1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product Identifier

Material name : Dual Fuel Hyper Clean
Product code : SXDFHC400

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

Product use : Vehicle fuel system additive.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Central Solutions (GB) Ltd
Sol-X House
Windmill Lane
Norton
Doncaster
DN6 9AT

Tel. : +44(0) 1302 708895
Fax. : +44(0) 1302 708895

Email (for SDSs) : info@solxsolutions.com
:

1.4 Emergency tel. no. (Office hours)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

According to 1272/2008/EC: Classification, Labelling and Packaging of Substances and Mixtures (CLP) Regulation:

Acute Toxicity Category 4
Skin Irritant Category 2
Serious Eye Damage Category 2

2.2 Label elements

Labelling according to EC Directives: 1272/2008/EC:

Signal word: Warning

Pictogram(s):

H-Statements:	H302+H312+H332	Harmful if swallowed, in contact with skin or if inhaled.
	H315	Causes skin irritation.
	H319	Causes serious eye irritation.

P-Statements:	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P301+P312	IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.
	P302+P352	IF ON SKIN: Wash with plenty of soap and water.
	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: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
	P312	Call a POISON CENTRE, or doctor/physician if you feel unwell.

2.3 Other hazards

No data available**.**

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixtures:

Hazardous components

Chemical Name	CAS No./ EC No./ Reg. No	Classification (67/548/EEC)	Classification (1272/2008/EC)	Content
2-BUTOXYETHANOL .	111-76-2 203-905-0 01-2119475108-36-xxxx	[Xn] R20/21/22 [Xi] R36/38	Acute Tox.4; H302+H312+H332 Sk.Irrit.2; H315 Serious Eye Damage 2; H319	>90%
2-ETHYLHEXYL NITRATE	27247-96-7 248-363-6 01-2119539586-27	[Xn] R20/21 [-] R44 [N] R51/53 [-] R66	Acute Tox.4; H302+H312+H332 Aquatic Chronic 2; H411	1-5%

See Section 16 for the full text of the R-phrases and H-statements noted above.

(1272/2008/EC: Classification, Labelling and Packaging of Substances and Mixtures (CLP) Regulation).

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice: Remove casualty from exposure ensuring one's own safety whilst doing so. Take off any contaminated clothing and shoes/boots immediately. Never give anything by mouth to an unconscious person. This product is of low acute toxicity.

Skin contact: Wash with soap and water. Seek medical advice if irritation develops.

Eye contact: Rinse with water for 10 minutes and seek medical advice if irritation persists.

Ingestion: Rinse mouth with water and give water to drink. Do not induce vomiting. Seek medical advice.

Inhalation : Inhalation of high levels of vapour may cause CNS depression and narcosis. Remove to fresh air, give oxygen or artificial respiration and seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

High levels of vapour may cause irritation to eyes, nose or throat.

4.3 Indication of any immediate medical attention and special treatment needed

See inhalation information above.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Carbon dioxide; dry chemical powder; alcohol or polymer foam.

Unsuitable extinguishing media: High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting: Irritating/toxic fumes may be released at elevated temperatures.

5.3 Advice for fire-fighters:

Special protective equipment: Wear self-contained breathing apparatus. Use personal protective equipment.

Further information: Standard procedure for chemical fires. Use water spray to cool unopened containers. Do not allow fire run-off to enter drains.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Use personal protective equipment to deal with spillage.

6.2 Environmental precautions

Prevent product from entering drains. If product enters waterways, inform relevant authorities.

6.3 Methods and materials for containment and cleaning up

Wipe up any liquid spillage with absorbent material such as sand, earth, or vermiculite, and place in a labelled container for disposal in accordance with local/national regulations.

6.4 References to other sections

See sections 8 and 13 for personal protection and disposal information.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Handle with care.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, well ventilated area. Protect from frost, heat and sunlight. Incompatible with oxidising agents. Keep away from food, drink and animal feed.

7.3 Specific end use(s)

No information available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Chemical name	8hr TWA	15min STEL	Comment	Reference
2-Butoxyethanol	123 mg/m$_3$ (25 ppm)	246 mg/m$_3$ (50 ppm)	Sk, BMGV	EH40/2005
2-Ethylhexyl Nitrate	-	1 ppm	Sk	Supplier

DNEL (workers)	2-Butoxyethanol	Reference
Chronic systemic effects (inhalation)	98 mg/m$_3$	Manufacturer
Chronic systemic effects (dermal)	75 mg/kg/day	Manufacturer

DNEL (consumers)	2-Butoxyethanol	Reference
Chronic systemic effects (inhalation)	49 mg/m$_3$	Manufacturer
Chronic systemic effects (dermal)	38 mg/kg/day	Manufacturer

8.2 Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area.

Personal protective equipment

Respiratory protection: Unlikely to be necessary in normal circumstances; if vapour levels are high, wear a respirator conforming to EN 140 with type A filter or better.

Hand protection: Wear chemically resistant gloves such as butyl rubber approved to standard EN 374; material thickness 0.5mm; break through time ≥ 480 min. Gloves must be replaced after 8 hours of wear. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Check with glove manufacturer for specific advice.

