Safety Data Sheet according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012. Date of issue: 11/18/2015 Revision date: 05/16/2019 Version: 2.0

SECTION 1: Identification				
1.1. Identification				
Product name	: Fuel Right Winter 2.8K			
Product code	: Not available			
1.2. Recommended use and restrictions o	n use			
Use of the substance/mixture	: Fuel additive			
1.3. Supplier				
Manufacturer Fuel Right 41 Germay Drive Wilmington, Delaware 19804 - USA T 302-425-4400				
1.4. Emergency telephone number				
Emergency number	: CHEMTREC (800) 424-9300			
SECTION 2: Hazard(s) identification				
2.1. Classification of the substance or mix	xture			
GHS US classification				
Flam. Liq. 4				
Skin Irrit. 2				
Eye Dam. 1				
Carc. 2				
Asp. Tox. 1				
2.2. GHS Label elements, including precat	utionary statements			
GHS US labeling				
Hazard pictograms (GHS US)				
Signal word (GHS US)	: Danger			
Hazard statements (GHS US)	: Combustible liquid			
	Causes skin irritation Causes serious eye damage			
	Suspected of causing cancer			
	May be fatal if swallowed and enters airways			
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, sparks, open flames and other ignition sources. No smoking. Wash hands, forearms and face thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. If exposed or concerned: Get medical advice/attention. If swallowed: Immediately call a poison center or doctor Do NOT induce vomiting. If on skin: Wash with plenty of water Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a poison center or doctor 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 			

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2.3.	Other hazards which do not result in classification	
No add	litional information available	
2.4.	Unknown acute toxicity (GHS US)	
Not ap	blicable	
SECTION 3: Composition/Information on ingredients		
3.1.	Substances	
Not applicable		

3.2. Mixtures

Name	Product identifier	%
Petroleum distillates, hydrotreated light	(CAS-No.) 64742-47-8	30 - 60
Solvent naphtha, petroleum, heavy aromatic	(CAS-No.) 64742-94-5	10 - 30
Dipropylene glycol monomethyl ether	(CAS-No.) 34590-94-8	10 - 30
Cyclic Amino Compound	Trade Secret	5 - 10
Naphthalene	(CAS-No.) 91-20-3	1 - 5
Kerosine(petroleum), hydrodesulfurized	(CAS-No.) 64742-81-0	< 3
Aliphatic Diamine	Trade Secret	< 2

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

SECTION 4: First-aid measures	
4.1. Description of first aid measures	
First-aid measures after inhalation	: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact	: IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
First-aid measures after ingestion	: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.
4.2. Most important symptoms and effects (acute and delayed)	
Symptoms/effects after inhalation	: May cause irritation to the respiratory tract.
Symptoms/effects after skin contact	: Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/effects after eye contact	: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.
Symptoms/effects after ingestion	: May be fatal if swallowed and enters airways. May result in aspiration into the lungs, causing chemical pneumonia. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3. Immediate medical attention and special treatment, if necessary

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Fire-fighting measures		
5.1. Suitable (and unsuitable) extinguish	ing media	
Suitable extinguishing media	: Water fog. Dry chemical. Alcohol-resistant foam. Carbon dioxide.	
Unsuitable extinguishing media	: Do not use water jet.	
5.2. Specific hazards arising from the ch	emical	
Fire hazard	: Combustible liquid. Products of combustion may include, and are not limited to: oxides of carbon. Oxides of nitrogen.	
5.3. Special protective equipment and pr	ecautions for fire-fighters	
Firefighting instructions	: Use water spray to keep fire-exposed containers cool.	
Protection during firefighting	: Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Vapors may be heavier than air and may travel along the ground to a distant ignition source and flash back.	

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SECTION 6: Accidental release measures					
6.1. Personal precautions, protective equi	1. Personal precautions, protective equipment and emergency procedures				
General measures :	Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Use special care to avoid static electric charges. Eliminate sources of ignition.				
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					
Prevent entry to sewers and public waters.					
6.3. Methods and material for containment and cleaning up					
For containment :	Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).				
Methods for cleaning up	Sweep or shovel spills into appropriate container for disposal. Provide ventilation. Spilled material may present a slipping hazard.				
6.4. Reference to other sections					
For further information refer to section 8: "Exposure	For further information refer to section 8: "Exposure controls/personal protection"				
SECTION 7: Handling and storage					
7.1. Precautions for safe handling					
Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from sources of ignition - No smoking. Avoid contact with skin, eyes and clothing. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Take precautionary measures against static discharge. Use only non-sparking tools. Use only outdoors or in a well-ventilated area.				
Hygiene measures :	Take off contaminated clothing and wash it before reuse. Wash hands, forearms and face thoroughly after handling.				
7.2. Conditions for safe storage, including	any incompatibilities				
Technical measures	Proper grounding procedures to avoid static electricity should be followed.				

