F 21 Race Fuel
Safety Data Sheet

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

1.1. Product identifier

Product form : Mixture

Product name : F 21

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

Use of the substance/mixture : Fuel

1.3. Details of the supplier of the safety data sheet

Fuel Factory LLC
4431 William Penn Hwy
Murrysville, PA 15668
(353) 151-3673

1.4. Emergency telephone number

Ambipar Response Emergency Phone Number:
1-800-219-8391 / Local +1 385-264-7545

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Flam. Liq. 1	H224
Acute Tox 1 (Oral)	H300
Acute Tox. 1 (Dermal)	H310
Acute Tox. 2 (Inhalation)	H330
Skin Irrit. 2	H315
Repr. 1	H360
STOT SE 3	H336
Carcinogenicity 2	H351
STOT SE 1	H370
STOT RE 2	H373
Asp. Tox. 1	H304
Aquatic Chronic 1	H410
Aquatic Acute 1	H400

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

GHS02 GHS07 GHS08 GHS09

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H224 - Extremely flammable liquid and vapor
H225 – Highly flammable Liquid and vapor
H226 – Flammable liquid and vapor
H227 – Combustible liquid
H300 – Fatal if swallowed
H304 - May be fatal if swallowed and enters airways
H310 – Fatal in contact with skin
H312+H332 - Harmful in contact with skin or if inhaled
H315 - Causes skin irritation
H330 – Fatal if inhaled
H336 - May cause drowsiness or dizziness
H351- Suspected of causing cancer
H360 – May damage fertility or the unborn child
H361 - Suspected of damaging fertility or the unborn child
H370 – Causes damage to organs
H373 - May cause damage to organs through prolonged or repeated exposure
H410 – Very toxic to aquatic life with long lasting effects
H400 – Very toxic to aquatic life

Precautionary statements (GHS-US) : P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
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/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
P261 – Avoid breathing dust/fume/gas/mist/vapors/spray
P264 - Wash thoroughly after handling
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+P310+P331 - IF SWALLOWED: immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338 – IF IN EYES: Rince cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - IF exposed or concerned: Get medical advice/attention
P312 - Call a POISON CENTER/doctor/physician if you feel unwell
P314 - Get medical advice and attention if you feel unwell
P331 - If swallowed, do NOT induce vomiting
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 – If eye irritation persists: Get medical advice or attention
P362 - Take off contaminated clothing and wash before reuse
P370+P378 - In case of fire: Use CO_2, dry chemical, foam (AFFF/ATC) or water spray for extinction
P391 - Collect spillage
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P403+P235 - Store in a well-ventilated place. Keep cool
P405 - Store locked up
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
2-Methoxy-2-Methylpropane	(CAS No) 1634-04-4	5 - 35	Flam. Liq. 2, H225 Skin Irrit. 2, H315
Methyl Benzene (Component)	(CAS No) 108-88-3	0 - 10	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361 STOT SE 3, H336 STOT RE 2, H373
Dimethylbenzene	(CAS No) 1330-20-7	0 – 10	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315
2-Methylbutane	(CAS No) 78-78-4	5 - 15	Flam. Liq. 1, H224 STOT SE 3, H336 Asp. Tox. 1, H304

Tetraethylplumbane	(CAS No) 78-00-2	≤ 0.05	Flam. Liq. 4, H227 Acute Tox. 1 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 Repr. 1A, H360 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,2,4 - Trimenthylpentane	(CAS No) 540-84-1	25 - 70	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336
DMA-906	IFS1132	0-3	Flam Liquids 3, H226 Asp. Tox. 1, H304 Skin Irrit 2, H315 Carcinogenicity 2, H351 STOT SE 1, H370 STOT RE 2, H373

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air. If not breathing, administer CPR or artificial respiration. Get immediate medical attention.

First-aid measures after skin contact : After contact with skin, wash immediately with plenty of water and soap. If skin reddening or irritation develops, seek medical attention.

First-aid measures after eye contact : Immediately flush the eyes with plenty of water for at least 15 minutes while holding eyelids apart to ensure flushing of the entire surface of the eye. Continue flushing for an additional 15 minutes if a physician is not immediately available. Seek medical attention, preferably an ophthalmologist, immediately.