Eye protection: Chemical splash goggles and/or face shield should be worn. The selected goggles or glasses must satisfy the European standard EN 166.

Skin and body protection: Depending on the conditions of use, protective gloves, apron, boots, head and face protection should be worn. The selected protective clothing has to satisfy the standard EN 13034, which describes clothing offering limited 8 hour protection against splashes. Use PPE that is chemically resistant to the product and prevents skin contact. Sk noted above means can be absorbed through skin.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practices. Do not eat or drink whilst using the product. Wash hands before breaks and at the end of the work day. Wash contaminated clothing before re-use.

Environmental exposure controls: Do not discharge into drains or rivers.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties (Note-the information relates to the major constituent, 2-Butoxyethanol).

State and colour	Clear colourless liquid
Odour	Mild
Odour Threshold	No data available
Flammability	Non-Flammable
Flash point	67°C
Lower explosion limit	1.1%
Upper explosion limit	10.6%
Explosive properties	Not explosive
Thermal decomposition	No data available

9.1 Information on basic physical and chemical properties (continued)

Auto-ignition temperature	230°C
Oxidising properties	Non-oxidising
Solubility in water	Miscible
Solubility in other solvents	Alcohols
pH	Neutral
Melting point/range	-75°C
Boiling point/range	168-172°C
Relative density	0.9 g/cm3 @ 20°C
Vapour pressure	1 hPa @ 20°C
Vapour density	No data available
Partition coefficient: n-octanol/water	log Pow: 0.81
Viscosity (kinematic)	3.3 mPas @ 20°C
Evaporation rate	No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity	Generally non-reactive.
10.2 Chemical stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	None if stored and used as directed.
10.4 Conditions to avoid	Naked flames, ignition sources.
10.5 Incompatible materials	Strong **o**xidising agents.
10.6 Hazardous decomposition products	Oxides of carbon.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Chemical name	Oral (LD50)	Inhalation (LC50)	Dermal (LD50)
2-Butoxyethanol	300-2000 mg/kg (Rat)	No data available	1000-2000 mg/kg (Rat)

Skin corrosion/irritation: Not classed as a skin irritant.

Serious eye damage/eye irritation: Highly irritating to eyes.

Respiratory or skin sensitisation: Not classed as a respiratory or skin sensitizer.

Repeated dose toxicity: No data available.

Carcinogenicity: Not carcinogenic.

Mutagenicity: Not mutagenic.

Toxicity for reproduction: Not toxic for reproduction.

Specific target organ toxicity (STOT): No data available.

Further information Overexposure to organic nitrates by inhalation of vapour or skin contact may cause headache, dizziness, nausea and decreased blood pressure. The level of 2-Ethylhexyl Nitrate in this product is very low and unlikely to be a cause for concern.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Chemical name	Species	Test	Value
2-Butoxyethanol	Daphnia	EC50 24h	>100 mg/l
	Fish	LC50 96h	>100 mg/l
	Algae	EC50 7d	>100 mg/l

12.2 Persistence and degradability Readily biodegradable.

12.3 Bioaccumulative potential No data available.

12.4 Mobility in soil No data available.

12.5 Results of PBT and vPvB assessment Contains no PBT or vPvB substances.

12.6 Other adverse effects None.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Disposal operations: Dispose of in accordance with local and national regulations. Do not dispose of waste into sewer.
Do not dispose of together with household waste. Contact licensed waste disposal company.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not burn or use a cutting torch on the empty container.

14. TRANSPORT INFORMATION

14.1 UN number ADR/RID/ADN; IMDG; ICAO: Not classified as dangerous goods.

14.2 UN proper shipping name: Not classified as dangerous goods.

14.3 Transport hazard class(es) : Not classified as dangerous goods.

14.4 Packing Group: Not classified as dangerous goods.

14.5 Environment hazards Marine Pollutant: No

14.6 Special precautions for user : Not classified as dangerous goods.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Ship type 3, Pollution category Y.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Volatile Organic Compounds (VOC) content: 873 g/l. (Directive 1999/13/EC)

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been performed on this product.

16. OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3

R20/21	Harmful by inhalation and in contact with skin.
R20/21/22	Harmful by inhalation, in contact with skin, and if swallowed.
R36/38	Irritating to eyes and skin.
R44	Risk of explosion if heated under confinement.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R66	Repeated exposure may cause skin dryness or cracking.

Full text of H-statements referred to under sections 2 and 3

H302+H312+H332	Harmful if swallowed, in contact with skin or if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.

Abbreviations and acronyms

CAS: Chemical Abstract Service (division of the American Chemical Society). {Section 3}.
STOT: Single Target Organ Toxicity (Section 11).
TWA: Time-weighted average. (Section 8).
STEL: Short-term exposure limit. (Section 8).
BMGV: Biological Monitoring Guidance Value – see EH40/2005 for further information. (Section 8).
DNEL: Derived no effect level – a level above which humans should not be exposed. (Section 8).
EC50: Effective Concentration, 50 percent. (Section 12).
LC50: Lethal Concentration, 50 percent. (Section 11/12).
LD50: Lethal Dose, 50 percent. (Section 11).

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

[final page]