



SAFETY DATA SHEET

Sol-X Power Jet Brake Cleaner (CO2)

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

1.1. Product identifier

Product name Sol-X Power Jet Brake Cleaner (CO2)

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

Identified uses Brake Cleaner

1.3. Details of the supplier of the safety data sheet

Supplier Central Solutions (GB) Ltd
 Sol-X House
 Windmill Lane
 Doncaster
 DN6 9AT
 England
 Tel.: +44(0) 1302 708895
 email: info@solxsolutions.com www.solxsolutions.com

1.4. Emergency telephone number

Emergency telephone +44(0)1302 708 895

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Aerosol 1 - H222, H229

Health hazards Skin Irrit. 2 - H315 STOT SE 3 - H336

Environmental hazards Aquatic Chronic 2 - H411

Human health Gas or vapour is harmful on prolonged exposure or in high concentrations. In high concentrations, vapours and aerosol mists have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Deliberately concentrating and inhaling the contents of this container is dangerous and can be fatal.

Environmental The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

Physicochemical Aerosol containers can explode when heated, due to excessive pressure build-up. The product is extremely flammable. When sprayed on a naked flame or any incandescent material the aerosol vapours can be ignited.

2.2. Label elements

Pictogram



Sol-X Power Jet Brake Cleaner (CO2)

Signal word	Danger
Hazard statements	H222 Extremely flammable aerosol. H229 Pressurised container: may burst if heated. H315 Causes skin irritation. H336 May cause drowsiness or dizziness. H411 Toxic to aquatic life with long lasting effects.
Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P211 Do not spray on an open flame or other ignition source. P251 Do not pierce or burn, even after use. P271 Use only outdoors or in a well-ventilated area. P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. P102 Keep out of reach of children. P501 Dispose of contents/ container in accordance with local regulations. P260 Do not breathe vapour/ spray. P262 Do not get in eyes, on skin, or on clothing.
Contains	HYDROCARBONS, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane, PROPAN-2-OL
Detergent labelling	≥ 30% aliphatic hydrocarbons

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

HYDROCARBONS, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	60-100%
CAS number: —	EC number: 921-024-6
	REACH registration number: 01-2119475514-35
Classification Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 STOT SE 3 - H336 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411	
PROPAN-2-OL	1-5%
CAS number: 67-63-0	EC number: 200-661-7
	REACH registration number: 01-2119457558-25
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336	

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HEXANE-norm			<1%
CAS number: 110-54-3	EC number: 203-777-6	REACH registration number: 01-2119480412-44	
Classification			
Flam. Liq. 2 - H225			
Skin Irrit. 2 - H315			
Repr. 2 - H361f			
STOT SE 3 - H336			
STOT RE 2 - H373			
Asp. Tox. 1 - H304			
Aquatic Chronic 2 - H411			

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Move affected person to fresh air at once.
Inhalation	If spray/mist has been inhaled, proceed as follows. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. Keep affected person warm and at rest. Get medical attention immediately.
Ingestion	Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
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4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with foam, carbon dioxide, dry powder or water fog.
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5.2. Special hazards arising from the substance or mixture

Specific hazards	Containers can burst violently or explode when heated, due to excessive pressure build-up. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. The product is highly flammable. Forms explosive mixtures with air.
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5.3. Advice for firefighters

Protective actions during firefighting	Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Use water to keep fire exposed containers cool and disperse vapours.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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Personal precautions Provide adequate ventilation. Use suitable respiratory protection if ventilation is inadequate. Avoid inhalation of vapours.

6.2. Environmental precautions

Environmental precautions Avoid the spillage or runoff entering drains, sewers or watercourses. Contain spillage with sand, earth or other suitable non-combustible material.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Leave small quantities to evaporate, if safe to do so. Do not allow material to enter confined spaces, due to the risk of explosion. Absorb spillage with non-combustible, absorbent material.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Keep away from heat, sparks and open flame. Do not spray on a naked flame or any incandescent material. Eliminate all sources of ignition.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep away from heat, sparks and open flame. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Store in tightly-closed, original container in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

HYDROCARBONS, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

Long-term exposure limit (8-hour TWA): WEL 1200 mg/m³

PROPAN-2-OL

Long-term exposure limit (8-hour TWA): WEL 400 ppm 999 mg/m³

Short-term exposure limit (15-minute): WEL 500 ppm 1250 mg/m³

HEXANE-norm

Long-term exposure limit (8-hour TWA): WEL 20 ppm 72 mg/m³

WEL = Workplace Exposure Limit

Ingredient comments WEL = Workplace Exposure Limits

PROPAN-2-OL (CAS: 67-63-0)

