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: BLUESIL PRIM PM 820

1.2 Relevant identified uses of the substance or mixture and uses advised against:
Identified uses: Adhesion promoter for silicone elastomers.
Uses advised against: None known.

1.3 Details of the supplier of the safety data sheet:
Manufacturer:

Bluestar Silicones Germany GmbH
Hans-Sachs-Strasse 4a
D-23566 Lübeck

Telephone: +49 (0) 451 6 09 81-27
Fax: +49 (0) 451 6 09 81-11

e-mail: fds.sil@bluestarsilicones.com

Supplier:

Bluestar Silicones Germany GmbH
Hans-Sachs-Strasse 4a
D-23566 Lübeck

Telephone: +49 (0) 451 6 09 81-27
Fax: +49 (0) 451 6 09 81-11

1.4 Emergency telephone number: +49 (0) 89 19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture:

The product has been classified according to the legislation in force.

Classification according to Directive 67/548/EEC or 1999/45/EC as amended:

F; R11 Xi; R36/38 Xn; R65 R67 N; R51/53

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

Physical Hazards:

Flammable liquids	Category 2	Highly flammable liquid and vapor.

Health Hazards:

Skin irritation	Category 2	Causes skin irritation.
Serious eye damage	Category 1	Causes serious eye damage.
Specific Target Organ Toxicity - Single Exposure	Category 3	May cause drowsiness or dizziness.
Aspiration Hazard	Category 1	May be fatal if swallowed and enters airways.

Environmental Hazards:

Chronic hazards to the aquatic environment	Category 2	Toxic to aquatic life with long lasting effects.

Hazard summary:
Physical Hazards: Highly flammable.

Health Hazards:
Inhalation: Vapors may cause drowsiness and dizziness.

Eye contact: Causes serious eye damage.

Skin Contact: Irritating to skin.

Ingestion: Harmful if swallowed - may enter lungs if swallowed or vomited.

Other Health Effects: No other information noted.

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

2.2 Label Elements:

Contains: Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha

Signal Words: Danger

Hazard Statement(s):
Highly flammable liquid and vapor.
May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes serious eye damage.
May cause drowsiness or dizziness.
Toxic to aquatic life with long lasting effects.

Precautionary Statement:

Prevention: Keep away from heat/sparks/open flames/hot surfaces. No smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection.

Response: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

2.3 Other hazards: No data available.

Substance(s) formed under the conditions of use:

Chemical name	Concentration	CAS-No.	EC No.	REACH Registration No.	INDEX No.
Butan-1-ol	<6,5%	71-36-3	200-751-6		#
ethanol; ethyl alcohol	<5%	64-17-5	200-578-6		#

SECTION 3: Composition/information on ingredients

3.2 Mixtures:

General information: Solution of organosiloxanes.

Chemical name	Concentration	CAS-No.	EC No.	REACH Registration No.	Notes
Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha	>50%	64742-49-0	265-151-9		
Titanium tetrabutanolate	<10%	5593-70-4	227-006-8		
n-hexane	<3%	110-54-3	203-777-6		#

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
#: This substance has workplace exposure limit(s).
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.

Classification:

Chemical name	Classification		Notes
Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha	DSD:	F; R11 Xi; R38 Xn; R65 R67 N; R51/53	
	CLP:	Asp. Tox. 1;H304, Repr. 2;H361f, STOT SE 3;H336, Skin Corr. 2;H315, Flam. Liq. 2;H225, Aquatic Chronic 2;H411	Note H, Note P
Titanium tetrabutanolate	DSD:	R10 Xi; R38 Xi; R41	
	CLP:	Flam. Liq. 3;H226, Skin Irrit. 2;H315, Eye Dam. 1;H318, STOT SE 3;H335, STOT SE 3;H336	
n-hexane	DSD:	F; R11 Repr. 3; R62 Xi; R38 Xn; R65, R48/20 R67 N; R51, R53	
	CLP:	Flam. Liq. 2;H225, Repr. 2;H361f, STOT RE 2;H373, Asp. Tox. 1;H304, Skin Irrit. 2;H315, STOT SE 3;H336, Aquatic Chronic 2;H411	

DSD: Directive 67/548/EEC.
CLP: Regulation No. 1272/2008.:

The full text for all R- and H-phrases is displayed in section 16.

