SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.

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

1.1 Product identifier

Product name: Rivolta S.L.X. Rapid Spray

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

Identified uses: Solvent-based cleaner

Uses advised against: No uses advised against identified.

1.3 Details of the supplier of the safety data sheet

Manufacturer / Supplier

Bremer & Leguil GmbH
Am Burgacker 30 - 42
47051 Duisburg / Germany
info@bremer-leguil.de

Telephone: +49 (0)203 / 9923-0

Contact Person: Bremer & Leguil GmbH - Product Safety Management

E-mail: product-safety-management@bremer-leguil.de

1.4 Emergency telephone number:

+49 (0) 6131 19240 (Giftinformationszentrum Mainz)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product has been classified and labelled as hazardous according to regulation (EU) 1272/2008 (CLP).

Classification according to Regulation (EC) No 1272/2008 as amended.

Physical Hazards

Aerosols	Category 1	H222: Extremely flammable aerosol. H229: Pressurized container: May burst if heated.

Health Hazards

Serious eye irritation	Category 2	H319: Causes serious eye irritation.
Specific Target Organ Toxicity - Single Exposure	Category 3	H336: May cause drowsiness or dizziness.
Aspiration Hazard	Category 1	H304: May be fatal if swallowed and enters air-ways.

Hazard summary

Physical Hazards: Flammable aerosol.

Health Hazards

Inhalation: Has a narcotic effect.

Skin Contact: At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.

Ingestion: If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

2.2 Label Elements

Contains: Hydrocarbons, low viscous
Isopropyl alcohol

Signal Words: Danger

Hazard Statement(s):
H222: Extremely flammable aerosol.
H229: Pressurized container: May burst if heated.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.

Precautionary Statements

General information:
P102: Keep out of reach of children.

Prevention:
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.
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical advice/attention.

Storage:
P410+P412: Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.

Supplemental label information
EUH066: Repeated exposure may cause skin dryness or cracking.

2.3 Information on other hazards
By handling of mineral oil products and chemical products no particular hazard is known when normal precautions (item 7) and personal protective equipment (item 8) are kept. The product may not be released into the environment without control.

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

General information: Mixture of components with propellant in aerosol can.

Chemical name	Identifier	Concentration *	REACH Registration No.	Notes
Propane	EINECS: 200-827-9	0% - <100,00%	01-2119486944-21	
Butane	EINECS: 203-448-7	0% - <100,00%	01-2119474691-32	
Isobutane (<0,1% 1,3-butadiene)	EINECS: 200-857-2	0% - <100,00%	01-2119485395-27	
Ethanol	EINECS: 200-578-6	20,00% - <50,00%	01-2119457610-43	
Hydrocarbons, low viscous	EC: 927-241-2	10,00% - <25,00%	01-2119471843-32	
Isopropyl alcohol	EINECS: 200-661-7	10,00% - <20,00%	01-2119457558-25	

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.

Classification

Chemical name	Identifier	Classification	
Propane	EINECS: 200-827-9	CLP:	Flam. Gas 1A;H220, Press. Gas Compr. Gas;H280
Butane	EINECS: 203-448-7	CLP:	Flam. Gas 1A;H220, Press. Gas Compr. Gas;H280
Isobutane (<0,1% 1,3-butadiene)	EINECS: 200-857-2	CLP:	Flam. Gas 1A;H220, Press. Gas Compr. Gas;H280
Ethanol	EINECS: 200-578-6	CLP:	Flam. Liq. 2;H225, Eye Irrit. 2;H319
Hydrocarbons, low viscous	EC: 927-241-2	CLP:	Flam. Liq. 3;H226, Asp. Tox. 1;H304, STOT SE 3;H336, Aquatic Chronic 3;H412 EUH066
Isopropyl alcohol	EINECS: 200-661-7	CLP:	Flam. Liq. 2;H225, Eye Irrit. 2;H319, STOT SE 3;H336

CLP: Regulation No. 1272/2008.

specific concentration limit

Chemical name	Identifier	specific concentration limit	Hazard class	Hazard Category	Hazard statements
Ethanol	EINECS: 200-578-6	>= 50 %	Serious eye irritation	2	H319

For the wording of the listed hazard statements refer to section 16.

SECTION 4: First aid measures

General: Instantly remove any clothing soiled by the product.

4.1 Description of first aid measures

Inhalation: Supply fresh air; consult doctor in case of symptoms.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

Skin Contact: Wash with soap and water.

