SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Safety data sheet according to Regulation (EC) 2020/878

Revision date 03/10/2025 **Revision Number** 8.17

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

1.1. Product identifier

Product Name	RS Pro Butane 200ml Gas Torch Refill
Product Code(s)	790-3580, 790-3583
Safety data sheet number	00659
Unique Formula Identifier (UFI)	S2X7-F0U2-Y009-75D3
Pure substance/mixture	Mixture

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

Recommended use	Gas refill
Uses advised against	No specific uses advised against are identified

1.3. Details of the supplier of the safety data sheet

Supplier

RS Components Ltd
Birchington Road
Corby
Northants
NN17 9RS
+44 (0) 845 850 9900
RCustomerServicesUK@rs-components.com

RS Components Ltd
Glenview Industrial Estate
Herberton Road
Rialto
Dublin 12
+353 (0) 1 415 3100
enquiries.ie@rs-components.com

For further information, please contact

E-mail address enquiries.ie@rs-components.com

1.4. Emergency telephone number

Emergency Telephone +44 (0) 1865 407333 (24hr)
+44 1235 239670 (24hr)

Emergency Telephone - §45 - (EC)1272/2008	
Austria	
Belgium	
Denmark	
France	
Ireland	+353 (0)1 809 2166 (08:00 - 22:00)
Italy	
Netherlands	
Norway	
Portugal	
Spain	
Sweden	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable gases	Category 1A - (H220)
Gases under pressure	Liquefied gas - (H280)

2.2. Label elements



Signal word
Danger

Hazard statements
H220 - Extremely flammable gas.
H280 - Contains gas under pressure; may explode if heated.

Precautionary Statements - EU (§28, 1272/2008)
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 - In case of leakage, eliminate all ignition sources.
P410 + P403 - Protect from sunlight. Store in a well-ventilated place.

Additional information
Restricted to professional users.

2.3. Other hazards

Other hazards No information available.

PBT or vPvB properties This product does not contain any substances that are assessed to be a PBT or a vPvB.

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical name	Weight-%	REACH registration number	EC No. (Index No.)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)	Notes
butane (containing < 0.1 % butadiene (203-450-8)) 106-97-8	30-60	No data available	203-448-7	Flam. Gas 1A (H220) Press. Gas (Liq.) (H280)	-	-	-	-
isobutane (containing < 0.1 % butadiene (203-450-8)) 75-28-5	10-30	No data available	200-857-2	Flam. Gas 1A (H220) Press. Gas (Liq.) (H280)	-	-	-	-
propane 74-98-6	10-30	No data available	200-827-9	Flam. Gas 1A (H220) Press. Gas (Liq.) (H280)	-	-	-	-

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate
If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
butane (containing < 0.1 % butadiene (203-450-8)) 106-97-8	No data available	No data available	No data available	No data available	276808.3276
isobutane (containing < 0.1 % butadiene (203-450-8)) 75-28-5	No data available	No data available	No data available	No data available	200000
propane 74-98-6	No data available	No data available	No data available	No data available	200000

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59).

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
Skin contact	In case of contact with liquefied gas, thaw frosted parts with lukewarm water.
Ingestion	Rinse mouth.

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

Symptoms	No information available.
Effects of Exposure	May cause cancer. Mutagenic effects.

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

Note to doctors	Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	Cylinders may rupture under extreme heat. Damaged cylinders should be handled only by specialists. Containers may explode when heated. Ruptured cylinders may rocket.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Contents under pressure. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.
Other information	Refer to protective measures listed in Sections 7 and 8.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Contents under pressure. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from sunlight. Store locked up.

Storage class (TRGS 510) LGK 2A.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
butane (containing < 0.1 % butadiene (203-450-8)) 106-97-8	-	TWA: 800 ppm TWA: 1900 mg/m³ STEL 1600 ppm STEL 3800 mg/m³	TWA: 1000 ppm STEL: 980 ppm STEL: 2370 mg/m³	TWA: 1900 mg/m³	TWA: 600 ppm TWA: 1450 mg/m³ TWA: 10 ppm TWA: 22 mg/m³ STEL: 750 ppm STEL: 1810 mg/m³
isobutane (containing < 0.1 % butadiene (203-450-8)) 75-28-5	-	TWA: 800 ppm TWA: 1900 mg/m³ STEL 1600 ppm STEL 3800 mg/m³	TWA: 1000 ppm STEL: 980 ppm STEL: 2370 mg/m³	TWA: 1800.0 mg/m³	-