DNEL

Industry - Dermal; Long term systemic effects: 888 mg/kg/day
 Industry - Inhalation; Long term systemic effects: 500 mg/m³
 Consumer - Dermal; Long term systemic effects: 319 mg/kg/day
 Consumer - Dermal; Long term systemic effects: 26 mg/kg/day
 Consumer - Inhalation; Long term systemic effects: 89 mg/m³

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PNEC	- Fresh water; 140.9 mg/l
	- Marine water; 140.9 mg/l
	- Intermittent release; 140.9 mg/l
	- Sediment (Freshwater); 552 mg/kg
	- Sediment (Marinewater); 552 mg/kg
	- STP; 2251 mg/l
	- Soil; 28 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls	Provide adequate ventilation. Avoid inhalation of vapours and spray/mists. Observe any occupational exposure limits for the product or ingredients.
Personal protection	Do not eat, drink or smoke when using this product.
Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles.
Hand protection	Due to the packaging form, aerosol, risk of skin contact is small. Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.
Hygiene measures	Wash promptly if skin becomes contaminated. Wash at the end of each work shift and before eating, smoking and using the toilet. Use appropriate skin cream to prevent drying of skin. Wash hands thoroughly after handling.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Aerosol.
Colour	Colourless.
Odour	Citrus
Initial boiling point and range	60°C @
Flash point	No information available.
Upper/lower flammability or explosive limits	: 1
Vapour pressure	ca. 590 to 1760 kPa @ 45°C
Vapour density	ca. 1.5 at 15°C
Relative density	0.71 @ °C
Auto-ignition temperature	410-580°C
Comments	Information given is applicable to the major ingredient.

9.2. Other information

Other information	Not available.
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Sol-X Power Jet Brake Cleaner (CO2)

Volatile organic compound This product contains a maximum VOC content of 650 g/l.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Stable at normal ambient temperatures and when used as recommended.

10.2. Chemical stability

Stability Avoid the following conditions: Heat, sparks, flames.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Does not decompose when used and stored as recommended.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition. Avoid exposing aerosol containers to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials to avoid Keep away from oxidising materials, heat and flames.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

General information Deliberately concentrating and inhaling the contents of this container is dangerous and can be fatal.

Inhalation In high concentrations, vapours and aerosol mists have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Unconsciousness, possibly death.

Skin contact Skin irritation should not occur when used as recommended. Repeated exposure may cause skin dryness or cracking.

Eye contact Irritating to eyes. Vapour or spray in the eyes may cause irritation and smarting. Repeated exposure may cause chronic eye irritation.

Acute and chronic health hazards Arrhythmia (deviation from normal heart beat). In high concentrations, vapours and aerosol mists have a narcotic effect and may cause headache, fatigue, dizziness and nausea.

Route of exposure Inhalation Skin absorption

Target organs Central nervous system Respiratory system, lungs

Medical symptoms Arrhythmia (deviation from normal heart beat). Narcotic effect. Vapours may cause drowsiness and dizziness.

Toxicological information on ingredients.

PROPAN-2-OL

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,840.0

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Species	Rat
Notes (oral LD₅₀)	Low order of acute toxicity.
<u>Acute toxicity - dermal</u>	
Acute toxicity dermal (LD₅₀ mg/kg)	16.4
Species	Rabbit
Notes (dermal LD₅₀)	Low order of acute toxicity.
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	6 hours.
<u>Skin corrosion/irritation</u>	
Animal data	Not irritating.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Not available.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Negative.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	No evidence of reproductive toxicity in animal studies.
Inhalation	Drowsiness, dizziness, disorientation, vertigo.
Ingestion	No specific health hazards known.
Skin contact	No specific health hazards known.
Eye contact	Irritating to eyes.

HEXANE-norm

<u>Acute toxicity - dermal</u>	
Acute toxicity dermal (LD₅₀ mg/kg)	3,000.0
Species	Rabbit
<u>Acute toxicity - inhalation</u>	
Acute toxicity inhalation (LC₅₀ gases ppmV)	48,000.0
Species	Rat
ATE inhalation (gases ppm)	48,000.0
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	This product may cause skin and eye irritation.
<u>Skin sensitisation</u>	

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Skin sensitisation	Not sensitising.
<u>Carcinogenicity</u>	
Carcinogenicity	Dose level: 0.043, 900, 3000, 9016 ppm, , Rat Dose level: 0.039, 900, 3000, 9018 ppm, , Mouse Based on available data the classification criteria are not met.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Fertility - 5000 ppm, , Rat Permanent testicular damage characterised by loss of germ-cell line.
Reproductive toxicity - development	Teratogenicity: - Dose level:: 200, 1000, 5000 ppm, , Rat, Mouse Teratogenicity:., Maternal toxicity: - NOAEL: 200 - 1000 ppm, ,
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	LOAEL 3000 ppm, Inhalation, Rat

SECTION 12: Ecological Information

Ecotoxicity The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

Ecological information on ingredients.

