	: 140°F Typical.

COMPOSITION

Technol D-Ice is a scientifically formulated blend of wax dispersants teamed up with premium quality polar solvents. This product contains no MTBE, harmful alcohols, acids, salts, heavy metals or Barium and is safe for use in metallic fuel systems.

APPLICATION & RATIOS

Technol D-Ice may be applied directly to bulk storage or fuel tanks. It is recommended to be applied before cold temperatures arrive, during refueling to ensure proper mixing and distribution.

Initial Application and to melt ice:

1 gallon to 600 gallons of fuel depending on the severity of the ice formation and the size of the fuel tank.

Maintenance Application to prevent ice:

To keep water from freezing apply 1 gallon to 2400 gallons of fuel.

AVAILABILITY

Technol D-Ice is readily available in:

- 5-gallon Closed-Head Steel Pails
- 54-gallon Closed-Head Steel Drums
- 275- & 330-gallon Tote Bins for Bulk Applications

SECTION 1.
PRODUCT AND COMPANY IDENTIFICATION

PRODUCT FORM: Liquid Substance
 TRADE NAME: **TECHNOL D-ICE**
 CHEMICAL NAME: Proprietary mixture of petroleum distillates
 COMPANY: Technol Fuel Conditioners, Inc.
 145 Wyckoff Road
 Eatontown, NJ 07724
 Phone: 1.800.645.4033
 EPA REGISTRATION: None - Not designed for On-Road Fuel Consumption
 EMERGENCY PHONE: Chemtrec: 1.800.424.9300 - within USA and Canada
 Chemtrec: 1.703.527.3887 - outside USA and Canada

SECTION 2.
HAZARDS IDENTIFICATION

 GHS SIGNAL WORD: **WARNING!**

GHS HAZARD PICTOGRAMS:



GHS CLASSIFICATIONS:

PHYSICAL: H227: Combustible liquid
 HEALTH: H302: Harmful if swallowed
 H312: Harmful in contact with skin
 H320: Can cause eye irritation
 H336: May cause drowsiness or dizziness
 H373: May cause damage to organs through prolonged or repeated exposure
 ENVIRONMENTAL: H402: Harmful to aquatic life

GHS PRECAUTIONARY STATEMENTS:

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P233: Keep container tightly closed.
 P261: Avoid breathing dust/fumes/gas/mist/vapors/spray [As modified by IV ATP].
 P262: Do not get in eyes, on skin, or on clothing.
 P273: Avoid release into the environment.
 P301+P331: IF SWALLOWED, Do NOT induce vomiting.
 P410+P411: Protect from sunlight. Store at temperatures between 45°F [7.2°C] and 85°F [29.4°C].

SECTION 3.
COMPOSITION AND INGREDIENTS INFORMATION

<u>Chemical Name</u>	<u>Hazard Date</u>	<u>% By Weight</u>	<u>CAS Number</u>	<u>SARA 311</u>	<u>SARA 312</u>	<u>SARA 313</u>
Aromatic Naphtha	Not Available	20% - 50%	64742-94-5	NO	NO	NO
Glycol Ether	August, 1992	20% - 50%	111-76-2	NO	NO	YES



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According to Federal Register / Vol. 77, No. 58 / Rules & Regulations

Revision: 10/08/2015 Issued: 01/01/1994 Supersedes: 10/01/2005

SECTION 4. FIRST AID MEASURES

- INHALATION:** Overexposure can cause dizziness, lack of coordination, and breathing complications, unlikely to occur under normal usage conditions. Handlers should always wear a self-contained breathing apparatus in the positive mode with a full face-piece due to the likelihood of fumes, smoke, and hazardous component decomposition. Remove to fresh air and deploy artificial respiration if not breathing. Get medical attention.
- SKIN CONTACT:** Can cause irritation of exposed skin due to defatting of skin tissue. Handlers should always wear rubber gloves. Wash exposed skin vigorously with general soap and water. Get medical attention if skin irritation persists.
- EYE CONTACT:** Can cause irritation of exposed eye tissue. Handlers should always wear splash-proof goggles. Rinse eyes with cool flowing water for at least 15 minutes and get immediate medical attention.
- INGESTION:** Can cause irritation of the gastrointestinal tract and possible fatal kidney liver damage. DO NOT INDUCE VOMITING. Deploy artificial respiration if not breathing. Get immediate medical attention.