Ingestion:	Call a physician or poison control center immediately. Rinse mouth. Never give liquid to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do NOT induce vomiting.
4.2 Most important symptoms and effects, both acute and delayed:	Causes serious eye irritation. If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately. Dizziness Freeze burns
4.3 Indication of any immediate medical attention and special treatment needed	Get medical attention if symptoms occur.

SECTION 5: Firefighting measures

General Fire Hazards:	Use water spray to keep fire-exposed containers cool. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

5.1 Extinguishing media

Suitable extinguishing media:	CO_2, fire extinguishing powder or fog like water spraying. Extinguish larger fires with alcohol resistant foam or spray water with suitable surfactant added
Unsuitable extinguishing media:	Water with a full water jet.
5.2 Special hazards arising from the substance or mixture:	Danger of explosion with aerosol cans.

5.3 Advice for firefighters

Special fire-fighting procedures:	Move container from fire area if it can be done without risk. Dispose of fire debris and contaminated fire fighting water inaccordance with official regulations. Collect contaminated fire fighting water separately. It must not enter drains.
Special protective equipment for fire-fighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:	Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind. Keep away from sources of ignition - No smoking.
6.2 Environmental Precautions:	Avoid release to the environment. Environmental manager must be informed of all major spillages. Prevent further leakage or spillage if safe to do so. Do not allow to enter drainage system, surface or ground water.
6.3 Methods and material for containment and cleaning up:	Scrape up spillage or absorb with absorbing material. Stop the flow of material, if this is without risk. Dispose of the material collected according to regulations.

6.4 Reference to other sections:

See Section 8 of the SDS for Personal Protective Equipment. See Section 7 for information on safe handling See Section 13 for information on disposal.

Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk.

SECTION 7: Handling and storage:

7.1 Precautions for safe handling:

Avoid contact with eyes. Wash hands thoroughly after handling. Do not eat, drink or smoke when working with the product. Take usual precautions when handling mineral oil products or chemical products. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Avoid contact with flame and heat source, prevent contact with direct sunlight Use only in well-ventilated areas.

7.2 Conditions for safe storage, including any incompatibilities:

Store locked up. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Local regulations concerning handling and storage of waterpolluting products have to be followed. Local regulations for the storage and handling of aerosol cans and flammable liquids have to be kept. Keep away from heat/sparks/hot surfaces. - No smoking.

7.3 Specific end use(s):

Not applicable

Storage Class:

2 B, Aerosols

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
Ethanol	AGW	200 ppm 380 mg/m3	Germany. TRGS 900, Occupational Exposure Limits (AGW), as amended (06 2018)
Hydrocarbons, low viscous	AGW	600 mg/m3	Germany. TRGS 900, Occupational Exposure Limits (AGW), as amended
Butane	AGW	1.000 ppm 2.400 mg/m3	Germany. TRGS 900, Occupational Exposure Limits (AGW), as amended (01 2012)
Isopropyl alcohol	AGW	200 ppm 500 mg/m3	Germany. TRGS 900, Occupational Exposure Limits (AGW), as amended (01 2012)
Propane	AGW	1.000 ppm 1.800 mg/m3	Germany. TRGS 900, Occupational Exposure Limits (AGW), as amended (01 2012)

Biological Limit Values

Chemical name	Exposure Limit Values	Source
Isopropyl alcohol (acetone: Sampling time: End of shift.)	25 mg/l (Blood)	DE BAT (09 2013)

Isopropyl alcohol (acetone: Sampling time: End of shift.)	25 mg/l (Urine)	DE BAT (09 2013)

8.2 Exposure controls

Appropriate engineering controls: Provide adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

General information: Wash hands before breaks and after work. Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. The usual precautionary measures should be adhered to inhandling the chemicals or the mineral oil products.

Eye/face protection: Avoid contact with skin and eyes. Goggles/face shield are recommended. If risk of splashing, wear safety goggles or face shield.

Skin protection

Hand Protection: Material: Nitrile butyl rubber (NBR).
Min. Breakthrough time: >= 480 min
Recommended thickness of the material: >= 0,38 mm

Avoid long-term and repeated skin contact. Suitable gloves can be recommended by the glove supplier. Use skin protection cream for preventive skin protection. Protective gloves, where permitted in acc. to safety directions. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Other: Do not carry cleaning cloths impregnated with the product in trouser pockets. Wear suitable protective clothing.

Respiratory Protection: Do not breathe dust/fume/gas/mist/vapors/spray. Provide adequate ventilation. In case of inadequate ventilation wear respiratory protection. Filter AX/P2.

Thermal hazards: Not known.