Storage o	conditions	Keep out of the reach of children. Keep container tightly closed. Store in dry, cool, well- ventilated area. Store away from direct sunlight or other heat sources. Store locked up.		
SECTIO	SECTION 8: Exposure controls/personal protection			
8.1.	Control parameters			

Petroleum distillates, hydrotreated light (64742-47-8)				
Not applicable	Not applicable			
Dipropylene glycol	monomethyl ether (34590-94-8)			
ACGIH ACGIH TWA (ppm) ACGIH ACGIH STEL (ppm)		100 ppm		
		150 ppm		
OSHA OSHA PEL (TWA) (mg/m³)		600 mg/m ³		
OSHA	OSHA PEL (TWA) (ppm)	100 ppm prevent or reduce skin absorption		
OSHA	Limit value category (OSHA)			
IDLH	US IDLH (ppm)	600 ppm		
NIOSH NIOSH REL (TWA) (mg/m ³)		600 mg/m ³		
NIOSH NIOSH REL (TWA) (ppm) NIOSH NIOSH REL (STEL) (mg/m³) NIOSH NIOSH REL (STEL) (ppm)		100 ppm		
		900 mg/m ³		
		150 ppm		
NIOSH	US-NIOSH chemical category	Potential for dermal absorption		

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Cyclic Amino Compound (Trade Secret)			
Not applicable			
Naphthalene (91-20-3)			
ACGIH	ACGIH TWA (ppm)	10 ppm	
OSHA	OSHA PEL (TWA) (mg/m ³)	50 mg/m ³	
OSHA	OSHA PEL (TWA) (ppm)	10 ppm	
IDLH	US IDLH (ppm)	250 ppm	
NIOSH	NIOSH REL (TWA) (mg/m ³)	50 mg/m ³	
NIOSH	NIOSH REL (TWA) (ppm)	10 ppm	
NIOSH	NIOSH REL (STEL) (mg/m ³)	75 mg/m³	
NIOSH	NIOSH REL (STEL) (ppm)	15 ppm	
Aliphatic Diamine (Trade Secret)			
Not applicable			
Solvent naphtha, petroleum, heavy aromatic (64742-94-5)			
Not applicable			
Kerosine(petroleum),hydrodesulfurized (64742-81-0)			
ACGIH ACGIH TWA (mg/m³)		200 mg/m ³ (application restricted to conditions in which there are negligible aerosol exposures-total hydrocarbon vapor (Kerosene/Jet fuels)	
3.2. Appropriate en	ngineering controls		
Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.			
Environmental exposure controls : Avoid release to the environment. Maintain levels below Community environmental protection thresholds.			

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear suitable gloves resistant to chemical penetration

Eye protection:

Wear approved eye protection (properly fitted dust- or splash-proof chemical safety goggles) and face protection (face shield).

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

SECTION 9: Physical and chemical properties		
9.1. Information on basic physical and chemical properties		
Physical state : Liquid		
Appearance	: No data available.	
Color	: Hazy pale yellow to light amber	
Odor	: Hydrocarbon / Fish oil / Ammonia	
Odor threshold	: No data available	
pН	: 9.7	
Melting point	: No data available	
Freezing point	: No data available	

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Boiling point	:	No data available
Flash point	:	77 °C (171 °F)
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	Combustible liquid.
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	No data available
Specific gravity / density	:	0.864
Solubility	:	In water, material is partially soluble.
Partition coefficient n-octanol/water	:	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: Stal	bilitv and re	activitv
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10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Open flame. Sources of ignition. Incompatible materials.

10.5. Incompatible materials

Oxidizers.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon. Oxides of nitrogen. May release flammable gases.

