



D.T. 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of issue: 03/21/2016 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : D.T. 1
Product code : 34003

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Fuel: additive

1.3. Details of the supplier of the safety data sheet

Bardahl Manufacturing Corporation
1400 NW 52nd Street
Seattle, WA 98107
T 206-783-4851 - F 206-784-3219
john.wilson@bardahl.com - www.bardahl.com

1.4. Emergency telephone number

Emergency number : 800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

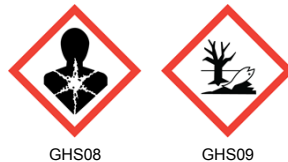
Flam. Liq. 4	H227
Carc. 2	H351
STOT RE 2	H373
Asp. Tox. 1	H304
Aquatic Acute 2	H401
Aquatic Chronic 2	H411

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS08

GHS09

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

Combustible liquid
May be fatal if swallowed and enters airways
Suspected of causing cancer (Dermal)
May cause damage to organs through prolonged or repeated exposure
Toxic to aquatic life
Toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US) :

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Keep away from heat, hot surfaces, open flames, sparks. - No smoking
Do not breathe mist, vapours
Avoid release to the environment
Wear eye protection, protective gloves
If swallowed: Immediately call a POISON CENTER
If exposed or concerned: Get medical advice/attention
Get medical advice/attention if you feel unwell
Do NOT induce vomiting
In case of fire: Use alcohol resistant foam, BC-powder, carbon dioxide (CO2) to extinguish
Collect spillage
Store in a well-ventilated place. Keep cool
Store locked up
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

D.T. 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Petroleum distillate	(CAS No) 68476-34-6	>= 80	Carc. 2, H351 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Solvent naphtha (heavy aromatic)	(CAS No) 64742-94-5	5 - 10	Skin Irrit. 2, H315 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Naphthalene	(CAS No) 91-20-3	0.1 - 1	Acute Tox. 4 (Oral), H302 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/injuries after inhalation	: May cause respiratory irritation.
Symptoms/injuries after skin contact	: Repeated exposure may cause skin dryness or cracking.
Symptoms/injuries after eye contact	: Causes eye irritation.
Symptoms/injuries after ingestion	: Risk of aspiration pneumonia. Irritation of the gastric/intestinal mucosa. Risk of lung oedema.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Flammable liquid and vapour. Combustible liquid.
Explosion hazard	: Reactions with explosion hazards: see "Reactivity Hazard".
Reactivity	: Decomposes exothermically on exposure to temperature rise: pressure build-up may cause closed container to burst.

5.3. Advice for firefighters

Firefighting instructions	: Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

D.T. 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : No flames, no sparks. Eliminate all sources of ignition.

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Stop release. Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Store locked up.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

D.T. 1	
ACGIH	Not applicable
OSHA	Not applicable
Solvent naphtha (heavy aromatic) (64742-94-5)	
ACGIH	Not applicable
OSHA	Not applicable
Naphthalene (91-20-3)	
OSHA	Not applicable
Petroleum distillate (68476-34-6)	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Hand protection : Protective gloves.

Eye protection : Safety glasses.

D.T. 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment.
Environmental exposure controls	: Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: amber
Odour	: characteristic
Odour threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 62 °C typical
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Vapour pressure	: No data available
Relative density	: No data available
Relative vapour density at 20 °C	: No data available
Density	: 0.85 g/cm ³ typical
Solubility	: Water: Solubility in water of component(s) of the mixture : • 1,3,5-Trimethyl benzene: 0.0020 g/100ml • 1,2,3-Trimethyl benzene: 0.0050 g/100ml • Solvent naphtha (heavy aromatic): < 0.01 g/100ml • Naphthalene: 0.0030 g/100ml • 1,2,4- Trimethyl benzene: 0.0060 g/100ml • 2-ethylhexyl nitrate: 0.001 g/100ml • Petroleum distillate: 0.001 g/100ml
Log Pow	: No data available
Log Kow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: 5 cSt @ 40 C
Viscosity, dynamic	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Decomposes exothermically on exposure to temperature rise: pressure build-up may cause closed container to burst.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