First-aid measures after ingestion : If the material is swallowed, get immediate medical attention or advice. DO NOT induce vomiting unless directed to do so by medical personnel.

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

Symptoms/injuries after inhalation : Breathing high concentrations may be harmful. May cause central nervous system depression or effects. Symptoms may include headache, excitation, euphoria, dizziness, incoordination, drowsiness, light-headedness, blurred vision, fatigue, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death, depending on the concentration and duration of exposure. Breathing high concentrations of this material, for example, in a confined space or by intentional abuse, can cause irregular heartbeats which can cause death.

Symptoms/injuries after skin contact : Contact may cause reddening, itching and inflammation.

Symptoms/injuries after eye contact : Contact may cause pain and severe reddening and inflammation of the conjunctiva. Effects may become more serious with repeated or prolonged contact.

Symptoms/injuries after ingestion : May cause irritation of the mouth, throat and gastrointestinal tract. May cause central nervous system depression or effects. Symptoms may include salivation, pain, nausea, vomiting and diarrhea. Exposure may also cause central nervous system symptoms similar to those listed under "Inhalation"

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : CO_2, dry chemical, foam (AFFF/ATC) or water spray

Unsuitable extinguishing media : None.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable liquid and vapor.

Explosion hazard : In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.Vapors may travel long distances along ground before igniting/flashing back to vapor source.

5.3. Advice for firefighters

Protection during firefighting : Firefighters should wear full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : If possible, stop flow of product.

Methods for cleaning up : Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillage into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Comply with all applicable EPA, OSHA, NFPA and consistent state and local requirements. Use appropriate grounding and bonding practices. Store in properly closed containers that are appropriately labeled and in a cool well-ventilated area. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Do not cut, drill, grind or weld on empty containers since they may contain explosive residues. Avoid skin contact. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

7.3. Specific end use(s)

Fuel

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2-Methoxy-2-Methylpropane (1634-04-4)		
USA ACGIH	ACGIH TWA (ppm)	50 ppm

Methyl Benzene (108-88-3)		
USA ACGIH	ACGIH TWA (ppm)	20 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm
USA OSHA	OSHA PEL (Ceiling) (ppm)	300 ppm

Dimethylbenzene (1330-20-7)

USA ACGIH	ACGIH TWA (ppm)	100 ppm
USA ACGIH	ACGIH STEL (ppm)	150 ppm

Dimethylbenzene (1330-20-7)		
USA OSHA	OSHA PEL (TWA) (mg/m³)	435 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	100 ppm

2-Methylbutane (78-78-4)		
USA ACGIH	ACGIH TWA (ppm)	600 ppm

Tetraethylplumbane (78-00-2)		
USA ACGIH	ACGIH TWA (mg/m³)	0.1 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	0.075 mg/m³

DMA-906 (IFS1132)		
Xylene	ACGIH TLV	TWA: 100 ppm, 0 times per shift, 8 hours TWA: 434 mg/m^3, 0 times per shift, 8 hours STEL: 150 ppm, 0 times per shift, 15 minutes STEL: 651 mg/m^3, 0 times per shift, 15 minutes
	OSHA PEL 1989	TWA: 100 ppm, 0 times per shift, 8 hours TWA: 435 mg/m^3, 0 times per shift, 8 hours STEL: 150 ppm, 0 times per shift, 15 minutes STEL: 655 mg/m^3, 0 times per shift, 15 minutes
	OSHA PEL	TWA: 100 ppm, 0 times per shift, 8 hours TWA: 435 mg/m^3, 0 times per shift, 8 hours
Paraffins (petroleum, Normal C5-20	NIOSH REL	TWA: 5 mg/m^3, 10 hours. Form: Mist STEL: 10 mg/m^3, 15 minutes. Form: Mist
Ethylbenzene	ACGIH TLV OSHA PEL 1989	TWA: 20 ppm, 0 times per shift, 8 hours TWA: 100 ppm, 0 times per shift, 10 hours TWA: 435 mg/m^3, 0 times per shift, 10 hours STEL: 125 ppm, 0 times per shift, 15 minutes STEL: 545 mg/m^3, 0 times per shift, 15 minutes
	NIOSH REL	TWA: 100 ppm, 0 times per shift, 10 hours TWA: 435 mg/m^3, 0 times per shift, 10 hours STEL: 125 ppm, 0 times per shift, 15 minutes STEL: 545 mg/m^3, 0 times per shift, 15 minutes
	OSH PEL	TWA: 100 ppm, 0 times per shift, 8 hours TWA: 435 mg/m^3, 0 times per shift, 8 hours
Naphthalene	ACGIH TLV OSHA PEL 1989	TWA: 10 ppm, 0 times per shift, 8 hours TWA: 52 mg/m^3, 0 times per shift, 8 hours TWA: 10 ppm, 0 times per shift, 8 hours TWA: 50 mg/m^3, 0 times per shift, 8 hours STEL: 15 ppm, 0 times per shift, 15 minutes STEL: 75 mg/m^3, 0 times per shift, 15 minutes
	NIOSH REL	TWA: 10 ppm, 0 times per shift, 10 hours TWA: 50 mg/m^3, 0 times per shift, 10 hours STEL: 15 ppm, 0 times per shift, 15 minutes STEL: 75 mg/m^3, 0 times per shift, 15 minutes
	OSHA PEL	TWA: 10 ppm, 0 times per shift, 8 hours TWA: 50 mg/m^3, 0 times per shift, 8 hours

