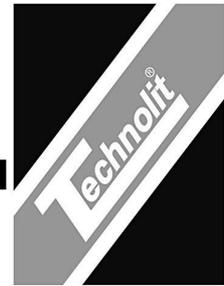


SICHERHEITSDATENBLATT MATERIAL SAFETY DATA SHEET

Der Werkstattexperte



According to 1907/2006/EC, Article 31

Revision (Printing Date): 30-01-2015

Page 1/6

Perlschutz-Spray
Pearl protection spray

Art.-No.: 820000

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

Product identifier / trade-name: **Perlschutz-Spray**
Pearl protection spray

Relevant identified uses of the substance or mixture and uses advised against: Grease and silicone free welding protection spray

Manufacturer / supplier: Technolit GmbH
Industriestr. 8
Tel.: ++49 (0) 6648 / 69-0
36137 Großenlüder
Fax: ++49 (0) 6648 / 69-569
Monday - Thursday: 7.15 am – 16.00 pm
Friday: 7.15 am – 14.00 pm
E-Mail: info@technolit.de

Informing department: Quality management
Tel.: ++49 (0) 6648 / 69-0
Giftnotruf Berlin (German Regulation): Tel.: ++49 (0) 30 / 30686 790

SECTION 2 Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:
GHS02

H222-H229

Flam. Aerosol 1
Extremely flammable aerosol.
Pressurized container: May burst if heated.

GHS07

H315

Skin Irrit. 2
Causes skin irritation.

GHS07

H336

STOT SE 3
May cause drowsiness or dizziness.
Aquatic Chronic 3

H412

Harmful to aquatic life with long lasting effects.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC:
Xi-Irritant.

R38

Irritating to skin.

F+-Extremely flammable.

R12

Extremely flammable.

R52/53

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

R67

Vapours may cause drowsiness and dizziness.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
Warning! Pressurized container.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS02 GHS07

Hazard-determining components of labelling:

Hazard statements:

H222-H229

Hydrocarbons, C5-C7 n-alkanes, isoalkanes, <5% n-hexane

H315

Extremely flammable aerosol.
Pressurized container: May burst if heated.

H336

Causes skin irritation.
May cause drowsiness and dizziness.

H412

Harmful to aquatic life with long lasting effects.

Precautionary statements:

P102

Keep out of reach of children.

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.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards:	PBT: Not applicable.
Results of PBT and vPvB assessment:	vPvB: Not applicable.

SECTION 3 Composition/information on ingredients

Chemical characterization: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS-No Index-number:	EINECS-No EG-No	Description / chemical name	Amount (%)	Classification according Regulation (EC) No 1272/2008 (CLP)	Classification according 67/548/EEC
106-97-8 601-004-00-0 64742-49-0	203-448-7	Butane	50-100%	Flam. Gas 1; H220 Press. Gas; H280	F+ R12
	922-114-8	Hydrocarbons, C5-C7 n-alkanes, isoalkanes, <5% n-hexane	20-<25%	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Aquatic Chronic 2; H411 Skin Irrit. 2; H315 STOT SE 3; H336	F-Xi-N-Xn R11-38-51/53-65-67
74-98-6 601-003-00-5	200-827-9	Propane	10-<20%	Flam. Gas 1; H220 Press. Gas; H280	F+ R12
75-28-5 601-004-00-0	200-857-2	Isobutane	0,5-<2,5%	Flam. Gas 1; H220 Press. Gas; H280	F+ R12

Additional information: For the wording of the listed R-/H-phrases refer to section 16.

SECTION 4 First aid measures

Description of first aid measures:

After inhalation:	In case of unconsciousness place patient stably in side position for transportation. Supply fresh air; consult doctor in case of complaints.
After skin contact:	Wash with soap and water.
After eye contact:	Rinse opened eye for several minutes under running water.
After swallowing:	Not applicable, as aerosol.
Information for doctor:	Show can or label.
Most important symptoms/effects, acute and delayed:	No further relevant information available.
Indication of immediate medical attention and special treatment:	No further relevant information available.