SECTION 5. FIREFIGHTING MEASURES

Special Hazards and Procedures:

This product poses no unusual fire fighting problems. It will burn if involved in a fire. Oxides of sulfur (SO₂) will be given off while burning. Combustion may produce oxides of carbon and oxides of calcium. Water may be used to cool fire-exposed containers and structures but is not a suitable extinguishing media.

Protective Equipment:

As in any fire, firefighters must be equipped to prevent breathing of vapors or products of combustion. Wear an approved self-contained goggled breathing apparatus, protective gloves and clothing.

Extinguishing Media:

Dry chemical, CO₂ and foam are suitable. Water jets or any water-based fluid are not suitable. Closed containers may be cooled with water. Treat large fires as an oil fire. Oil will float on water and can cause fire to spread. Heat from fire can generate flammable vapor.

SECTION 6. ACCIDENTAL RELEASE PRECAUTIONS

- PERSONAL:** Wearing suitable protective equipment, eliminate sources of ignition and open nearby windows to ventilate the problem area.
- ENVIRONMENTAL:** Product has very low solubility in water. Prevent from entering sewer system, surface water or soil.
- FOR SPILL CLEAN-UP:** Shut off leak and dike up large spills. Absorb with an inert material such as sand, soil or vermiculite. Sweep up absorbent and dispose in accordance with regulatory requirements.

SECTION 7. PRODUCT HANDLING & STORAGE

- HANDLING:** This product is best stored in its original container. Steel or HDPE containers are recommended replacements and electrically bond and ground all containers and equipment. Avoid contact with eyes, skin and clothing. Avoid breathing vapors, aerosol and mists. Use with adequate ventilation and wash thoroughly after handling. Never use pressure to empty drums.
- STORAGE:** Full or partially-filled containers should always be kept upright and away from strong oxidizing agents. This product will pump down to 10°F [-12.2°C]. Nonetheless, it is recommended that full or partially-filled containers be stored in a cool dry place between 45° - 85°F [7.2° - 29.4°C]. Store in original container if possible, and keep all chemical containers away from direct sunlight and tightly closed when not in use.



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SECTION 8. EXPOSURE CONTROL/PERSONAL PROTECTION

VENTILATION: None normally required. Use additional ventilation if needed to control vapor concentrations particularly if a mist is generated or fumes from hot material are present.

RESPIRATORY: None required if area adequately ventilated. Use appropriate respiratory protection if used in confined areas. If used in an application where a mist may be generated, observe a TWA/PEL of 5 mg/m³ (OSHA, ACGIH) for a mineral oil mist. Use a respirator with dual organic vapor/mist and particulates cartridge if vapor concentration exceeds permissible exposure limit.

SKIN PROTECTION: Use neoprene-type gloves and apron.

EYE PROTECTION: Wear chemical safety goggles or a full-plate face shield. Contact lenses should not be worn.

SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

Appearance:	Pale Amber Liquid	Odor:	Mild Solvent
Boiling Point:	Not Determined	Density at 25°C (gm/cm ³):	0.85 Typical
Vapor Pressure:	@ 20°C (mm Hg) Not Determined	Vapor density (Air = 1):	2 Estimated (Air=1)
Solubility in Water:	Negligible	Solubility in Organic Solvents:	Soluble
pH:	Not Applicable	Flash point, COC (ASTM D-93):	140°F
Pounds per Gallon:	7.09	Evaporation Rate:	1.3 (Butyl Acetate =1)
Freeze Point:	10°F (-12.2°C)	Volatiles By Volume @ 68°F (20°C):	90% - 95% Estimated

SECTION 10. STABILITY AND REACTIVITY

This product is stable and not subject to hazardous polymerization.

Hazardous Decomposition Products: Oxides of carbon (carbon monoxide and carbon dioxide), oxides of hydrogen (contaminated and hazardous water), and oxides of Nitrogen can occur when exposed to heat at 350°F (176.7°C).

Incompatible materials: Strong oxidizers such as hydrogen peroxide, oxidizing chlorine, and bromine compounds (e.g. chlorine bleach) and chromic acid should be avoided.

Conditions to avoid: Extreme heat and sources of fire or ignition.