8.2. Exposure controls

Appropriate engineering controls : Local exhaust and general ventilation must be adequate to meet exposure standards.

Hand protection : Wear impervious gloves to minimize skin contact.

Eye protection : Safety glasses. Wear splash goggles if splashing is likely.

Skin and body protection : Wear suitable working clothes.

Respiratory protection : If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Odor	:	Strong hydrocarbon
Odor threshold	:	No data available
pH	:	Neutral
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Initial boiling point	:	<150°F
Flash point	:	-40°F
Self ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Specific gravity	:	.709
Solubility	:	Negligible.
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

VOC content : 100 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Will not occur.

10.4. Conditions to avoid

Heat, flames, and other ignition sources.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Combustion produces carbon monoxide, aldehydes, aromatic and other hydrocarbons.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful in contact with skin. Harmful if inhaled.

2-Methoxy-2-Methylpropane (1634-04-4)	
LD50 oral rat	4 g/kg
LD50 dermal rabbit	> 10000 mg/kg
LC50 inhalation rat (ppm)	23576 ppm/4h
ATE US (oral)	4000000.00000000 mg/kg

Methyl Benzene (108-88-3)	
LD50 oral rat	636 mg/kg

LD50 dermal rabbit	8390 mg/kg
LC50 inhalation rat (mg/l)	12.5 mg/l/4h
ATE US (oral)	636.00000000 mg/kg
ATE US (dermal)	8390.00000000 mg/kg

Dimethylbenzene (1330-20-7)	
LD50 oral rat	4300 mg/kg
LC50 inhalation rat (mg/l)	47635 mg/l/4h
ATE US (oral)	4300.00000000 mg/kg
ATE US (dermal)	1100.00000000 mg/kg

Tetraethylplumbane (78-00-2)	
LC50 inhalation rat (mg/l)	850 mg/m³ (Exposure time: 1 h)
ATE US (oral)	5.00000000 mg/kg body weight
ATE US (dermal)	5.00000000 mg/kg body weight
ATE US (gases)	100.00000000 ppmV/4h
ATE US (vapors)	0.50000000 mg/l/4h
ATE US (dust, mist)	0.05000000 mg/l/4h

2,2,4 Trimethylpentane (540-84-1)	
LD50 oral rat	>5,000 mg/kg
LD50 dermal rabbit	>2000 mg/kg
LC50 inhalation rat (ppm)	>33.52 mg per liter (Exposure time: 4 h)

DMA- 906 (IFS1132)	
Xylene	Rabbit – LD50 Dermal – 4320 mg/kg Rat – LD50 Oral – 4300 mg/kg
Solvent Naphtha (petroleum), Heavy Arom.	Rat – LC50 Inhalation Vapor - >590 mg/m^3 Rabbit – LD50 Dermal - >2 mL/kg Rabbit – LD50 Dermal – 2000 mg/kg Rat – LDLo Oral – 5 mL/kg
Naphtha (petroleum), hydrotreated heavy	Rat – LC50 Inhalation Vapor – 8500 mg/m^3 Rat – LD50 Oral - >6 g/kg
ethylbenzene	Mouse – LC50 Inhalation Vapor – 35500 mg/m^3 Rabbit – LC50 Inhalation Vapor – 4000 ppm Rabbit – LD50 Dermal - >5000 mg/kg
Naphthalene	Rat – LC50 inhalation Vapor - >340 mg/m^3 Rabbit – LD50 Dermal - >2000 mg/kg Rat – LD50 Oral – 490 mg/kg

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : May cause genetic defects.
Carcinogenicity : May cause cancer.