SECTION 5 Fire fighting measures

Extinguishing media:	Suitable: CO ₂ , powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
	Unsuitable: Water with full jet.
Special hazards caused by the substance or preparation:	No further relevant information available.
Special protective equipment and precautions for firefighters:	Immediately remove intact cans out of hazard area. If applicable cool with water, as burst hazard. Wear self-contained respiratory protective device. Wear full protection suit.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Wear protective equipment. Keep unprotected persons away.
Environmental precautions:	Do not allow to enter sewers/ surface or ground water.
Methods and materials for containment and cleaning up:	Ensure adequate ventilation. Collect with liquid absorbing material and proceed according to local waste disposal regulations.
Additional information:	Keep away from sources of ignition – no smoking.
Reference to other sections:	See section 7 for information on safe handling. See section 8 for information on personal protection equipment. See section 13 for disposal information.

SECTION 7 Handling and storage

Handling:	
Information for safe handling:	Ensure good ventilation/exhaustion at the workplace. Handle receptacle with care. Observe warnings.
Precautions against fire and explosion:	Keep ignition sources away – do not smoke. Protect against electrostatic charges.

Storage:**Conditions for safe storage, including any incompatibilities**

Requirements to be met by storerooms and containers:	Observe official regulations on storing packaging with pressurized containers. Store in a cool and dry location.
Information about storage in one common storage facility:	Not required.
Information about storage conditions:	Store in cool, dry conditions in well sealed receptacles. Protect from heat and direct sunlight.
Storage class: (German Regulation)	2B
Specific applications:	No further relevant information available.

SECTION 8 Exposure controls / personal protection

Control parameter**Ingredients with critical values that require monitoring at the workplace**

CAS-No	Substance name	WEL ()	
		Short-term value:	Long-term value:
106-97-8	Butane	1810 mg/m ³ , 750 ppm	1450 mg/m ³ , 600 ppm Carc (if more than 0,1 % of buta-1,3-diene)

German Regulation – AGW

CAS-No.:	Substance name	Arbeitsplatzgrenzwert:
106-97-8	Butane	2400 mg/m ³ , 1000 ml/m ³ 4(II); DFG
74-98-6	Propane	1800 mg/m ³ , 1000 ml/m ³ 4(II); DFG
75-28-5	Isobutane	2400 mg/m ³ , 1000 ml/m ³ 4(II); DFG

Additional information:

The lists that were valid during the compilation were used as basis.

WEL-TWA = Workplace Exposure Limit – Long-term exposure limit [8-hour TWA (=time weighted average) reference period] | AGW = Arbeitsplatzgrenzwert (workplace limit value, Germany) | WEL-STEL = Workplace Exposure Limit – Short-term exposure limit (15-minutes reference period) | BMGV = Biological Monitoring Guidance Value | BGW = Biologischer Grenzwert (biological limit value, Germany) | Sen = Capable of causing occupational asthma. | Sk = Can be absorbed through skin. | Carc = Capable of causing cancer and/or heritable genetic damage.

Limits and monitoring of exposure:	Technical measures and the application of adequate working processes/methods take priority over personal protective equipment.
Additional information about design of technical systems:	No further data; see section 7.
Recommended monitoring procedures:	Air monitoring in confined areas to determine the efficiency of the ventilation and/or the need for the use of respiratory protective equipment according to DIN EN 689. ("Work place atmosphere: Instructions to determine the inhalative exposure of chemical substances for comparison limits and measurements strategy.")

Personal protective equipment

General protective and hygienic measures:	The personal protective equipment depends on the concentration and the quantity of the hazardous ingredients and has to be adapted to the workplace. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale aerosol. Do not eat, drink and smoke at work. Avoid contact with the skin. Avoid contact with eyes and skin.
Breathing equipment:	Use outside or in well-ventilated areas. If required use respiratory protection device. Half-face respirator: FFP2 [The wearing of breathing equipment, except for self-contained hoods/helmets, is not allowed to be a permanent safety measure. The time limit has to be determined by a risk-assessment through an occupational health practitioner. Observe the regulation of BGR 190 (German)].
Protection of hands:	If required use protective gloves. <u>Material of gloves:</u> Nitrile rubber, NBR <u>Recommended thickness of the material:</u> ≥ 0,4 mm <u>Penetration time of the glove material:</u> The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
Eye protection:	Do not spray in eyes. If required use tight-fitting goggles.
Body protection:	If used according to specifications no body protection necessary.

