

1. Identification of the substance/preparation and company/undertaking

Product name	Castrol Silicon Spray
SDS no.	452343
Use of the substance/preparation	Lubricant Aerosol. For specific application advice see appropriate Technical Data Sheet or consult our company representative.
Supplier	Castrol (UK) Ltd Wakefield House Pipers Way Swindon Wiltshire SN3 1RE
EMERGENCY TELEPHONE NUMBER	Carechem: +44 (0) 208 762 8322 (24 hours)
E-mail address	MSDSadvice@bp.com

2. Hazards identification

This preparation is classified as dangerous according to Directive 1999/45/EC as amended and adapted.

Physical/chemical hazards	Extremely flammable.
Human health hazards	Irritating to skin. Vapours may cause drowsiness and dizziness.
Environmental hazards	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Additional hazards	Solvent "sniffing" (abuse) or intentional overexposure to vapours can produce serious central nervous system effects, including unconsciousness, and possibly death.

See sections 11 and 12 for more detailed information on health effects and symptoms and environmental hazards.

3. Composition/information on ingredients

Propellant Butane Propane

Chemical name	CAS no.	%	EINECS / ELINCS.	Classification
Low boiling point hydrogen treated naphtha	64742-49-0	50 - 100	265-151-9	F; R11 Xn; R65 Xi; R38 R67 N; R51/53 [1]
Hydrocarbon solvent	Proprietary	20 - 50		F; R11 Xn; R65 Xi; R38 R67 N; R50/53 [1]

See section 16 for the full text of the R-phrases declared above

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] PBT-substance

[4] vPvB-substance

Occupational exposure limits, if available, are listed in section 8.

4. First-aid measures

Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.
Skin contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms appear.
Ingestion	Poisoning very unlikely unless deliberate ingestion of large quantities has occurred. If potentially dangerous quantities of this material have been swallowed, call a physician immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
Notes to physician	Treatment should in general be symptomatic and directed to relieving any effects.

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5. Fire-fighting measures

Extinguishing media

Suitable

In case of fire, use water fog, foam, dry chemical or carbon dioxide extinguisher or spray.

Not suitable

Do not use water jet.

Hazardous decomposition products

Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Unusual fire/explosion hazards

Aerosols may burst if exposed to temperatures above 122°F/50°C.
Extremely explosive in the presence of heat

Special fire-fighting procedures

Use water spray to keep fire-exposed containers cool.

Protection of fire-fighters

Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

6. Accidental release measures

Personal precautions

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurised contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Water polluting material. May be harmful to the environment if released in large quantities.

Large spill

Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill

Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

Handling

Wash thoroughly after handling. Avoid contact with skin and eyes.
Do not spray on a naked flame or any incandescent material. Do not smoke or use matches or lighters during use and until all vapours (odours) have gone.
Product contaminated rags, paper or material used to absorb spillages, represent a fire hazard, and should not be allowed to accumulate. Dispose of safely immediately after use.

Storage

Store and use away from heat, sparks, open flame or any other ignition source.
Store in a cool, well-ventilated area away from incompatible materials and ignition sources.
Pressurised container: protect from sunlight and do not expose to temperature exceeding 50°C. Do not pierce or burn, even after use.

Not suitable

Avoid all possible sources of ignition (spark or flame).

8. Exposure controls/personal protection

Ingredient name

Low boiling point hydrogen treated naphtha

Occupational exposure limits

EH40 (United Kingdom (UK)).

TWA: 1200 mg/m³ 8 hour(s).

Butane

EH40/2005 WELs (United Kingdom (UK)).

STEL: 1810 mg/m³ 15 minute(s). Issued/Revised: 1/1997

STEL: 750 ppm 15 minute(s). Issued/Revised: 1/1997

TWA: 1450 mg/m³ 8 hour(s). Issued/Revised: 1/1997

TWA: 600 ppm 8 hour(s). Issued/Revised: 1/1997

ACGIH TLVs

Butane

ACGIH TLV (United States).

TWA: 1000 ppm 8 hour(s). Issued/Revised: 1/2004

Propane

ACGIH TLV (United States).

TWA: 1000 ppm 8 hour(s). Issued/Revised: 1/2004

For information and guidance, the ACGIH values are included. For further information on these please consult your supplier.

Whilst specific OELs for certain components may be shown in this section, other components may be present in any mist, vapour or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Exposure controls

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Occupational exposure controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits.

All chemicals should be assessed for their risks to health and appropriate control measures put in place to prevent or adequately control exposure. A hierarchy of control measures exists (e.g. elimination, substitution, general ventilation, containment, systems of work, changing the process or activity) that must be considered before use of personal protective equipment. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained. Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards.

The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Personal protective equipment

Respiratory protection

Respiratory protective equipment is not normally required where there is adequate natural or local exhaust ventilation to control exposure.

In case of insufficient ventilation, wear suitable respiratory equipment.

Respiratory protective equipment must be checked to ensure it fits correctly each time it is worn.

Air-filtering respirators, also called air-purifying respirators, will not be adequate under conditions of oxygen deficiency (i.e. low oxygen concentration), and would not be considered suitable where airborne concentrations of chemicals with a significant hazard are present. In these cases air-supplied breathing apparatus will be required.