2-Methoxy-2-Methylpropane (1634-04-4)	
IARC group	3 - Not classifiable

Methyl Benzene (108-88-3)	
IARC group	3 - Not classifiable

Dimethylbenzene (1330-20-7)	
IARC group	3 - Not classifiable

Tetraethylplumbane (78-00-2)	
IARC group	3 - Not classifiable

2,2,4 Trimethylpentane (540-84-1)	
IARC group	No Ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No Ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH

National Toxicity Program (NTP) Status	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP

DMA – 906 (IFS1132)	
Xylene	Rabbit – Eyes Severe irritant Rat – Skin – Mild Irritant Rabbit – Skin Moderate irritant
Solvent naphtha (petroleum) heavy arom.	Rabbit – Skin – mild irritant Mammal species unspecified – Eyes – Mild irritant
ethylbenzene	Rabbit – eyes – severe irritant Rabbit – Skin – Mild irritant

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

Specific target organ toxicity (single exposure) : May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure): May cause damage to organs through prolonged or repeated exposure. Affected organs include: blood, kidneys, reproductive system, liver, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

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

SECTION 12: Ecological information

12.1. Toxicity

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

2-Methoxy-2-Methylpropane (1634-04-4)	
LC50 fish 1	672 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	542 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 other aquatic organisms 1	> 800 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)
LC50 fish 2	929 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 other aquatic organisms 2	184 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata)

Methyl Benzene (108-88-3)	
LC50 fish 1	15.22 - 19.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	5.46 - 9.83 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 other aquatic organisms 1	> 433 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata)
LC50 fish 2	12.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 2	11.5 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 other aquatic organisms 2	12.5 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata [static])

Dimethylbenzene (1330-20-7)	
LC50 fish 1	13.4 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	3.82 mg/l (Exposure time: 48 h - Species: water flea)
LC50 fish 2	2.661 - 4.093 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 2	0.6 mg/l (Exposure time: 48 h - Species: Gammarus lacustris)

2-Methylbutane (78-78-4)	
EC50 Daphnia 1	2.3 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Tetraethylplumbane (78-00-2)	
LC50 fish 1	84 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)
EC50 Daphnia 1	0.085 mg/l (Exposure time: 48 h - Species: Artemia salina)
LC50 fish 2	19.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas)

2,2,4 Trimethylpentane (540-84-1)	
LC50 fish 1	.11 mg/l (Exposure time: 96 h – Species: Oncorhynchus Mykiss [Rainbow Trout])
EC50 Daphnia 1	.4 mg/l (Exposure time: 48 h - Species: Daphnia magna [Water Flea])

DMA-906 (IFS1132)	
Xylene	Acute LC50 3.3 mg/l – Fish – 96 Hours
Solvent naphtha (petroleum, heavy arrom.	Acute EC50 1-3 mg/l – Algae – 72 hours Acute LC50 3-10 mg/l – Daphnia – 48 hours Acute LC50 2-5 mg/l – Fish, 96 hours
Ethylbenzene	Acute EC50 4600 µg/l Fresh water – Algae – Pseudokirchneriella Subcapitata – 72 hours Acute EC50 3600 µg/l Fresh water – Algae – Pseudokirchneriella Subcapitata – 96 hours Acute EC50 7.2 mg/l – algae – 48 hours Acute EC50 2.93 mg/l – Daphnia – 48 hours Acute LC50 4.2 mg/l – Fish – 96 hours Chronic NOEC <1000 µg/l Fresh water – Algae – Pseudokirchneriella Subcapitata – 96 hours Chronic NOEC 6800 µg/l Fresh water – Daphnia-Daphnia magna – 48 hours Acute EC50 1.96 mg/l Fresh water- Daphnia – Daphnia magna -48 hours Acute LC50 2350 µg/l Marine water – Crustaceans – Palaemonetes pugio – 48 hours Acute LC50 1.6 mg/l – Fish – 96 hours Chronic NOEC 0.5 mg/l Marine water – Crustaceans – Uca pugnax – Adult – 3 weeks Chronic Noec 1.5 mg/l Fresh water – Fish – Oreochromis mossambicus – 60 days