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties**Appearance**

Form: AEROSOL	Color: white	Smell: solvent-like
pH-value:	Not applicable.*	
Boiling point / boiling range:	Not applicable, as aerosol.*	°C
Flash point:	Not applicable, as aerosol.*	°C
Flammability (solid, gaseous):	Extremely flammable.	
Self-igniting:	Product is not self-igniting.	
Danger of explosion:	Protect from sunlight and do not expose to temperatures exceeding 50°C, otherwise burst hazard. Formation of explosive vapour/air mixtures.	
Minimum limit of explosion:	1,0	Vol. %
Maximum limit of explosion:	10,9	Vol. %
Vapour pressure at 20°C:	4,0	bar
		Internal pressure of can

Vapour pressure at 50°C:	7,0	bar	Internal pressure of can
Density at 20°C:	0,63	g/cm ³	
Solubility in/ miscibility with water:	Insoluble.		
Segregation coefficient (n-octanol/water):	Not determined.		
Viscosity (dynamic/kinematic):	Not determined.		
Solvent content:			
Organic solvents:	90,8	%	
VOC (EC):	582	g/l	(92,82%)
Solids content:	7,2	%	

Additional information: No further relevant information available.
 * The finished mixture in an aerosol container is formed after addition of propellant.
 Several details are not measurable in an hermetic closed, pressurized container.

SECTION 10 Stability and reactivity

Reactivity: If used and stored according to specifications no reactions known.
 Chemical stability: The product is chemically stable under normal conditions.
 Thermal decomposition: No decomposition if used according to specifications.
 Conditions to avoid: No information available.
 Possibility of hazardous reactions: No dangerous reactions known.
 Incompatible materials: No further relevant information available.
 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11 Toxicological information

Information on toxicological effects

Acute toxicity:

64742-49-0 hydrocarbons, C5-C7 n-alkanes, isoalkanes, <5% n-hexane	
Oral LD50	> 2000 mg/kg (rat)
Dermal LD50	> 2000 mg/kg (rabbit)
Inhalative LC50/4h	>5 mg/l (rat)

Primary irritant effect - on the skin: Irritant to skin and mucous membranes.
 Primary irritant effect - on the eye: No irritant effect.
 Sensitization: No sensitizing effects known.
 Repeated dose toxicity: No data of mixture / raw material available.
 Toxicokinetics, metabolism and distribution: No data of mixture / raw material available.
 Carcinogenicity: No data of mixture / raw material available.
 Mutagenicity: No data of mixture / raw material available.
 Toxicity for reproduction: No data of mixture / raw material available.
 Additional information: The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version: Irritant.

SECTION 12 Ecological information

Toxicity

Aquatic toxicity: No further relevant information available.
 Persistence and degradability: Do not allow to enter sewers/ surface or ground water. Product is not soluble in water.
 Behaviour in environment systems:
 Bioaccumulative potential: No further relevant information available.
 Mobility in soil: No further relevant information available.
 Ecotoxicological effects:
 Remark: Harmful to fish.
 Water hazard class (German regulation): WGK 2 (self-assessment) – hazardous for water
 Results of PBT and vPvB assessment: PBT: Not applicable.
 vPvB: Not applicable.
 Other adverse effects: Harmful to aquatic organisms. Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.

SECTION 13 Disposal considerations

Product:

Recommendation: Container with rest content must not be disposed together with household garbage. Do not allow product to reach sewage system.
 European waste catalogue: **15 00 00** WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED.
15 01 00 Packaging (including separately collected municipal packaging waste)
15 01 04 Metallic packaging
15 01 10 Packaging containing residues of or contaminated by dangerous substances

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

SECTION 14 Transport information

UN-Number	
ADR/IMDG/IATA:	UN1950
UN proper shipping name	
ADR:	1950 AEROSOLS
IMDG:	AEROROLS
IATA:	AEROSOLS, flammable
Transport hazard class(es)	
ADR	
Class:	2 5F Gases
Label:	2.1
IMDG/IATA	
Class:	2.1
Label:	2.1
Packaging group:	
ADR, IMDG, IATA:	Void.
Environmental hazards:	
Marine pollutant:	No.
Special precautions for user:	Warning: Gases
Danger code (Kemler):	-
EMS Number:	F-D, S-U
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable.
Transport / additional information:	
ADR:	
Limited quantities:	1L
Transport category:	2
Tunnel restriction code:	D
UN "Model Regulation":	UN 1950, AEROSOLS, 2.1