propane 74-98-6	-	TWA: 1000 ppm TWA: 1800 mg/m³ STEL 2000 ppm STEL 3600 mg/m³	TWA: 1000 ppm	TWA: 1800.0 mg/m³	-
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
butane (containing < 0.1 % butadiene (203-450-8)) 106-97-8	-	-	TWA: 500 ppm TWA: 1200 mg/m³ STEL: 1000 ppm STEL: 2400 mg/m³	TWA: 800 ppm TWA: 1500 mg/m³ STEL: 500 mg/m³	TWA: 800 ppm TWA: 1900 mg/m³ STEL: 1000 ppm STEL: 2400 mg/m³
isobutane (containing < 0.1 % butadiene (203-450-8)) 75-28-5	-	-	-	TWA: 800 ppm TWA: 1900 mg/m³	TWA: 800 ppm TWA: 1900 mg/m³ STEL: 1000 ppm STEL: 2400 mg/m³
propane 74-98-6	-	-	TWA: 1000 ppm TWA: 1800 mg/m³ STEL: 2000 ppm STEL: 3600 mg/m³	TWA: 1000 ppm TWA: 1800 mg/m³	TWA: 800 ppm TWA: 1500 mg/m³ STEL: 1100 ppm STEL: 2000 mg/m³
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
butane (containing < 0.1 % butadiene (203-450-8)) 106-97-8	TWA: 800 ppm TWA: 1900 mg/m³	TWA: 1000 ppm TWA: 2400 mg/m³	TWA: 1000 ppm TWA: 2400 mg/m³ Peak: 4000 ppm Peak: 9600 mg/m³	TWA: 1000 ppm TWA: 2350 mg/m³	TWA: 2350 mg/m³ STEL: 9400 mg/m³
isobutane (containing < 0.1 % butadiene (203-450-8)) 75-28-5	-	TWA: 1000 ppm TWA: 2400 mg/m³	TWA: 1000 ppm TWA: 2400 mg/m³ Peak: 4000 ppm Peak: 9600 mg/m³	-	-
propane 74-98-6	-	TWA: 1000 ppm TWA: 1800 mg/m³	TWA: 1000 ppm TWA: 1800 mg/m³ Peak: 4000 ppm Peak: 7200 mg/m³	TWA: 1000 ppm TWA: 1800 mg/m³	-
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
butane (containing < 0.1 % butadiene (203-450-8)) 106-97-8	TWA: 1000 ppm STEL: 3000 ppm	-	STEL: 1000 ppm STEL: 2377 mg/m³	TWA: 300 mg/m³ STEL: 300 mg/m³	-
isobutane (containing < 0.1 % butadiene (203-450-8)) 75-28-5	STEL: 3000 ppm	-	STEL: 1000 ppm STEL: 2377 mg/m³	TWA: 100 mg/m³ STEL: 300 mg/m³	-
propane 74-98-6	STEL: 3000 ppm Simple asphyxiant	-	: Simple asphyxiant	TWA: 1000 ppm TWA: 1800 mg/m³ STEL: 300 mg/m³	-
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
butane (containing < 0.1 % butadiene (203-450-8)) 106-97-8	-	-	-	TWA: 250 ppm TWA: 600 mg/m³ STEL: 312.5 ppm STEL: 750 mg/m³	STEL: 3000 mg/m³ TWA: 1900 mg/m³
isobutane (containing < 0.1 % butadiene (203-450-8)) 75-28-5	-	-	-	TWA: 40 ppm TWA: 275 mg/m³ STEL: 60 ppm STEL: 343.75 mg/m³	-
propane 74-98-6	-	-	-	TWA: 500 ppm TWA: 900 mg/m³ STEL: 625 ppm STEL: 1125 mg/m³	TWA: 1800 mg/m³
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
butane (containing < 0.1 % butadiene (203-450-8)) 106-97-8	TWA: 1000 ppm STEL: 1000 ppm	TWA: 700 mg/m³ STEL: 1000 mg/m³	TWA: 1000 ppm TWA: 2400 mg/m³ STEL: 5000 ppm STEL: 12000 mg/m³	TWA: 1000 ppm TWA: 2400 mg/m³ STEL: 4000 ppm STEL: 9600 mg/m³	TWA: 1000 ppm