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

2-Methoxy-2-Methylpropane (1634-04-4)	
BCF fish 1	(no bioaccumulation expected)
Log Pow	1.06 (at 23 °C)

Methyl Benzene (108-88-3)	
Log Pow	2.65

Dimethylbenzene (1330-20-7)	
BCF fish 1	0.6 - 15
Log Pow	2.77 - 3.15

2-Methylbutane (78-78-4)	
Log Pow	3.2 - 3.3

Tetraethylplumbane (78-00-2)	
BCF fish 1	92 - 3189
Log Pow	4.32 (at 20 °C)

DMA -906 (IFS1132)			
Product	$LogP_{ow}$	BCF	Potential
Xylene	3.12 to 3.2	8.1 to 25.9	Low
Solvent Naphtha (petroleum), heavy arom.	-	<100	Low
Naphtha (petroleum), hydrotreated heavy	-	10 to 2500	High
Ethylbenzene	3.1	-	Low
Naphthalene	3.4	36.5 to 168	Low

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with local/regional/national/international regulations.

Product : The products should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste

management company.

Contaminated Packaging : Empty Remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on the empty drum.

SECTION 14: Transport information

In accordance with DOT

Transport document description : UN1203 Gasoline includes gasoline mixed with ethyl alcohol, with not more than 10% alcohol, 3, II

UN-No.(DOT) : 1203

DOT NA no. : UN1203

DOT Proper Shipping Name : Gasoline

includes gasoline mixed with ethyl alcohol, with not more than 10% alcohol

Department of Transportation (DOT) Hazard Classes : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT) : 3 - Flammable liquid

Packing group (DOT) : II - Medium Danger

DOT Special Provisions (49 CFR 172.102) : 144 - If transported as a residue in an underground storage tank (UST), as defined in 40 CFR 280.12, that has been cleaned and purged or rendered inert according to the American Petroleum Institute (API) Standard 1604 (IBR, see 171.7 of this subchapter), then the tank and this material are not subject to any other requirements of this subchapter. However, sediments remaining in the tank that meet the definition for a hazardous material are subject to the applicable regulations of this subchapter.
177 - Gasoline, or, ethanol and gasoline mixtures, for use in internal combustion engines (e.g., in automobiles, stationary engines and other engines) must be assigned to Packing Group II regardless of variations in volatility.
B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.
B33 - MC 300, MC 301, MC 302, MC 303, MC 305, MC 306, and DOT 406 cargo tanks equipped with a 1 psig normal vent used to transport gasoline must conform to Table I of this Special Provision. Based on the volatility class determined by using ASTM D 439 and the Reid vapor pressure (RVP) of the particular gasoline, the maximum lading pressure and maximum ambient temperature permitted during the loading of gasoline may not exceed that listed in Table I.
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.
T4 - 2.65 178.274(d)(2) Normal.....178.275(d)(3)

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 : E - 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, but is prohibited from carriage on passenger vessels in which the limiting number of passengers is exceeded.

SECTION 15: Regulatory information

15.1. US Federal regulations

2-Methoxy-2-Methylpropane (1634-04-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.

SARA Section 313 - Emission Reporting	1.0 %

Methyl Benzene (108-88-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)

Methyl Benzene (108-88-3)	
SARA Section 313 - Emission Reporting	1.0 %

Dimethylbenzene (1330-20-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 313 - Emission Reporting	1.0 %

Tetraethylplumbane (78-00-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 302 (Specific toxic chemical listings)	
SARA Section 302 Threshold Planning Quantity (TPQ)	100