SECTION 11: Toxicological information		
11.1. Information on toxicological effects		
Acute toxicity (oral)	: Not classified	
Acute toxicity (dermal)	: Not classified	
Acute toxicity (inhalation)	: Not classified	
Petroleum distillates, hydrotreated light (6474	42-47-8)	
LD50 oral rat	> 5000 mg/kg	
LD50 dermal rabbit	> 2000 mg/kg	
LC50 inhalation rat	> 5.2 mg/l/4h	
Dipropylene glycol monomethyl ether (34590-94-8)		
LD50 oral rat	5.35 g/kg	
LD50 dermal rabbit	9500 mg/kg	
Naphthalene (91-20-3)		
LD50 oral rat	1110 mg/kg	
LD50 dermal rabbit	1120 mg/kg	
LC50 inhalation rat	> 340 mg/m ³ (Exposure time: 1 h)	

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Solvent naphtha, petroleum, heavy aromatic (64742-94-5)				
LD50 oral rat	> 5000 mg/kg			
LD50 dermal rabbit	> 2 ml/kg			
LC50 inhalation rat	> 590 mg/m ³ (Exposure time: 4 h)			
Kerosine(petroleum),hydrodesulfurized (64742-81-0)				
LD50 oral rat	> 5000 mg/kg			
LD50 dermal rabbit	> 2000 mg/kg			
LC50 inhalation rat	> 5200 mg/m ³ (Exposure time: 4 h)			
ATE US (gases)	700 ppmV/4h			
ATE US (vapors)	3 mg/l/4h			
ATE US (dust, mist)	0.5 mg/l/4h			
Skin corrosion/irritation	: Causes skin irritation.			
	pH: 9.7			
Serious eye damage/irritation	: Causes serious eye damage.			
	pH: 9.7			
Respiratory or skin sensitization	: Not classified			
Germ cell mutagenicity	: Not classified			
Carcinogenicity	: Suspected of causing cancer.			
Naphthalene (91-20-3)				
Naphthalene (91-20-3)	2B - Possibly carcinogenic to humans			
IARC group	2B - Possibly carcinogenic to humans Evidence of Carcinogenicity. Reasonably anticipated to be Human Carcinogen			
IARC group National Toxicology Program (NTP) Status	2B - Possibly carcinogenic to humans Evidence of Carcinogenicity, Reasonably anticipated to be Human Carcinogen Yes			
IARC group	Evidence of Carcinogenicity, Reasonably anticipated to be Human Carcinogen			
IARC group National Toxicology Program (NTP) Status In OSHA Hazard Communication Carcinogen	Evidence of Carcinogenicity, Reasonably anticipated to be Human Carcinogen			
IARC group National Toxicology Program (NTP) Status In OSHA Hazard Communication Carcinogen list	Evidence of Carcinogenicity, Reasonably anticipated to be Human Carcinogen Yes			
IARC group National Toxicology Program (NTP) Status In OSHA Hazard Communication Carcinogen list Reproductive toxicity Specific target organ toxicity – single exposure	Evidence of Carcinogenicity, Reasonably anticipated to be Human Carcinogen Yes : Not classified			
IARC group National Toxicology Program (NTP) Status In OSHA Hazard Communication Carcinogen list Reproductive toxicity	Evidence of Carcinogenicity, Reasonably anticipated to be Human Carcinogen Yes : Not classified : Not classified			
IARC group National Toxicology Program (NTP) Status In OSHA Hazard Communication Carcinogen list Reproductive toxicity Specific target organ toxicity – single exposure Specific target organ toxicity – repeated	Evidence of Carcinogenicity, Reasonably anticipated to be Human Carcinogen Yes : Not classified : Not classified			
IARC group National Toxicology Program (NTP) Status In OSHA Hazard Communication Carcinogen list Reproductive toxicity Specific target organ toxicity – single exposure Specific target organ toxicity – repeated exposure	Evidence of Carcinogenicity, Reasonably anticipated to be Human Carcinogen Yes : Not classified : Not classified : Not classified			
IARC group National Toxicology Program (NTP) Status In OSHA Hazard Communication Carcinogen list Reproductive toxicity Specific target organ toxicity – single exposure Specific target organ toxicity – repeated exposure Aspiration hazard Viscosity, kinematic	Evidence of Carcinogenicity, Reasonably anticipated to be Human Carcinogen Yes : Not classified			
IARC group National Toxicology Program (NTP) Status In OSHA Hazard Communication Carcinogen list Reproductive toxicity Specific target organ toxicity – single exposure Specific target organ toxicity – repeated exposure Aspiration hazard	Evidence of Carcinogenicity, Reasonably anticipated to be Human Carcinogen Yes : Not classified			
IARC group National Toxicology Program (NTP) Status In OSHA Hazard Communication Carcinogen list Reproductive toxicity Specific target organ toxicity – single exposure Specific target organ toxicity – repeated exposure Aspiration hazard Viscosity, kinematic Symptoms/effects after inhalation	Evidence of Carcinogenicity, Reasonably anticipated to be Human Carcinogen Yes : Not classified : May be fatal if swallowed and enters airways. : No data available : May cause irritation to the respiratory tract. : Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the			
IARC group National Toxicology Program (NTP) Status In OSHA Hazard Communication Carcinogen list Reproductive toxicity Specific target organ toxicity – single exposure Specific target organ toxicity – repeated exposure Aspiration hazard Viscosity, kinematic Symptoms/effects after inhalation Symptoms/effects after skin contact	Evidence of Carcinogenicity, Reasonably anticipated to be Human Carcinogen Yes Not classified Not classified Not classified May be fatal if swallowed and enters airways. No data available May cause irritation to the respiratory tract. Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and			

