

# 4+ Premium

## Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Date of issue: 08/03/2016

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Version: 2.0

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
 Product name : 4+ Premium  
 Product code : Not available

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

Use of the substance/mixture : Premium fuel enhancer

#### 1.3. Details of the supplier of the safety data sheet

**Manufacturer**  
 DSG Power Systems Inc.  
 230 29th Street East  
 Saskatoon, SK S7L 6Y6 - Canada  
 T 1-800-667-6879

**Distributor**  
 Innospec Fuel Specialties LLC  
 8375 South Willow Street  
 Littleton, Colorado 80124  
 T 1-800-441-9547

#### 1.4. Emergency telephone number

Emergency number : CANUTEC: 613-996-6666 (24hr) (Transport only)

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

##### GHS classification

Flam. Liq. 4  
 Skin Irrit. 2  
 Eye Irrit. 2A  
 Carc. 2  
 Asp. Tox. 1

#### 2.2. Label elements

##### GHS labelling

Hazard pictograms (GHS) :



Signal word (GHS) :

: Danger

Hazard statements (GHS) :

: Combustible liquid. Causes skin irritation. Causes serious eye irritation. Suspected of causing cancer. May be fatal if swallowed and enters airways.

Precautionary statements (GHS) :

: 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/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. If eye irritation persists: Get medical advice/attention. 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

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity

Not applicable

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

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### 3.2. Mixtures

Name	Product identifier	%
Benzene, ethylenated, residues, distillation lights	(CAS-No.) 178535-25-6	10 - 30
Petroleum distillates, hydrotreated light	(CAS-No.) 64742-47-8	7 - 13
2-Ethylhexanol	(CAS-No.) 104-76-7	3 - 7
Benzene, 1,3,5-triethyl-	(CAS-No.) 102-25-0	< 5
Naphthalene	(CAS-No.) 91-20-3	< 1
Ethylene oxide	(CAS-No.) 75-21-8	< 0.01

\*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. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

### 4.2. Most important symptoms and effects, both 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 irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
- Symptoms/effects after ingestion : May be fatal if swallowed and enters airways. May result in aspiration into the lungs, causing chemical pneumonia. May cause stomach distress, nausea or vomiting.

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

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. Extinguishing media

- Suitable extinguishing media : Powder, water spray, foam, carbon dioxide.
- Unsuitable extinguishing media : None known.

### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Combustible liquid. Products of combustion may include, and are not limited to: oxides of carbon. Oxides of nitrogen.

### 5.3. Advice for firefighters

- Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

## SECTION 6: Accidental release measures

### 6.1. 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. Eliminate sources of ignition. Use special care to avoid static electric charges. Use only non-sparking tools.

#### 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.

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### 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.

### 6.4. Reference to other sections

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 heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not get in eyes, on skin, or on clothing. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Ethylene Oxide is subject to the standard 29 CFR 1910.1047, which may contain specific requirements for handling including protective equipment, regulated areas, monitoring and medical surveillance. The employer should review the standard and assure compliance with applicable requirements.
- 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 conditions : Keep out of the reach of children. Keep container tightly closed and in well ventilated place. Do not store at temperatures above 49 °C / 120 °F. Store locked up.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Benzene, ethylenated, residues, distillation lights (178535-25-6)		
Not applicable		
Petroleum distillates, hydrotreated light (64742-47-8)		
Not applicable		
2-Ethylhexanol (104-76-7)		
Not applicable		
Benzene, 1,3,5-triethyl- (102-25-0)		
Not applicable		
Naphthalene (91-20-3)		
ACGIH	ACGIH TWA (ppm)	10 ppm
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	50 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	10 ppm
IDLH	US IDLH (ppm)	250 ppm
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	50 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) (ppm)	10 ppm
NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	75 mg/m <sup>3</sup>
NIOSH	NIOSH REL (STEL) (ppm)	15 ppm
Ethylene oxide (75-21-8)		
ACGIH	ACGIH TWA (ppm)	1 ppm
OSHA	OSHA PEL (TWA) (ppm)	1 ppm
OSHA	OSHA PEL (STEL) (ppm)	5 ppm (see 29 CFR 1910.1047)
IDLH	US IDLH (ppm)	800 ppm
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.18 mg/m <sup>3</sup> (less than stated value)
NIOSH	NIOSH REL (TWA) (ppm)	0.1 ppm (less than stated value)

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Ethylene oxide (75-21-8)		
NIOSH	NIOSH REL (ceiling) (mg/m <sup>3</sup> )	9 mg/m <sup>3</sup>
NIOSH	NIOSH REL (ceiling) (ppm)	5 ppm

### 8.2. Exposure controls

Appropriate engineering controls	: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.
Hand protection	: Wear suitable gloves resistant to chemical penetration.
Eye protection	: Wear eye/face protection.
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.
Environmental exposure controls	: Avoid release to the environment.
Other information	: Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear
Colour	: Amber
Odour	: Strong pungent.
Odour threshold	: 0.001 - 0.03 ppm
pH	: No data available
Melting point	: No data available
Freezing point	: -49.1 °C (-56.3 °F)
Boiling point	: 211.4 °C (412.6 °F)
Flash point	: 71 °C (159.8 °F)
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Combustible liquid.
Vapour pressure	: 0.04 kPa (0.3 mmHg) @ 20 °C (68 °F)
Relative vapour density at 20 °C	: No data available
Relative density	: 0.88 @ 16 °C (60 °F)
Solubility	: Partially soluble.
Partition coefficient n-octanol/water	: No data available
Auto-ignition temperature	: 130 - 215 °C (266-419 °F)
Decomposition temperature	: No data available
Viscosity, kinematic	: 4.82 cSt @40 °C (100 °F)
Viscosity, dynamic	: No data available
Explosive limits	: Lower explosive limit (LEL): 1.1 vol % Upper explosive limit (UEL): 10.6 vol %
Explosive properties	: No data available
Oxidising properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No dangerous reactions known under normal conditions of use.