isobutane (containing < 0.1 % butadiene (203-450-8)) 75-28-5	TWA: 1000 ppm STEL: 1000 ppm	TWA: 700 mg/m³ STEL: 1000 mg/m³	TWA: 1000 ppm TWA: 2400 mg/m³ STEL: 5000 ppm STEL: 12000 mg/m³	TWA: 1000 ppm TWA: 2400 mg/m³ STEL: 4000 ppm STEL: 9600 mg/m³	TWA: 1000 ppm
propane 74-98-6	TWA: 1000 ppm	TWA: 778 ppm TWA: 1400 mg/m³ STEL: 1000 ppm STEL: 1800 mg/m³	-	TWA: 1000 ppm TWA: 1800 mg/m³ STEL: 4000 ppm STEL: 7200 mg/m³	TWA: 1000 ppm

Chemical name	Sweden	Switzerland	United Kingdom
butane (containing < 0.1 % butadiene (203-450-8)) 106-97-8	NGV: 350 mg/m³	TWA: 800 ppm TWA: 1900 mg/m³ STEL: 3200 ppm STEL: 7600 mg/m³	TWA: 600 ppm TWA: 1450 mg/m³ STEL: 750 ppm STEL: 1810 mg/m³
isobutane (containing < 0.1 % butadiene (203-450-8)) 75-28-5	NGV: 350 mg/m³	TWA: 800 ppm TWA: 1900 mg/m³ STEL: 3200 ppm STEL: 7600 mg/m³	-
propane 74-98-6	NGV: 350 mg/m³	TWA: 1000 ppm TWA: 1800 mg/m³ STEL: 4000 ppm STEL: 7200 mg/m³	-

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers

Derived No Effect Level (DNEL) - General Public .

Predicted No Effect Concentration (PNEC) .

8.2. Exposure controls

Engineering controls No information available.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Tight sealing safety goggles.

Hand protection Wear suitable gloves. Wear cold insulating gloves.

Skin and body protection Wear suitable protective clothing. Antistatic boots. Wear fire/flame resistant/retardant clothing.

Respiratory protection Use appropriate respiratory protection. Consult with an industrial hygienist to determine the appropriate respiratory protection for your specific use of this material.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

Environmental exposure controls No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Compressed liquefied gas
Colour	Colourless
Odour	Characteristic
Odour threshold	No information available

Property	**Values**	**Remarks • Method**
Melting point / freezing point	No data available	None known
Boiling point or initial boiling point and boiling range	No data available	None known
Flammability	No data available	None known
Lower and upper explosion limit/flammability limit		None known
Lower explosion limit	No data available	
Upper explosion limit	No data available	
Flash point	-40 °C	CC (closed cup)
Autoignition temperature	No data available	None known
Decomposition temperature		None known
SADT (°C)	No data available	None known
pH	No data available	None known
pH (as aqueous solution)	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Solubility	No data available	None known
Water solubility	No data available	None known
Partition coefficient n-octanol/water (log value)	No data available	None known
Vapour pressure	No data available	None known
Density and/or relative density	No data available	None known
Bulk density	No data available	
Liquid Density	No data available	
Relative vapour density	No data available	None known
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

9.2. Other information

9.2.1. Information with regards to physical hazard classes
No information available

9.2.2. Other safety characteristics
No information available
Sensitivity to mechanical impact Yes

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data
Sensitivity to mechanical impact Yes.
Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Excessive heat.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity Based on available data, the classification criteria are not met.

Numerical measures of toxicity

The following ATE values have been calculated for the mixture

ATEmix (oral)	99,999.00 mg/kg
ATEmix (dermal)	99,999.00 mg/kg
ATEmix (inhalation-gas)	235,249.40 ppm
ATEmix (inhalation-vapour)	99,999.00 mg/L
ATEmix (inhalation-dust/mist)	99,999.00 mg/L

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
butane (containing < 0.1 % butadiene (203-450-8))	-	-	= 658 g/m³ (Rat) 4 h
isobutane (containing < 0.1 % butadiene (203-450-8))	-	-	> 800000 ppm (Rat) 15 min
propane	-	-	> 800000 ppm (Rat) 15 min

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Germ cell mutagenicity Contains a known or suspected mutagen. Classification based on data available for ingredients. May cause genetic defects.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as mutagenic.

