



## Material Safety Data Sheet

### 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Product Name</b>	<b>OPEN GEAR</b>
<b>Product Identifier</b>	53-E 102, Aerosol (400 ml)
<b>MSDS No.</b>	L-16E
<b>Product Family</b>	Lubricant
<b>Manufacturer</b>	IGS Aerosols GmbH, Im Hemmet 1, Wehr, Germany, D-79664, +49/7762-8007-0
<b>Emergency Contact Information</b>	CANUTEC (Canadian Transport Emergency Centre), (613) 996-6666, 24 Hours / 7 Days
<b>Use</b>	High load drive lubricant.

### 2. HAZARDS IDENTIFICATION

#### WHMIS Classification



Class A



Class B5



Class D2B

A - Compressed Gas; B5 - Flammable Aerosol; D2B - Toxic

#### Potential Health Effects

**Route of Exposure** Inhalation; skin contact; skin absorption; eye contact; ingestion.

**Inhalation** Symptoms may include headache, nausea, dizziness, drowsiness and confusion.

**Skin Contact** May cause mild irritation.

**Eye Contact** EYE IRRITANT. Symptoms include sore, red eyes, and tearing.

#### Potential Environmental Effects

Harmful to aquatic organisms. May cause long term adverse effects in the aquatic environment.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Registry No.	Concentration %	Other Identifiers
Naphtha (petroleum), hydrotreated light	64742-49-0	10-20	N/Av
Butane	106-97-8	20-30	N/Av
Propane	74-98-6	1-10	N/Av
Isobutane	75-28-5	1-10	N/Av

### 4. FIRST AID MEASURES

#### First Aid Procedures

**Inhalation** Move victim to fresh air. Call a Poison Control Centre or doctor if victim feels unwell. If unconscious, remove victim from exposure ensuring one's safety whilst doing so, check for breathing and apply artificial respiration if necessary.

**Skin Contact** Immediately flush with lukewarm, gently flowing water for 15-20 minutes.

**Eye Contact** Immediately and briefly flush with lukewarm, gently flowing water for 15-20 minutes, while holding eyelid(s) open. Transfer to hospital for specialist examination.

**Ingestion** Immediately call a Poison Control Centre or doctor. Treatment is urgently required. Transport to a hospital.

## 5. FIRE FIGHTING MEASURES

<b>Flammable Properties</b>	Extremely Flammable. Forms explosive air-vapour mixture. Can ignite if heated.
<b>Suitable Extinguishing Media</b>	Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.
<b>Specific Hazards Arising from the Chemical</b>	In combustion, emits toxic fumes.
<b>Protective Equipment and Precautions for Firefighters</b>	Wear fire equipment at all times. Wear self-contained respirator. Wear protective clothing to prevent contact with skin and eyes.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Use the Personal Protective Equipment recommended in Section 8 of this MSDS.
<b>Environmental Precautions</b>	Do not allow into any sewer, on the ground or into any waterway.
<b>Methods for Containment and Clean-up</b>	Do not use absorbents. Contain spill using noncombustible material such as vermiculite, earth or sand.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Ensure sufficient ventilation in work area. Do not handle in a confined space. Smoking is forbidden.
<b>Storage</b>	Store in an area that is: cool, well-ventilated. Keep away from direct sunlight. Keep in original packaging. Keep away from sources of ignition.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Chemical Name</b>	<b>CAS Registry No.</b>	<b>TWA</b>
Naphtha (petroleum), hydrotreated light	64742-49-0	170 ppm (8 hr)
Butane	106-97-8	1000 ppm (8 hr)
Isobutane	75-28-5	1000 ppm (8 hr)
Propane	74-98-6	1000 ppm (8 hr)

**Engineering Controls** Ensure there is sufficient ventilation in the area.

### **Personal Protective Equipment (PPE)**

<b>Eye/Face Protection</b>	Wear chemical safety goggles.
<b>Skin Protection</b>	Solvent resistant protective clothing. Nitrile gloves, permeation time > 8 hours.
<b>Respiratory Protection</b>	Self-contained breathing apparatus must be available in case of emergency.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Aerosol
<b>Colour</b>	Grey.
<b>Odour</b>	Characteristic
<b>Evaporative Rate</b>	Moderate
<b>Specific Gravity</b>	0,72 g/ml @ 20 °C (68 °F)
<b>Solubility in Water</b>	Insoluble.
<b>Flash Point</b>	-60 °C (-76 °F)
<b>Vapour Pressure</b>	2500 hPa
<b>Viscosity Kinematic (Aerosol)</b>	255 cps @ 20°C (68 °F)
<b>Viscosity Kinematic (Liquid)</b>	116000 cps @ 20°C (68 °F)
<b>Lower Flammable/Explosive Limit</b>	1,4%
<b>Upper Flammable/Explosive Limit</b>	32%
<b>Auto-ignition Temperature</b>	510 °C (950 °F)
<b>VOC (g/L)</b>	345 g/L

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Normally stable.
<b>Conditions to Avoid</b>	Heat, open flames, sparks, static discharge and other ignition sources. Avoid direct sunlight.
<b>Incompatible</b>	Oxidizing agents (e.g. peroxides).
<b>Materials</b>	
<b>Hazardous Decomposition Products</b>	In combustion, emits toxic fumes of carbon dioxide / carbon monoxide.

## 11. TOXICOLOGICAL INFORMATION

### LC50/LD50 Values

Ingredients	CAS Number	LD <sub>50</sub> RAT (oral)	LC <sub>50</sub> RAT
Naphtha (petroleum), hydrotreated light	64742-49-0	2000 mg/kg	5 mg/l (4hrs)
Butane	106-97-8	N/Av	658 g/cm (4hrs)
Propane	74-98-6	N/Av	> 20% (4hrs)
Isobutane	75-28-5	N/Av	14,2 % (4hrs)

### Skin Irritation / Corrosion

Mild

### Effects of Short-Term (Acute) Exposure

#### Inhalation

May cause drowsiness and mild irritation at contact area.

#### Skin Absorption

Mild irritation in contact area.

## 12. ECOLOGICAL INFORMATION

<b>Persistence and Degradability</b>	Does not biodegrade readily.
<b>Bioaccumulation / Accumulation</b>	Harmful to aquatic organisms.

## 13. DISPOSAL CONSIDERATIONS

Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction.

## 14. TRANSPORT INFORMATION

### Shipping Information

Regulation	UN No.	Shipping Name	Class	Packing Group
Canadian TDG	1950	Open-Gear (Aerosol)	2,1	N/Av

### Other Transport Information

<b>Special Shipping Information</b>	Not applicable
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## 15. REGULATORY INFORMATION

### Canada

#### Domestic Substances List (DSL)

All ingredients are listed on the DSL.

#### CEPA - National Pollutant Release Inventory (NPRI)

All ingredients are listed or exempted.

This Product has been classified in accordance with the hazard criteria of the controlled products.

### USA

#### US OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

#### Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.

**Additional USA Regulatory Lists**

CERCLA: None

SARA Title III - Section 302: None

SARA Title III - Section 311/312: None

SARA Title III - Section 313: None

New Jersey Right To Know: Substance No. 1040 (Isobutane CAS 75-28-5) , Substance No. 0273 (Butane CAS 106-97-8) , Substance No. 1594 (Butane CAS 74-98-6)

Section 112: Hazardous Air Pollutants (HAPS): None.

**16. OTHER INFORMATION**

<b>MSDS Prepared By</b>	Product Manager,Environmental and MRO Solutions
<b>Phone No.</b>	1-888-592-5837
<b>Date of Preparation</b>	February 2014