### 10.2. Chemical stability

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

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

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### 10.4. Conditions to avoid

Heat. Sources of ignition. Incompatible materials.

### 10.5. Incompatible materials

Oxidizing agent. Reducing agents. Bases.

### 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.

<b>Petroleum distillates, hydrotreated light (64742-47-8)</b>	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	> 5.2 mg/l/4h

<b>2-Ethylhexanol (104-76-7)</b>	
LD50 oral rat	3730 mg/kg
LD50 dermal rabbit	1980 mg/kg
LC50 inhalation rat	> 227 ppm (Exposure time: 6 h)
ATE CA (oral)	3730 mg/kg bodyweight
ATE CA (Dermal)	1980 mg/kg bodyweight
ATE CA (Gases)	4500 ppmv/4h
ATE CA (vapours)	11 mg/l/4h
ATE CA (dust,mist)	1.5 mg/l/4h

<b>Naphthalene (91-20-3)</b>	
LD50 oral rat	1780 mg/kg
LD50 dermal rabbit	10000 mg/kg
LC50 inhalation rat	> 340 mg/m <sup>3</sup> (Exposure time: 1 h)
ATE CA (oral)	1780 mg/kg bodyweight
ATE CA (Dermal)	10000 mg/kg bodyweight

<b>Ethylene oxide (75-21-8)</b>	
LD50 oral rat	72 mg/kg
LD50 oral	72 mg/kg
LC50 inhalation rat	800 ppm
ATE CA (oral)	72 mg/kg bodyweight
ATE CA (Gases)	700 ppmv/4h
ATE CA (vapours)	3 mg/l/4h
ATE CA (dust,mist)	0.5 mg/l/4h

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

<b>Naphthalene (91-20-3)</b>	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	1 - Evidence of Carcinogenicity, 3 - Reasonably anticipated to be Human Carcinogen
In OSHA Hazard Communication Carcinogen list	Yes

<b>Ethylene oxide (75-21-8)</b>	
IARC group	1 - Carcinogenic to humans
National Toxicology Program (NTP) Status	2 - Known Human Carcinogens

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Ethylene oxide (75-21-8)	
In OSHA Hazard Communication Carcinogen list	Yes
In OSHA Specifically Regulated Carcinogen list	Yes

Reproductive toxicity : Not classified.

STOT-single exposure : Not classified.

2-Ethylhexanol (104-76-7)	
STOT-single exposure	May cause respiratory irritation.

Ethylene oxide (75-21-8)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified.

Ethylene oxide (75-21-8)	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

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

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Viscosity, kinematic (calculated value) (40 °C)	4.82 mm <sup>2</sup> /s @ 40 °C (100 °F)

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 irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Symptoms/effects after ingestion : May be fatal if swallowed and enters airways. May result in aspiration into the lungs, causing chemical pneumonia. May cause stomach distress, nausea or vomiting.

Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

## 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])

2-Ethylhexanol (104-76-7)	
LC50 fish 1	32 - 37 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	39 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	> 7.5 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)

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])

Ethylene oxide (75-21-8)	
LC50 fish 1	84 mg/l
EC50 Daphnia 1	137 - 300 mg/l (Exposure time: 48 h - Species: Daphnia magna)

### 12.2. Persistence and degradability

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Persistence and degradability	Not established.

### 12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.

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Petroleum distillates, hydrotreated light (64742-47-8)	
BCF fish 1	61 - 159
2-Ethylhexanol (104-76-7)	
Partition coefficient n-octanol/water	3.1
Naphthalene (91-20-3)	
BCF fish 1	30 - 430
Partition coefficient n-octanol/water	3.6
Ethylene oxide (75-21-8)	
Partition coefficient n-octanol/water	-0.3 (at 25 °C)

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other information : No other effects known.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment 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.
- Additional information : Handle empty containers with care because residual vapours are flammable.

## SECTION 14: Transport information

### Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

In accordance with DOT/TDG

UN-No.(DOT/TDG) : UN3082

Proper Shipping Name (DOT/TDG) : Environmentally hazardous substances, liquid, n.o.s. (2-Ethylhexyl nitrate, Light ends of polyethylbenzene residue)

Class (DOT/TDG) : Class 9 - Miscellaneous hazardous material 49 CFR 173.140

Packing group (DOT/TDG) : III

Hazard labels (DOT/TDG) :



## SECTION 15: Regulatory information

### 15.1. Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

### 15.2. International regulations

No additional information available

### 15.3. US State regulations

**WARNING:** This product can expose you to Ethylene oxide, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## SECTION 16: Other information

- Revision date : 07/19/2019
- Other information : None.
- Prepared by : Nexreg Compliance Inc.  
[www.Nexreg.com](http://www.Nexreg.com)



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Indication of changes:

Modified. Regulatory information.

SDS HazCom 2012 - WHMIS 2015 (NexReg)

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