SECTION 4: First aid measures

General: Get medical attention if symptoms occur. Contaminated clothing to be placed in closed container until disposal or decontamination.

4.1 Description of first aid measures:

Inhalation: Move into fresh air and keep at rest.

Eye contact: In the event of contact with the eyes, rinse thoroughly with clean water. Continue to rinse for at least 15 minutes.

Skin Contact: Remove contaminated clothing and shoes. Wash with soap and water.

Ingestion: Do not induce vomiting. Rinse mouth thoroughly.

4.2 Most important symptoms and effects, both acute and delayed: None known.

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

Hazards: No specific recommendations.

Treatment: No specific recommendations.

SECTION 5: Firefighting measures

General Fire Hazards: No specific recommendations.

5.1 Extinguishing media:

Suitable extinguishing media: Extinguish with foam, carbon dioxide or dry powder.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Special hazards arising from the substance or mixture: Highly flammable.

5.3 Advice for firefighters:

Special fire fighting procedures: Water spray should be used to cool containers.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: Do not breathe vapor. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Use personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment.

6.2 Environmental Precautions: Collect spillage. Do not discharge into drains, water courses or onto the ground.

6.3 Methods and material for containment and cleaning up: Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Container must be kept tightly closed. Use explosion-proof electrical/ventilating/lighting/equipment. Absorb with sand or other inert absorbent. To clean the floor and all objects contaminated by this material, use an appropriate solvent.(cf. : § 9) Flush area with plenty of water. Incinerate in suitable combustion chamber.

Notification Procedures: Caution: Contaminated surfaces may be slippery. For waste disposal, see section 13 of the MSDS.

SECTION 7: Handling and storage:

7.1 Precautions for safe handling: Use explosion-proof electrical/ventilating/lighting/equipment. Ground container and transfer equipment to eliminate static electric sparks. Keep away from heat, sparks and open flame. Nitrogen blanketing of containers is required. Avoid forming spray/aerosol mists. Adequate ventilation should be provided so that exposure limits are not exceeded.

7.2 Conditions for safe storage, including any incompatibilities: Avoid discharge into drains, water courses or onto the ground. Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames, and high temperatures. Store in tightly closed original container. Material should be stored under an inert atmosphere. Avoid contact with oxidizing agents. For further information, refer to Section 10: "Stability and Reactivity". Suitable containers: Steel drums coated with epoxy-resin.

7.3 Specific end use(s): No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters:

Occupational Exposure Limits:

Chemical name	Type	Exposure Limit Values		Source
n-hexane	TWA	20 ppm	72 mg/m3	UK. EH40 Workplace Exposure Limits (WELs) (2007)
	TWA	20 ppm	72 mg/m3	EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU (12 2009)

Additional exposure limits under the conditions of use

Chemical name	Type	Exposure Limit Values		Source
Butan-1-ol	STEL	50 ppm	154 mg/m3	UK. EH40 Workplace Exposure Limits (WELs) (2007)
ethanol; ethyl alcohol	TWA	1 000 ppm	1 920 mg/m3	UK. EH40 Workplace Exposure Limits (WELs) (2007)

8.2 Exposure controls:

Appropriate engineering controls: Use engineering controls to reduce air contamination to permissible exposure level. Observe Occupational Exposure Limits and minimize the risk of inhalation.

Individual protection measures, such as personal protective equipment:

General information: Provide sufficient ventilation during operations which cause vapor formation.

Eye/face protection: Safety Glasses

Skin protection:

Hand Protection: Use protective gloves made of: Nitrile. Polyvinyl chloride (PVC).

Other: It is a good industrial hygiene practice to minimize skin contact. Wear suitable protective clothing.

Respiratory Protection: If ventilation is insufficient, suitable respiratory protection must be provided.

Hygiene measures: Provide eyewash station and safety shower.