Chemical name	European Union
butane (containing < 0.1 % butadiene (203-450-8))	Muta. 1B
isobutane (containing < 0.1 % butadiene (203-450-8))	Muta. 1B
propane	Muta. 1B

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	European Union
butane (containing < 0.1 % butadiene (203-450-8))	Carc. 1A
isobutane (containing < 0.1 % butadiene (203-450-8))	Carc. 1A
propane	Carc. 1A

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT - single exposure Based on available data, the classification criteria are not met.

STOT - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disruption for human health The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity No information available.

12.2. Persistence and degradability No information available.

12.3. Bioaccumulative potential

Chemical name	Partition coefficient	Bioconcentration factor (BCF)	Trophic magnification factor (TMF)
butane (containing < 0.1 % butadiene (203-450-8))	2.31	-	-
isobutane (containing < 0.1 % butadiene (203-450-8))	2.8	1.97	-
propane	1.09	-	-

12.4. Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment This product does not contain any substances that are assessed to be a PBT or a vPvB.

Chemical name	PBT and vPvB assessment
butane (containing < 0.1 % butadiene (203-450-8))	Not PBT/vPvB
isobutane (containing < 0.1 % butadiene (203-450-8))	Not PBT/vPvB
propane	Not PBT/vPvB

12.6. Endocrine disrupting properties The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7. Other adverse effects No information available.

PMT or vPvM properties Based on available data, the classification criteria are not met.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number UN2037
14.2 UN proper shipping name Small receptacles containing gas (gas cartridges) without release device, non-refillable
14.3 Transport hazard class(es) 2.1
14.4 Description UN2037, Receptacles, small, containing gas, 2.1
14.5 Environmental hazards No
14.6 Special precautions for user

Special Provisions A145, A167, A802
ERG Code 10L

IMDG
14.1 UN number or ID number UN2037
14.2 UN proper shipping name Small receptacles containing gas (gas cartridges) without release device, non-refillable
14.3 Transport hazard class(es) 2.1
14.4
Description UN2037, Receptacles, small, containing gas, 2.1
14.5 Environmental hazards No
14.6 Special precautions for user
Special Provisions 191, 277, 303, 327, 344, 959
EmS-No. F-D S-U
Underlined EMS codes indicate additional advice is given in the emergency response procedures
14.7 Maritime transport in bulk according to IMO instruments No information available

RID
14.1 UN number or ID number UN2037
14.2 UN proper shipping name Small receptacles containing gas (gas cartridges) without release device, non-refillable
14.3 Transport hazard class(es) 2.1
14.4
Description UN2037, Receptacles, small, containing gas, 2.1
14.5 Environmental hazards No
14.6 Special precautions for user
Special Provisions 191, 303, 327, 344
Classification code 5F

ADR
14.1 UN number or ID number UN2037
14.2 UN proper shipping name Small receptacles containing gas (gas cartridges) without release device, non-refillable
14.3 Transport hazard class(es) 2.1
14.4
Description UN2037, Receptacles, small, containing gas, 2.1, (D)
14.5 Environmental hazards No
14.6 Special precautions for user
Special Provisions 191, 303, 327, 344
Classification code 5F
Tunnel restriction code (D)

ADN
14.1 UN number or ID number UN2037
14.2 UN proper shipping name Small receptacles containing gas (gas cartridges) without release device, non-refillable
14.3 Transport hazard class(es) 2.1
14.4
Description UN2037, Receptacles, small, containing gas, 2.1
14.5 Environmental hazard No
14.6 Special precautions for user
Special Provisions 191, 303, 327, 344
Classification code 5F
Ventilation VE01
Equipment Requirements PP, EX, A

SECTION 15: Regulatory information

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

Germany

Water hazard class (WGK) non-hazardous to water (nwg)

Chemical Prohibition Ordinance (ChemVerbotsV)
This product is subject to requirements and restrictions regarding handling and delivery.