Provided an air-filtering/air-purifying respirator is suitable, a multiple type of gas filter for organic gases and vapours (boiling point $\leq 65^{\circ}\text{C}$ and $>65^{\circ}\text{C}$) can be used for vapour. Use filter types A with AX or comparable standard.

Provided an air-filtering/air-purifying respirator is suitable, a filter for particulates can be used for mist or fume. Use filter type P or comparable standard.

Hand protection

Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves.

Eye protection

Recommended: nitrile gloves

Safety glasses with side shields.

Skin and body

Use of protective clothing is good industrial practice.

Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

9 . Physical and chemical properties

General information

Appearance

Physical state

Aerosol.

Colour

Colourless.

Odour

Characteristic.

Important health, safety and environmental information

Flash point

Open cup: $<0^{\circ}\text{C}$ ($<32^{\circ}\text{F}$)

Explosion limits

Lower: 0.8%
Upper: 10.9%

Boiling point / range

-44°C (-47°F)

Density

690 kg/m^3 (0.69 g/cm^3) at 20°C

Solubility

Very slightly soluble in water

Partition coefficient (LogKow)

>3

10 . Stability and reactivity

Stability

The product is stable.

Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid

Extremely flammable. Keep away from sources of ignition.

Materials to avoid

Reactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition products

Combustion products may include the following:
carbon oxides

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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11 . Toxicological information

Acute toxicity

☑ Unlikely to cause more than transient stinging or redness if accidental eye contact occurs.

Causes skin irritation.

Unlikely to cause harm if accidentally swallowed in small doses, though larger quantities may cause nausea and diarrhoea.

Exposure to high concentrations can cause dizziness, lightheadedness, headache, nausea and blurred vision. Higher levels may cause unconsciousness.

May be harmful by inhalation if exposure to vapour, mists or fumes resulting from thermal decomposition products occurs.

Chronic toxicity

Chronic effects

No known significant effects or critical hazards.

Effects and symptoms

Eyes

No significant health hazards identified.

Skin

Causes skin irritation.

Inhalation

☑ Harmful if inhaled.

Ingestion

No significant health hazards identified.

12 . Ecological information

Persistence/degradability

Inherently biodegradable

Mobility

Spillages are unlikely to penetrate the soil.

Bioaccumulative potential

This product is not expected to bioaccumulate through food chains in the environment.

Environmental hazards

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Other ecological information

☑ Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

13 . Disposal considerations

Disposal considerations / Waste information

Pressurised container: protect from sunlight and do not expose to temperature exceeding 50°C. Do not pierce or burn, even after use.

Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.

Unused product





European waste catalogue (EWC)

15 01 10* packaging containing residues of or contaminated by dangerous substances

However, deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user.

14 . Transport information

International transport regulations

Regulatory information	UN number	Proper shipping name	Class	PG*	Label	Additional information
ADR/RID Classification	UN1950	AEROSOLS, flammable	2	-		Hazard identification number 23
ADNR Classification	UN1950	AEROSOLS, flammable	2	-		-
IMDG Classification	UN1950	AEROSOLS	2.1	-		Emergency schedules (EmS) F-D,S-U
ICAO/IATA Classification	UN1950	AEROSOLS, flammable	2.1	-		-

PG* : Packing group

UK Emergency Action Code: 2YE

ADR/RID Classification code: 5F




ADNR Classification code: 

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15 . Regulatory information

Classification and labelling have been performed according to EU directives 1999/45/EC and 67/548/EEC as amended and adapted.

Label requirements

Hazard symbol or symbols			
Indication of danger	Extremely flammable	Irritant	Dangerous for the environment
Risk phrases	R12- Extremely flammable. R38- Irritating to skin. R67- Vapours may cause drowsiness and dizziness. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.		
Safety phrases	S2- Keep out of the reach of children. S23- Do not breathe vapour or spray. S46- If swallowed, seek medical advice immediately and show this container or label. S51- Use only in well-ventilated areas. S61- Avoid release to the environment. Refer to special instructions/safety data sheet.		
Additional warning phrases	Pressurised container: protect from sunlight and do not expose to temperature exceeding 50°C. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking. Keep out of the reach of children.		
Other regulations			
Europe inventory	All components are listed or exempted.		
United States inventory (TSCA 8b)	All components are listed or exempted.		
Australia inventory (AICS)	All components are listed or exempted.		
Canada inventory	All components are listed or exempted.		
China inventory (IECSC)	At least one component is not listed.		
Japan inventory (ENCS)	At least one component is not listed.		
Korea inventory (KECI)	At least one component is not listed.		
Philippines inventory (PICCS)	All components are listed or exempted.		

16 . Other information

Full text of R-phrases referred to in sections 2 and 3	R12- Extremely flammable. R11- Highly flammable. R65- Harmful: may cause lung damage if swallowed. R38- Irritating to skin. R67- Vapours may cause drowsiness and dizziness. R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
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History

Date of issue/ Date of revision	24/04/2009.
Date of previous issue	09/04/2008.
Prepared by	Product Stewardship Group

Notice to reader

Indicates information that has changed from previously issued version.

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from us.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken.

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