D.T. 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Solvent naphtha (heavy aromatic) (64742-94-5)	
LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 5 mg/l/4h (Rat)

Naphthalene (91-20-3)	
LD50 oral rat	> 1100 mg/kg (Rat)
LD50 dermal rat	> 2500 mg/kg (Rat)
LD50 dermal rabbit	> 20000 mg/kg (Rabbit)
ATE US (oral)	500.000 mg/kg bodyweight

Petroleum distillate (68476-34-6)	
LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 5 mg/l/4h (Rat)

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Suspected of causing cancer (Dermal).

Naphthalene (91-20-3)	
IARC group	2B - Possibly carcinogenic to humans

Reproductive toxicity : Not classified
Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : May be fatal if swallowed and enters airways.

Symptoms/injuries after inhalation : May cause respiratory irritation.

Symptoms/injuries after skin contact : Repeated exposure may cause skin dryness or cracking.

Symptoms/injuries after eye contact : Causes eye irritation.

Symptoms/injuries after ingestion : Risk of aspiration pneumonia. Irritation of the gastric/intestinal mucosa. Risk of lung oedema.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

Solvent naphtha (heavy aromatic) (64742-94-5)	
EC50 Daphnia 1	0.95 mg/l (EC50; 48 h)
LC50 fish 2	2.34 mg/l (LC50; 96 h; Oncorhynchus mykiss)
Threshold limit algae 2	2.5 mg/l (EC50; 72 h)

Naphthalene (91-20-3)	
EC50 Daphnia 1	2.16 mg/l (EC50; 48 h; Daphnia magna)
LC50 fish 2	0.11 mg/l (LC50; 96 h; Oncorhynchus mykiss)
Threshold limit algae 1	0.4 mg/l (EC50; 72 h; Skeletonema costatum)

12.2. Persistence and degradability

Solvent naphtha (heavy aromatic) (64742-94-5)	
Persistence and degradability	Not readily biodegradable in water.

D.T. 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Naphthalene (91-20-3)	
Persistence and degradability	Readily biodegradable in water. Forming sediments in water. Biodegradable in the soil. Adsorbs into the soil. Photolysis in the air.
Biochemical oxygen demand (BOD)	0 g O ₂ /g substance
Chemical oxygen demand (COD)	0.22 g O ₂ /g substance
ThOD	2.99 g O ₂ /g substance

Petroleum distillate (68476-34-6)	
Persistence and degradability	Inherently biodegradable. No (test)data on mobility of the components available.

12.3. Bioaccumulative potential

Solvent naphtha (heavy aromatic) (64742-94-5)	
Log Pow	2.9 - 6.1
Bioaccumulative potential	Bioaccumable.

Naphthalene (91-20-3)	
BCF fish 1	23 - 168 (BCF; 8 weeks; Cyprinus carpio)
Log Pow	3.30 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Petroleum distillate (68476-34-6)	
Log Pow	3.9 - 6

12.4. Mobility in soil

Naphthalene (91-20-3)	
Surface tension	0.03 N/m (100 °C)

Petroleum distillate (68476-34-6)	
Surface tension	0.025 N/m

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

No additional information available

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : Not Applicable

UN-No.(DOT) : Not Applicable

Dangerous for the environment : Yes

Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

D.T. 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 15: Regulatory information

15.1. US Federal regulations

D.T. 1

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

Solvent naphtha (heavy aromatic) (64742-94-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Petroleum distillate (68476-34-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

No additional information available

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

Full text of H-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Acute 2	Hazardous to the aquatic environment — Acute Hazard, Category 2
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
Flam. Liq. 4	Flammable liquids, Category 4
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H227	Combustible liquid
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H351	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects

D.T. 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product