2,2,4 Trimethylpentane (540-84-1)	
SARA 311/312 Hazards	Fire Hazard Acute Health Hazard
CERCLA Reportable Quantity	1000 Lbs 2,2,4-Trimethylpentane
Sara 302 Reportable Quantity	This material does not contain any components with a SARA 302 RQ
SARA 302 Threshold Planning Quantity	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 304 Reportable Quantity	This material does not contain any components wit a section 304 EHS RQ
SARA 13 Ingredients	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) report levels established by SARA Title III, Section 313.
DMA-906 (IFS1132)	
United States inventory (TSCA 8b): all components are listed or exempted Clean Water Act (CWA) 307 : ethylbenzene, naphthalene	
SARA 302/304 – Composition/information on ingredients – no products found	
SARA 311/312 – Classification:	Flammable Liquids – Cat 3 Skin Irritation – Cat 2 Eye irritation Cat 2B Carcinogenicity – Cat 2 Specific Target organ Toxicity (repeated exposure) Cat 2 Aspiration hazard – Cat 2 HNOC – Defatting Irritant

15.2. US State regulations

Methyl Benzene (108-88-3)				
U.S. – California - Proposition 65 - Carcinogens List	U.S. – California - Proposition 65 - Developmental Toxicity	U.S. – California - Proposition 65 - Reproductive Toxicity - Female	U.S. – California - Proposition 65 - Reproductive Toxicity – Male	No significance risk level (NSRL)
	Yes	Yes		

2-Methoxy-2-Methylpropane (1634-04-4)
U.S. - Massachusetts - Right To Know List U.S. - Minnesota - Hazardous Substance List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Methyl Benzene (108-88-3)

U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Dimethylbenzene (1330-20-7)

U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

2-Methylbutane (78-78-4)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Tetraethylplumbane (78-00-2)

U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

2,2,4 Trimethylpentane (540-84-1)

U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

DMA-906 (IFS1132)

U.S. – Massachusetts : the following components are listed: xylene, dimethylbenzene, ethyl benzene, ethylbenzene
U.S. – New York – The following components are listed : Xylene mixed; Ethylbenzene; Naphthalene
U.S. – New Jersey – The following components are listed: Xylenes; benzene, Dimethyl- Ethyl Benzene, Benzene, ethyl- Naphthalene; Moth flakes
U.S. – Pennsylvania – The following components are listed: Benzene, dimethyl -; benzene; , ethyl-; naphthalene
California Prop 65 – Warning: this product can expose you to chemicals including ethylbenzene and naphthalene, which are known to the state of California to cause cancer. For more information go to www.P65warnings.ca.gov.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level	Contains: ppm (or %)
Ethylbenzene	Yes	No			0.99-4.99
Naphthalene	Yes	No	Yes		0.09 – 0.99

SECTION 16: Other information

Full text of H-phrases:

Acute Tox. 1 (Dermal)	Acute toxicity (dermal) Category 1
Acute Tox. 2 (Inhalation)	Acute toxicity (inhalation) Category 2
Acute Tox. 1 (Oral)	Acute toxicity (oral) Category 1
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Asp. Tox. 1	Aspiration hazard Category 1
Carcinogenicity 2	Carcinogenicity category 2
Flam. Liq. 1	Flammable liquids Category 1
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids Category 3
Flam. Liq. 4	Flammable liquids Category 4
Repr. 1A	Reproductive toxicity Category 1A
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 1	Specific Target organ toxicity – Single exposure Category 1
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H224	Extremely flammable liquid and vapor
H225	Highly flammable liquid and vapor

H226	Flammable liquid and vapor
H227	Combustible liquid
H300	Fatal if swallowed
H304	May be fatal if swallowed and enters airways
H310	Fatal in contact with skin
H312	Harmful in contact with skin
H315	Causes skin irritation
H330	Fatal if inhaled
H332	Harmful if inhaled
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H360	May damage fertility or the unborn child
H361	Suspected of damaging fertility or the unborn child
H370	Causes damage to organs
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

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

Trade Secret Provision: *In accordance with OSHA regulations and policies, the specific percentages and specific names of certain chemicals are being designated a trade secret and are not disclosed herein. In compliance with current regulations, this SDS provides the necessary properties and effects of the chemicals listed for this product. In cases of medical emergency, medical personnel can contact the emergency number listed and obtain the specifics of these chemicals. Should this need arise, we will request the attending physician provide to us, at such time as appropriate, a letter stating the medical necessity and a signature of confidentiality for the obtained information.*