SECTION 15 Regulatory information**Safety, health and environmental regulations / legislation specific for the substance or mixture****National Regulations – German Regulations / Classification according to:**

Restrictions of occupation: *Occupational restrictions for young workers according § 22 JarbSchG/Jugendarbeitsschutzgesetz (youth employment law) and for expectant and nursing mothers according §§ 4 and 5 MuSchuArbV/Verordnung zum Schutz der Mütter am Arbeitsplatz (maternity protection guidelines) are to be observed.*

TA-Luft (Technical Instructions Air): Class Share in %
NK 80-≤100

WGK (Water hazard class): WGK 2 (self-assessment) – hazardous for water

VOC (Volatile organic compound): 582 g/l

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16 Other information

The information contained in this MSDS is only valid for the products, to which this MSDS is related. It is based on our best knowledge at the time of issue and shall not constitute a guarantee of any specific product features. This information is only advisory and makes no claim to being complete. No warranty is made regarding its accuracy. The user of the product is responsible to ensure compliance with applicable regulations (Specific national regulations!) Blank spaces in this data sheet are due to the fact that the information was unknown at the time of issue or that no specific experience was available. Blank spaces shall not mean that the risks or hazards specified in the individual sections do not apply to the product. The manufacturer will not assume liability for damage resulting from the use of or contact with the specified product. When used in other preparations, formulations or in mixtures, it is necessary to ascertain whether the classification of the hazards has changed. The attention of the user is drawn to the possibility of creating other hazards when the product is used for purposes other than that for which it was recommended. In such cases reassessment may be necessary and should be made by the user. This safety data sheet should only be used and reproduced in order that the necessary measures are taken relating to the protection of health and safety at work. It is the responsibility of the distributors to pass on the totality of the information contained within this document to any subsequent person(s) who will come into contact with, handle or use this product in any way. They should check the adequacy of the information provided within this MSDS before passing it onto their customers/staff.

Regarding required protective equipment see our products from the segment "Technolit occupational safety".

Relevant R- and H-phrases (number and full text):

According to Regulation (EC) No 1272/2008	
H220	Extremely flammable gas.
H225	Highly flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
According to Directive 67/548/EEC or Directive 1999/45/EC	
R11	Highly flammable.
R12	Extremely flammable.
R38	Irritating to skin.

R41	Risk of serious damage to eyes.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
R67	Vapours may cause drowsiness and dizziness.

Abbreviations and acronyms:

Acute Tox. 4	Acute toxicity, hazard category 4
ADR	Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Acute 1	Hazardous to the aquatic environment – acute hazard category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – chronic hazard, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment – chronic hazard, category 3
Asp. Tox. 1	Aspiration hazard, hazard category 1
CAS	Chemical Abstracts Service (division of the American Chemical Society)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
Eye Dam. 1	Serious eye damage/eye irritation, hazard category 1
Eye Irrit. 2	Serious eye damage/eye irritation, hazard category 2
Flam. Aerosol 1	Flammable aerosols, hazard category 1
Flam. Gas 1	Flammable gases, hazard category 1
Flam. Liq. 2	Flammable liquid, hazard category 2
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMDG	International Maritime Code for Dangerous Goods
LC50	Lethal concentration, 50 percent
LD50	Lethal dose, 50 percent
PBT	Substances that are potentially persistent, bioaccumulative and toxic
Press. Gas	Gases under pressure: Compressed gas
RID	Règlement internationale concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
Skin Irrit. 2	Skin corrosion/irritation, hazard category 2
Skin Sens. 1	Skin sensitization, hazard category 1
STOT SE 3	Specific target organ toxicity – single exposure, hazard category 3
VOC	Volatile organic compounds
vPvB	Substances that are potentially very persistent and very bioaccumulative

With appearance of this safety data sheet all previous safety data sheets become invalid.

** - Indicates altered section / (*) indicates altered item

This Safety Data Sheet meets the formal requirements of EC-regulations No. 1907/2006 (REACH).

Demands on content, which are/become necessary concerning this regulation, will be added in time, as soon as the required information and/or data is/are available.