TRGS 905 Not applicable

Ordinance on the Incentive Tax on Volatile Organic Compounds (OVOC) SR 814.018 Not applicable
Storage of Hazardous Material Not applicable
WPO (GSchV) SR 814.201; WPA (GSchG) SR 814.20 Not applicable
Major Accidents Ordinance SR 814.012 Not applicable

European Union
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:
This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
butane (containing < 0.1 % butadiene (203-450-8)) 106-97-8	28. 29. 75.	-
isobutane (containing < 0.1 % butadiene (203-450-8)) 75-28-5	28. 29. 75.	-

Persistent Organic Pollutants
Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)
P2 - FLAMMABLE GASES

Ozone-depleting substances (ODS) regulation (EC) 2024/590
Not applicable.

Explosives Precursors Marketing and Use (2019/1148)
Not applicable.

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDSL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status

NZIoC	Contact supplier for inventory compliance status
TCSI	Contact supplier for inventory compliance status

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing Chemicals Inventory
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals
TCSI - Taiwan Chemical Substance Inventory

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely
P381 - In case of leakage, eliminate all ignition sources
P403 - Store in a well-ventilated place
P410 + P403 - Protect from sunlight. Store in a well-ventilated place

Key or legend to abbreviations and acronyms used in the safety data sheet
List may include phrases which are not applicable to this product

ACGIH	American Conference of Governmental Industrial Hygienists
AIDII	Italian Association of Industrial Hygienists
ADN	Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)
AIIC	Australian Inventory of Industrial Chemicals
ATE	Acute Toxicity Estimate
ASTM	American Society for the Testing of Materials
bar	Biological Reference Values for Chemical Compounds in the Work Area
BAT	Biological tolerance values for occupational exposure
BEL	Biological exposure limits
bw	Body weight
Ceiling	Maximum limit value
CLP	Classification, Labelling and Packaging Regulation; Regulation (EC) No 1272/2008
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DFG	German Research Foundation
DOT	Department of Transportation (United States)
DSL	Domestic Substances List (Canada)
ECHA	European Chemicals Agency
EC Number	European Community number
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
EPA	U.S. Environmental Protection Agency
EWC	European Waste Codes
GHS	Globally Harmonized System
IARC	International Agency for Research on Cancer

IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO	International Civil Aviation Organisation
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Organisation for Standardisation
KECI	Korean Existing Chemicals Inventory
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MAK	Maximum Concentration at the Workplace
MAL	Measuring Technical Hygienic Air Needs
MARPOL	International Convention for the Prevention of Pollution from Ships
MDLPS	Ministry of Labour and Social Policy
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOELR	No Observable Effect Loading Rate
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Cooperation and Development
OEL	Occupational exposure limits
PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances
PMT	Persistent, Mobile and Toxic
PPE	Personal protective equipment
QSAR	Quantitative Structure Activity Relationship
REACH	Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)
RID	Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)
SADT	Self-Accelerating Decomposition Temperature
SAR	Structure-activity relationship
SDS	Safety Data Sheet
SL	Surface Limit
STEL	Short Term Exposure Limit
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
SVHC	Substance of very high concern
TCSI	Taiwan Chemical Substance Inventory
TDG	Transport of Dangerous Goods (Canada)
TRGS	Technical Rule for Hazardous Substances
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
UN	United Nations
VOC	Volatile organic compounds
vPvB	Very Persistent and Very Bioaccumulative
vPvM	Very Persistent and Very Mobile
As	Allergenic substance
C	Carcinogen
DS	Dermal Sensitizer
Ot	Ototoxicant
pOt	Ototoxicant - potential to cause hearing disorders
PS	Photosensitiser
RS	Respiratory Sensitiser
S	Sensitiser

poS	Sensitizer - capable of causing occupational asthma
Sa	Simple asphyxiant
Sd	Skin designation
pSd	Skin designation - potential for cutaneous absorption
Sdv	Skin designation - vacated
Sk	Skin notation
dSk	Skin notation - danger of cutaneous absorption
pSk	Skin notation - potential for cutaneous absorption

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method
Flammable gases	On basis of test data
Gases under pressure	On basis of test data

Key literature references and sources for data used to compile the SDS
U.S. Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
U.S. Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications
International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program
International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set
United Nations World Health Organization (WHO)

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Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)
Disclaimer
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End of Safety Data Sheet