Hygiene measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

Environmental Controls: No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state:	Aerosols
Form:	Aerosols
Color:	Colorless

Odor:	Characteristic
pH:	substance/mixture is non-soluble (in water)
Freezing point:	not determined
Boiling Point:	78 °C
Flash Point:	< -60 °C (DIN EN ISO 2719)
Evaporation Rate:	Not applicable for mixtures
Flammability (solid, gas):	not determined
Flammability Limit - Upper (%)–:	Not applicable for mixtures
Flammability Limit - Lower (%)–:	Not applicable for mixtures
Vapor pressure:	Not applicable for mixtures
Relative vapor density:	Not applicable for mixtures
Density:	0,77 g/cm3 (15 °C) (DIN 51757)
Solubility(ies)	
Solubility in Water:	partly soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	Not applicable for mixtures
Autoignition Temperature:	not determined
Decomposition Temperature:	not determined
Flow time	Value not relevant for classification
Explosive properties:	Value not relevant for classification
Oxidizing properties:	Value not relevant for classification
Particle characteristics:	Not applicable
9.2 Other information	No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity:	Stable under normal use conditions.
10.2 Chemical Stability:	Stable under normal use conditions.
10.3 Possibility of hazardous reactions:	Stable under normal use conditions.
10.4 Conditions to avoid:	Stable under normal use conditions.
10.5 Incompatible Materials:	Strong oxidizing substances. Strong acids. Strong bases.
10.6 Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

SECTION 11: Toxicological information

Information on likely routes of exposure

Inhalation:	No data available.
Ingestion:	No data available.
Skin Contact:	No data available.
Eye contact:	Causes eye irritation.

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

Acute toxicity

Oral

Product:	Not classified for acute toxicity based on available data.

Specified substance(s)

Ethanol	LD 50 (Rat): > 6.200 mg/kg
Hydrocarbons, low viscous	LD 50 (Rat): > 5.001 mg/kg (OECD 401)
Isopropyl alcohol	LD 50 (Rat): 4.570 mg/kg

Dermal

Product:	Not classified for acute toxicity based on available data.

Specified substance(s)

Ethanol	LD 50 (Rabbit): > 20.000 mg/kg (OECD 402)
Hydrocarbons, low viscous	LD 50 (Rabbit): > 5.001 mg/kg (OECD 402)
Isopropyl alcohol	LD 50 (Rabbit): 13.400 mg/kg

Inhalation

Product:	Not classified for acute toxicity based on available data.

Specified substance(s)

Butane	LC 50 (Rat, 4 h): 658 mg/l Gas
Isopropyl alcohol	LC 50 (Rat, 4 h): 30 mg/l

Skin Corrosion/Irritation:

Product:	Based on available data, the classification criteria are not met.

Specified substance(s)

Hydrocarbons, low viscous	OECD 404 Prolonged or repeated contact: Slightly irritating.

Serious Eye Damage/Eye Irritation:

Product:	Based on available data, the classification criteria are met.

Respiratory or Skin Sensitization:

Product:	Skin sensitizer: Based on available data, the classification criteria are not met. Respiratory sensitizer: Based on available data, the classification criteria are not met.

Specified substance(s)

Hydrocarbons, low viscous	No sensitizing effect (guinea pig); OECD 406

Germ Cell Mutagenicity
Product: Based on available data, the classification criteria are not met.

Carcinogenicity
Product: Based on available data, the classification criteria are not met.

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

Specific Target Organ Toxicity - Single Exposure
Product: Based on available data, the classification criteria are met.

Specific Target Organ Toxicity - Repeated Exposure
Product: Based on available data, the classification criteria are not met.

Aspiration Hazard
Product: May be fatal if swallowed and enters airways.

11.2 Information on other hazards

Endocrine disrupting properties
Product: 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.

SECTION 12: Ecological information

12.1 Toxicity

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

Fish
Specified substance(s)

Propane	LC 50 (Fish, 96 h): > 1.000 mg/l
Isobutane (<0,1% 1,3-butadiene)	LC 50 (Fish, 96 h): 28 mg/l
Ethanol	LC 50 (Fish, 96 h): > 2.000 mg/l (OECD 203)
Hydrocarbons, low viscous	LC 50 (Fish, 96 h): > 10 - 30 mg/l
Isopropyl alcohol	LC 50 (Fish, 96 h): 9.640 mg/l

Aquatic Invertebrates
Specified substance(s)

Isobutane (<0,1% 1,3-butadiene)	EC 50 (Water Flea, 48 h): 16,3 mg/l
Ethanol	LC 50 (Water Flea, 48 h): 5.012 mg/l

Hydrocarbons, low viscous	EC 50 (Water Flea, 48 h): > 22 - 46 mg/l
Isopropyl alcohol	LC 50 (48 h): 1.400 mg/l

Chronic ToxicityProduct: Based on available data, the classification criteria are not met.

