

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : DFW-4174

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Smart Chemical Solutions, LLC
3505 Olsen Blvd
Suite 201
Amarillo, TX 79109
T (806) 367-8031

1.4. Emergency telephone number

Emergency number : CHEMTREC 1-800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 2	H225	Highly flammable liquid and vapor
Acute toxicity (oral) Category 4	H302	Harmful if swallowed
Acute toxicity (dermal) Category 3	H311	Toxic in contact with skin
Acute toxicity (inhalation:dust,mist) Category 2	H330	Fatal if inhaled
Specific target organ toxicity (single exposure) Category 1	H370	Causes damage to organs

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H225 - Highly flammable liquid and vapor
H302 - Harmful if swallowed
H370 - Causes damage to organs

Precautionary statements (GHS US) :

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 discharge.
P260 - Do not breathe 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.

DFW-4174

Safety Data Sheet

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

P271 - Use only outdoors or in a well-ventilated area.
P284 - [In case of inadequate ventilation] wear respiratory protection.
P301+P312 - If swallowed: Call a poison center or doctor 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.
P330 - Rinse mouth.
P370+P378 - In case of fire: Use media other than water to extinguish.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

20% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)
20% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)
20% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Methanol	CAS-No.: 67-56-1	70 – 90	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT SE 1, H370
2-Ethylhexanol distillation residuum	CAS-No.: 68609-68-7	10 – 30	Aquatic Acute 3, H402

Full text of hazard classes and H-statements : 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. Call a physician immediately.
Call a doctor.
First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Rinse mouth. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

No additional information available

DFW-4174

Safety Data Sheet

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

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

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

5.2. Specific hazards arising from the chemical

Fire hazard : Highly flammable liquid and vapor.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : No open flames, no sparks, and no smoking. Do not breathe dust/fume/gas/mist/vapors/spray. Only qualified personnel equipped with suitable protective equipment may intervene.

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".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

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 : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Do not get in eyes, on skin, or on clothing.
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

DFW-4174

Safety Data Sheet

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

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.
Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Methanol (67-56-1)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Methanol
ACGIH OEL TWA [ppm]	200 ppm
ACGIH OEL STEL [ppm]	250 ppm
Remark (ACGIH)	TLV® Basis: Headache; eye dam; dizziness; nausea. Notations: Skin; BEI
Regulatory reference	ACGIH 2022
USA - ACGIH - Biological Exposure Indices	
Local name	METHANOL
BEI	15 mg/l Parameter: Methanol - Medium: urine - Sampling time: End of shift - Notations: B, Ns
Regulatory reference	ACGIH 2022
USA - OSHA - Occupational Exposure Limits	
Local name	Methyl alcohol
OSHA PEL TWA [1]	260 mg/m ³
OSHA PEL TWA [2]	200 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Protective gloves
Eye protection:
Safety glasses
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
Wear respiratory protection.

DFW-4174

Safety Data Sheet

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

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Mixture contains one or more component(s) which have the following colour(s): Colourless
Odor	: There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odour: Characteristic odour Mild odour Pleasant odour Alcohol odour Commercial/unpurified substance: irritating/pungent odour
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapor.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

DFW-4174

Safety Data Sheet

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

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

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Toxic in contact with skin.
Acute toxicity (inhalation) : Fatal if inhaled.

DFW-4174	
ATE US (oral)	1187 mg/kg body weight
ATE US (dermal)	300 mg/kg body weight
ATE US (dust, mist)	0.5 mg/l/4h
Unknown acute toxicity (GHS US)	20% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 20% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 20% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

Methanol (67-56-1)	
LD50 oral rat	1187 – 2769 mg/kg body weight (BASF test, Rat, Male / female, Experimental value, Aqueous solution, Oral, 7 day(s))
LD50 dermal rabbit	300 mg/kg Source: ECHA
LC50 Inhalation - Rat	128 mg/l air (BASF test, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours))
ATE US (oral)	1187 mg/kg body weight
ATE US (dermal)	300 mg/kg body weight
ATE US (gases)	700 ppmV/4h
ATE US (vapors)	3 mg/l/4h
ATE US (dust, mist)	0.5 mg/l/4h

2-Ethylhexanol distillation residuum (68609-68-7)	
LD50 oral rat	> 2000 mg/kg Source: ECHA Chem
LC50 Inhalation - Rat	> 5.4 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Guideline: EPA OPPTS 870.1300 (Acute inhalation toxicity), Guideline: EU Method B.2 (Acute Toxicity (Inhalation)), Remarks on results: other:
LC50 Inhalation - Rat (Dust/Mist)	> 5.4 mg/l Source: ECHA Chem

Skin corrosion/irritation : Not classified

Methanol (67-56-1)	
pH	No data available in the literature

Serious eye damage/irritation : Not classified

DFW-4174

Safety Data Sheet

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

Methanol (67-56-1)

pH : No data available in the literature

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Causes damage to organs.