SECTION 11. TOXICOLOGICAL INFORMATION

ROUTES OF EXPOSURE: Eye contact, skin contact, inhalation of vapors, and ingestion.

ACUTE TOXICITY: The handling procedures and safety precautions in this SDS should be followed to minimize employee exposure.

CHRONIC EFFECTS: Can cause eye, skin and gastrointestinal irritation. Irritation of tissue, defatting of skin, gastrointestinal irritation, Kidney and Liver damage.

SYMPTOMS: Irritation of exposed tissue and organs, blurriness of vision, dizziness, fainting, and lack of physical coordination.

LD50: Not Established.

NTP/IARC/OSHA: This product and none of its components are listed as a carcinogens, mutagens, or teratogens.

SECTION 12. ECOLOGICAL INFORMATION

No specific aquatic data is available. This product should be kept away from all bodies of water, and prevented from entering sewer streams. It may be necessary to extract soil where large spills have occurred. No specific Bioaccumulation data is available. No specific Terrain Migration data is available.



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SECTION 13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: This product should be incinerated as a waste oil, at a certified and registered waste disposal site, in compliance with all federal, state and local regulations and requirements.

RCRA STATUS OF UNUSED PRODUCT: Dispose of this product in permitted hazardous wastes sites. Keep this product away lakes, streams, rivers, ponds, sewer systems, and any other body of water.

SECTION 14. TRANSPORTATION INFORMATION

US DOT Classification:



NA 1993, Combustible Liquid, NOS (placard required on ground carriers): not regulated if shipped or transported in containers less than 450 liters (119 Gallons US).

Proper Shipping Name: Proprietary mixture of petroleum derivatives
Shipping Class: 65 (regardless of package or container size)
Packing Group: III (regardless of package or container size)
NMFC Rating: 155250-02



UN 1993, Flammable Liquid, NOS (placard required on ground carriers): If shipped in containers of 450 liters or more (120 Gallons US or more), by air or by sea.

Proper Shipping Name: Petroleum Distillates, NOS
Shipping Class: 65 (regardless of package or container size)
Packing Group: III (regardless of package or container size)

IMDG Classification:

This product is not known to be a marine pollutant according to the International Marine Dangerous Goods Codes, however it can cause harm to aquatic life.

ICAO Classification:

Proper Shipping Name: Petroleum Distillates, NOS
Class: 3
UN/NA ID #: NA 1993
Packing Group: III

IBC Classification:

Guidance on transporting this product in bulk by ocean freight can be obtained from Annex II of Marpol 73/78 and the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.

All Transportation Methods:

Keep packages and containers upright and tightly sealed at all time during transportation. Do not expose packages and containers to direct sunlight, extreme heat, or any source of ignition. All product should be transported in their original packaging and containers. Rubber, plastic or other lined containers should not be used.

SECTION 15. REGULATORY INFORMATION

There are no other national and/or regional statutes or information on this product, including OSHA, Department of Transportation, Environmental Protection Agency, Consumer Product Safety Commission, and Right-To-Know Act not previously addressed in this document.

Chemical Name _____

CAS # _____

NJ TS Number _____

None



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SECTION 16. OTHER INFORMATION

This product has not been tested in long term, chronic exposure, therefore, the handling procedures and safety precautions in the SDS should be followed to minimize employee exposure.

Label Information for the United States: CAUTION: May cause skin and eye irritation. Do not swallow. Avoid eye and skin contact. Wash thoroughly after handling. Avoid contact with clothing. Wash clothing before reuse. Keep out of reach of children. Keep containers tightly closed when not in use. Avoid breathing mists or sprays of this product or its solutions.

EMPLOYER RESPONSIBILITY

Employers must ensure that these Material Safety Data Sheets are readily accessible and available to all their employees responsible for the storage, handling, and manipulation of this product. This can be done in many ways, such as organizing all chemicals SDS in freely available binders kept in areas where the chemicals are stored, or on computers the handling employees have access to without the inconvenience of leaving the work or storage area. We strongly recommend the binder method which keeps them available in the event of a power outage or other emergency inhibiting computer use. Employers may want to consider designating two persons (primary and backup) responsible for obtaining and maintaining SDS records. If the employer does not have a particular SDS for a chemical commodity, the employer or responsible designate should contact the chemical manufacturer to obtain one prior to product use.