Aquatic Invertebrates
Specified substance(s)

Ethanol	NOEC (Water Flea, 10 d): 9,6 mg/l

Toxicity to Aquatic Plants
Specified substance(s)

Isobutane (<0,1% 1,3-butadiene)	EC 50 (Alga, 72 h): 8,6 mg/l
Ethanol	EC 50 (Alga, 72 h): 275 mg/l (OECD 201) NOEC (Alga, 7 d): 208 mg/l (OECD 201)
Hydrocarbons, low viscous	EC 50 (Alga, 72 h): > 1.000 mg/l
Isopropyl alcohol	LC 50 (Alga, 72 h): > 100 mg/l

12.2 Persistence and Degradability

Biodegradation
Product: Not applicable for mixtures
Specified substance(s)

Ethanol	> 70 % (5 d, OECD 301D) Readily biodegradable
Hydrocarbons, low viscous	89 % (28 d) The product is easily biodegradable.

12.3 Bioaccumulative potential
Product: Not applicable for mixtures

12.4 Mobility in soil:
Product: Not applicable for mixtures

12.5 Results of PBT and vPvB assessment: The product does not contain any substances fulfilling the PBT/vPvB criteria.

12.6 Endocrine disrupting properties

Product: 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 data available.

Water Hazard Class (WGK): WGK 1: slightly water-endangering.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

General information: Dispose in accordance with all applicable regulations.

Disposal methods: Discharge, treatment, or disposal may be subject to national, state, or local laws.

European Waste Codes

16 05 04*: Gases in pressure containers (including halons) containing hazardous substances.

SECTION 14: Transport information

ADR/RID

14.1 UN number or ID number:	UN 1950
14.2 UN Proper Shipping Name:	AEROSOLS
14.3 Transport Hazard Class(es)	
Class:	2
Label(s):	2.1
Hazard No. (ADR):	–
Tunnel restriction code:	(D)
14.4 Packing Group:	–
14.5 Environmental hazards:	–
14.6 Special precautions for user:	–

IMDG

14.1 UN number or ID number:	UN 1950
14.2 UN Proper Shipping Name:	AEROSOLS
14.3 Transport Hazard Class(es)	
Class:	2.1
Label(s):	2.1
EmS No.:	F-D, S-U
14.3 Packing Group:	–
14.5 Environmental hazards:	–
14.6 Special precautions for user:	–

IATA

14.1 UN number or ID number:	UN 1950
14.2 Proper Shipping Name:	Aerosols, flammable
14.3 Transport Hazard Class(es):	
Class:	2.1
Label(s):	2.1
14.4 Packing Group:	–
14.5 Environmental hazards:	–
14.6 Special precautions for user:	–

14.7 Maritime transport in bulk according to IMO instruments: Not applicable.

SECTION 15: Regulatory information

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

EU Regulations

EU. Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex I, Controlled Substances: none

EU. Regulation 2019/1021/EU on persistent organic pollutants (POPs) (recast), as amended: none

National Regulations

Water Hazard Class (WGK): WGK 1: slightly water-endangering.

15.2 Chemical safety assessment: No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Revision Information: Vertical lines in the margin indicate an amendment.

Wording of the H-statements in section 2 and 3

EUH066	Repeated exposure may cause skin dryness or cracking.
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H229	Pressurized container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.

Other information: The classification complies with the current EU lists; however, it has been supplemented with expert literature information and information provided by/about our company. The following evaluation methods were used: - On the basis of test data - Calculation Method - Bridging Principle "Substantially similar mixtures" - Expert Judgement

Revision Date: 02.12.2022

Disclaimer:

The data contained in this safety data sheet are based on our current knowledge and experience and are given to the best of our knowledge and belief. It characterizes the product only with regard to safety requirements for handling, transport and disposal. The data do not describe the product's properties (tech. product specification). Neither should any agreed property nor the suitability of the product for any specific technical application be deduced from the data contained in this safety data sheet. Modifications on this document are not allowed. The data are not transferable to other products. In the case of mixing the product with other products or in the case of processing, the data in this safety data sheet are not necessarily valid for the new-made material. It is the responsibility of the recipient of the product to observe federal, state and local law. Please contact us to obtain up-to-date safety data sheets. This document was issued electronically and has no signature.