Methanol (67-56-1)

STOT-single exposure : Causes damage to organs.

STOT-repeated exposure : Not classified

2-Ethylhexanol distillation residuum (68609-68-7)

NOAEL (oral,rat,90 days) : ≈ 750 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

Aspiration hazard : Not classified
Viscosity, kinematic : No data available

2-Ethylhexanol distillation residuum (68609-68-7)

Viscosity, kinematic : 36.79 mm²/s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm²/s)' Remarks on result: 'other:'

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Methanol (67-56-1)

LC50 - Fish [1] : 15400 mg/l (EPA 660/3 - 75/009, 96 h, Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Lethal)

EC50 - Crustacea [1] : 18260 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 96 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, Locomotor effect)

EC50 96h - Algae [1] : 22000 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Growth rate)

2-Ethylhexanol distillation residuum (68609-68-7)

LC50 - Fish [1] : 50 mg/l Source: ECHA Chem

EC50 - Crustacea [1] : > 38 mg/l Source: ECHA Chem

EC50 72h - Algae [1] : > 34 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

EC50 72h - Algae [2] : 35 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

12.2. Persistence and degradability

Methanol (67-56-1)

Persistence and degradability : Readily biodegradable in the soil. Readily biodegradable in water.

Biochemical oxygen demand (BOD) : 0.6 – 1.12 g O₂/g substance

DFW-4174

Safety Data Sheet

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

Methanol (67-56-1)

Chemical oxygen demand (COD)	1.42 g O ₂ /g substance
ThOD	1.5 g O ₂ /g substance

12.3. Bioaccumulative potential

Methanol (67-56-1)

BCF - Fish [1]	1 – 4.5 (72 h, Cyprinus carpio, Static system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	-0.77 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

2-Ethylhexanol distillation residuum (68609-68-7)

Partition coefficient n-octanol/water (Log Pow)	1.6 Source: ECHA Chem
---	-----------------------

12.4. Mobility in soil

Methanol (67-56-1)

Mobility in soil	2.75 Source: HSDB
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	-0.89 – -0.21 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information : Flammable vapors may accumulate in the container.




SECTION 14: Transport information

DOT	IMDG	IATA
14.1. UN number		
1993	1993	1993
14.2. Proper Shipping Name		
Flammable liquids, n.o.s. (Methanol)	FLAMMABLE LIQUID, N.O.S. (Methanol)	Flammable liquid, n.o.s. (Methanol)
14.3. Transport hazard class(es)		
3	3	3

DFW-4174

Safety Data Sheet

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

DOT	IMDG	IATA
		
14.4. Packing group		
II	II	II
14.5. Environmental hazards		
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available		

14.6. Special precautions for user

DOT	
UN-No.(DOT)	: UN1993
DOT Special Provisions (49 CFR 172.102)	: IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP8 - A portable tank having a minimum test pressure of 1.5 bar (150 kPa) may be used when the flash point of the hazardous material transported is greater than 0 C (32 F). TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 202
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
DOT Vessel Stowage Location	: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
IMDG	
Special provision (IMDG)	: 274
Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP1, TP28, TP8
EmS-No. (Fire)	: F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage)	: S-E - SPILLAGE SCHEDULE Echo - FLAMMABLE LIQUIDS, FLOATING ON WATER
Stowage category (IMDG)	: B

DFW-4174

Safety Data Sheet

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

IATA

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 353
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 364
CAO max net quantity (IATA)	: 60L
Special provision (IATA)	: A3
ERG code (IATA)	: 3H

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

2-Ethylhexanol distillation residuum	CAS-No. 68609-68-7	10 – 30%
--------------------------------------	--------------------	----------

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Methanol	CAS-No. 67-56-1	70 – 90%
----------	-----------------	----------

Methanol (67-56-1)

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	5000 lb
-----------	---------

15.2. International regulations

CANADA

Methanol (67-56-1)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Methanol (67-56-1)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

WARNING:

This product can expose you to Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

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

DFW-4174

Safety Data Sheet

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

Full text of H-phrases	
H225	Highly flammable liquid and vapor
H302	Harmful if swallowed
H311	Toxic in contact with skin
H330	Fatal if inhaled
H331	Toxic if inhaled
H370	Causes damage to organs
H402	Harmful to aquatic life

Safety Data Sheet (SDS), USA