PROPAN-2-OL

Ecotoxicity The product is not expected to be hazardous to the environment.

12.1. Toxicity

Toxicity Not available.

Ecological information on ingredients.

PROPAN-2-OL

Toxicity Not available.

Acute aquatic toxicity

Acute toxicity - fish LC50, 96 hours: 9640 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC50, : > 1000 mg/l, Daphnia magna 24 hours

Acute toxicity - aquatic plants EC50, 72 hours: > 1000 mg/l, Scenedesmus subspicatus

Acute toxicity - microorganisms EC50, : > 1000 mg/l, Activated sludge

HEXANE-norm

Toxicity Not available.

Acute aquatic toxicity

Acute toxicity - fish LL50, 96 hours: 12.51 mg/l, Oncorhynchus mykiss (Rainbow trout)
LC50, 96 hours: 2.1 -2.98 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates LL50, 48 hours: 21.85 mg/l, Daphnia magna

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Acute toxicity - aquatic plants LL₅₀, 72 hours: 9.29 mg/l, Pseudokirchneriella subcapitata

12.2. Persistence and degradability

Persistence and degradability Not available.

Ecological information on ingredients.

PROPAN-2-OL

Persistence and degradability Not available.

Biodegradation Degradation (%)
- Degradation (%) 95: 21 days

HEXANE-norm

Persistence and degradability Not available.

12.3. Bioaccumulative potential

Bioaccumulative potential Not available.

Ecological information on ingredients.

PROPAN-2-OL

Bioaccumulative potential Not available.

Partition coefficient log Pow: 0.05

HEXANE-norm

Bioaccumulative potential BCF: 501, Bioaccumulation is unlikely.

12.4. Mobility in soil

Mobility Not known.

Ecological information on ingredients.

PROPAN-2-OL

Mobility Not known.

Adsorption/desorption coefficient Water - Koc: ~ 1.1 @ °C

Henry's law constant 0.00000338 atm m³/mol @ 25°C

HEXANE-norm

Mobility Not known.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment Not available.

Ecological information on ingredients.

Sol-X Power Jet Brake Cleaner (CO2)

PROPAN-2-OL

Results of PBT and vPvB assessment Not available.

HEXANE-norm

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects Not available.

Ecological information on ingredients.

PROPAN-2-OL

Other adverse effects Not available.

HEXANE-norm

Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Do not puncture or incinerate, even when empty.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Containers should be thoroughly emptied before disposal because of the risk of an explosion. Empty containers must not be punctured or incinerated because of the risk of an explosion.

SECTION 14: Transport information

General This product is packed in accordance with the Limited Quantity Provisions of CDGCPL2, ADR and IMDG. These provisions allow transport of aerosols of less than 1 litre packed in cartons of less than 30kg gross weight to be exempt from control providing that they are labelled in accordance with the requirements of these regulations to show that they are being transported as Limited Quantities. Aerosols not so packed and labelled must show the following.

14.1. UN number

UN No. (ADR/RID)	1950
UN No. (IMDG)	1950
UN No. (ICAO)	1950
UN No. (ADN)	1950

14.2. UN proper shipping name

Proper shipping name (ADR/RID) AEROSOLS (HYDROCARBONS, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane)

Proper shipping name (IMDG) AEROSOLS (HYDROCARBONS, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane)

Proper shipping name (ICAO) AEROSOLS (HYDROCARBONS, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane)

Proper shipping name (ADN) AEROSOLS (HYDROCARBONS, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane)

Sol-X Power Jet Brake Cleaner (CO₂)

14.3. Transport hazard class(es)

ADR/RID class	2.1
ADR/RID classification code	5F
ADR/RID label	2.1
IMDG class	2.1
ICAO class/division	2.1
ADN class	2.1

Transport labels



14.4. Packing group

Not applicable.

ADN packing group	None
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14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

EmS	F-D, S-U
ADR transport category	2
Tunnel restriction code	(D)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

National regulations	The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended). The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). Control of Substances Hazardous to Health Regulations 2002 (as amended). The Aerosol Dispensers Regulations 2009 (SI 2009 No. 2824).
EU legislation	Commission Regulation (EU) No 453/2010 of 20 May 2010.
Guidance	Workplace Exposure Limits EH40. CHIP for everyone HSG228. Safety Data Sheets for Substances and Preparations. Approved Classification and Labelling Guide (Sixth edition) L131. British Aerosol Manufacturers Code of Practice 7th. Edition 1999

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15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments	Supplemental information added.
Revision date	15/02/2018
Revision	3
SDS number	12712
SDS status	Approved.
Hazard statements in full	H222 Extremely flammable aerosol. H225 Highly flammable liquid and vapour. H229 Pressurised container: may burst if heated. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H361f Suspected of damaging fertility. H373 May cause damage to organs through prolonged or repeated exposure. H411 Toxic to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.