SECTION 12: Ecological information

- 12.1. Toxicity
- Ecology general

: May cause long-term adverse effects in the aquatic environment.

Petroleum distillates, hydrotreated light (64742-47-8)				
LC50 fish 1	45 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])			
LC50 fish 2	2.2 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])			
Dipropylene glycol monomethyl ether (34590-94-8)				
LC50 fish 1	> 10000 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])			
EC50 Daphnia 1	1919 mg/l (Exposure time: 48 h - Species: Daphnia magna)			
Naphthalene (91-20-3)				
LC50 fish 1	5.74 - 6.44 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])			
EC50 Daphnia 1	2.16 mg/l (Exposure time: 48 h - Species: Daphnia magna)			
LC50 fish 2	1.6 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])			
EC50 Daphnia 2	1.96 mg/l (Exposure time: 48 h - Species: Daphnia magna [Flow through])			

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Solvent naphtha, petroleum, heavy aromatic	: (64742-94-5)		
LC50 fish 1	19 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])		
EC50 Daphnia 1	0.95 mg/l (Exposure time: 48 h - Species: Daphnia magna)		
LC50 fish 2	2.34 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)		
Kerosine(petroleum), hydrodesulfurized (647	/42-81-0)		
LC50 fish 1	45 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])		
EC50 Daphnia 1	4720 mg/l (Exposure time: 48 h - Species: Den-dronereides heteropoda)		
LC50 fish 2	1740 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])		
2.2. Persistence and degradability			
Fuel Right Winter 2.8K			
Persistence and degradability	Not established.		
2.3. Bioaccumulative potential			
Fuel Right Winter 2.8K			
Bioaccumulative potential	Not established.		
Petroleum distillates, hydrotreated light (647	742-47-8)		
BCF fish 1	61 - 159		
Dipropylene glycol monomethyl ether (3459	0-94-8)		
Partition coefficient n-octanol/water	-0.064 (at 20 °C)		
Naphthalene (91-20-3)			
BCF fish 1	30 - 430		
Partition coefficient n-octanol/water	3.6		
Solvent naphtha, petroleum, heavy aromatic			
BCF fish 1	61 - 159		
Partition coefficient n-octanol/water	2.9 - 6.1		
Kerosine(petroleum), hydrodesulfurized (647			
BCF fish 1	61 - 159		
2.4. Mobility in soil			
lo additional information available			
2.5. Other adverse effects			
Dther information	: No other effects known.		
SECTION 13: Disposal consideration	IS		
3.1. Disposal methods			
Product/Packaging disposal recommendations	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.		
dditional information	: Handle empty containers with care because residual vapors are flammable.		
SECTION 14: Transport information			
Department of Transportation (DOT)			
n accordance with DOT			
IN-No.(DOT)	: NA1993		
Proper Shipping Name (DOT)	: Combustible liquid, n.o.s.		
Class (DOT)	: Combustible liquid		
Packing group (DOT)			
SECTION 15: Regulatory information			
5.1. US Federal regulations			

15.2. International regulations

No additional information available

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15.3. US State regulations

WARNING:

This product can expose you to Naphthalene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information		
Date of issue	: 11/18/2015	
Revision date	: 05/16/2019	
Other information	: None.	
Prepared by	: Nexreg Compliance Inc. www.Nexreg.com	NEXREG

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