REFERENCES

OSHA, 29 CR 1910.1200(g) and Appendix D.

United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS), 3rd Revised Edition, United Nations, 2009. These references and other information related to the revised Hazard Communication Standard can be found on OSHA's Hazard Communication Safety and Health Topics web site at: <http://www.osha.gov/dsg/hazcom/index.html>.

DISCLAIMER

This brief provides a general overview of the Material Safety Data Sheet requirements as mandated by the Hazard Communication Standard 29 CFR 1910.1200(g) and Appendix D of 29 CFR 1910.1200. It does not alter or determine compliance responsibilities in the standard or the Occupational Safety and Health Act of 1970. Since interpretations and enforcement policy may change over time, the reader should consult current OSHA interpretations, decisions by the Occupational Safety and Health Review Commission, and the courts for additional guidance on OSHA compliance requirement. Please note that states with OSHA-approved state plans may have additional requirements for chemical safety data sheets, outside of those outlined above. For more information on those standards, please visit: <http://www.osha.gov/dcsp/osp/statestandards.html>.

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D-Ice Application Chart

This chart specifies the number of containers or ounces needed for the amount of fuel to be conditioned. Container volumes are maximized in accordance with a 40"x40" skid. To determine ounces needed when container factors are shown, multiply the factor times the Container Ozs.

Container Ozs:	8oz. = 8	Quart = 32	Gal. = 128	Pail = 640	Drum = 6,656	Tote = 35,200
Sizes / Skid Max:	→	→	→	YES 20	YES 216	YES 275
Application:	Initial	Maintain	Initial	Maintain	Initial	Maintain
Ratio:	1: 600	2,400	600	2,400	600	2,400
				<u>Pails Needed</u>	<u>Drums Needed</u>	<u>Totes Needed</u>
50				0.02 ←	← ←	← ←
G 100				0.03 ←	← ←	← ←
A 200				0.07 ←	← ←	← ←
L 500				0.17 ←	← ←	← ←
L 1,000				0.33 0.1	← ←	← ←
O 2,000				0.67 0.2	0.1 ←	← ←
N 3,000				1.00 0.3	0.1 ←	← ←
S 4,000				1.33 0.3	0.1 ←	← ←
5,000				2 0.4	0.2 ←	← ←
O 7,500				3 0.6	0.2 0.1	← ←
F 8,000				3 0.7	0.3 0.1	← ←
9,000				3 0.8	0.3 0.1	0.1 ←
F 10,000				3 0.8	0.3 0.1	0.1 ←
U 12,000				4 1	0.4 0.1	0.1 ←
E 14,000				5 1	0.4 0.1	0.1 ←
L 15,000				5 1	0.5 0.1	0.1 ←
20,000				7 2	0.6 0.2	0.1 ←
T 25,000				8 2	0.8 0.2	0.2 ←
O 45,000				15 4	1 0.4	0.3 0.1
50,000				17 4	2 0.4	0.3 0.1
B 75,000				→ 6	2 0.6	0.5 0.1
E 80,000				→ 7	3 0.6	0.5 0.1
89,950				→ 7	3 0.7	0.5 0.1
C 98,000				→ 8	3 0.8	0.6 0.1
O 100,000				→ 8	3 0.8	0.6 0.2
N 110,000				→ →	4 0.9	0.7 0.2
D 115,000				→ →	4 0.9	0.7 0.2
I 119,900				→ →	4 1	0.7 0.2
T 135,000				→ →	4 1	0.8 0.2
I 159,500				→ →	5 1	1 0.2
O 200,000				→ →	6 2	1 0.3
N 240,000				→ →	8 2	1 0.4
E 320,000				→ →	10 3	2 0.5
D 520,000				→ →	17 4	3 0.8
1,000,000				→ →	32 8	6 1.5

Packaging & Shipping : 12 8oz bottles/case (where available) 60 cases per skid; 12 quart bottles/case (where available) 40 cases per skid, 4 gallons/case (where available) 40 cases per skid, 20 pails/skid, 4 drums/skid, one 275-gallon HDPE tote bin per skid. All containers and skids are non-returnable. Please recycle in accordance with local statutes. When seeing the arrow (→) we recomend the next larger size container.