Environmental Controls: No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance:	
Physical State:	Liquid
Form:	No data available.
Color:	Yellowish.
Odor:	Characteristic
Odor Threshold:	No data available.
pH:	Not applicable
Freezing point:	No data available.
Boiling Point:	80 - 110 °C
Flash Point:	-26 °C
Evaporation Rate:	No data available.
Flammability (solid, gas):	No data available.
Flammability Limit - Upper (%)–:	8 %(V)
Flammability Limit - Lower (%)–:	0,7 %(V)
Vapor pressure:	< 1 100 hPa (50 °C)
Vapor density (air=1):	No data available.
Relative density:	0,75 (20 °C) Approximate
Solubility(ies):	
Solubility in Water:	Very slightly soluble.
Solubility (other):	Common organic solvents.: Miscible (in all proportions).
Partition coefficient (n-octanol/water):	No data available.
Autoignition Temperature:	> 200 °C Gasoline
Decomposition Temperature:	No data available.
Viscosity:	< 0,5 mm2/s (25 °C)
Explosive properties:	No data available.
Oxidizing properties:	According to the data on the components Not considered as oxidizing. (evaluation by structure-activity relationship)

SECTION 10: Stability and reactivity

10.1 Reactivity: Not relevant.

10.2 Chemical Stability: Stable

10.3 Possibility of Hazardous Reactions: No data available.

10.4 Conditions to Avoid: No other information noted.

10.5 Incompatible Materials: Strong oxidizing agents. Water, steam, water mixtures.

10.6 Hazardous Decomposition Products: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. Amorphous silica. During use or in contact with water, may generate hazardous substances.

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: No data available.

11.1 Information on toxicological effects:

Acute Toxicity:

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

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

Inhalation:
Product: No data available.

Repeated Dose Toxicity:
Product: No data available.

Skin Corrosion/Irritation:
Product: Composition/information on ingredients

Specified substance(s):
Titanium tetrabutanolate — Irritating.

Serious Eye Damage/Eye Irritation:
Product: No data available.

Specified substance(s):
Titanium tetrabutanolate — Causes serious eye damage.

Respiratory or Skin Sensitization:
Product: No data available.

Germ Cell Mutagenicity:

In vitro:
Product: No data available.

In vivo:
Product: No data available.

Carcinogenicity:
Product: No data available.

Reproductive Toxicity:
Product: No data available.

Reproductive Toxicity (Fertility):
Product: No data available.

Developmental Toxicity (Teratogenicity):
Product: No data available.

Specific Target Organ Toxicity - Single Exposure:
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure:
Product: No data available.

Aspiration Hazard:
Product: No data available.

Other Adverse Effects:

SECTION 12: Ecological information

12.1 Toxicity:

Acute toxicity:

Fish:
Product: Composition/information on ingredients

Specified substance(s):

Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha	LL50 (Fish): 14 mg/l
n-hexane	LC 50 (Medaka, high-eyes (Oryzias latipes), 96 h): > 1 mg/l

Aquatic Invertebrates:

Product: Composition/information on ingredients

Specified substance(s):
n-hexane EC 50 (Water flea (Daphnia magna), 48 h): 21,85 mg/l

Chronic Toxicity:

Fish:
Product: No data available.

Aquatic Invertebrates:
Product: Composition/information on ingredients

Specified substance(s):
n-hexane NOEL (Water flea (Daphnia magna), 21 d): 5,195 mg/l

Toxicity to Aquatic Plants:
Product: Composition/information on ingredients

Specified substance(s):
n-hexane EC 50 (Green algae (Selenastrum capricornutum), 72 h): 2,077 mg/l

12.2 Persistence and Degradability:

Biodegradation:
Product: Composition/information on ingredients

Specified substance(s):
n-hexane 98 % (28 d) Expected to be readily biodegradable.

BOD/COD Ratio:
Product: No data available.

12.3 Bioaccumulative Potential:

Product: Composition/information on ingredients

Specified substance(s):
n-hexane Fish, Bioconcentration Factor (BCF): 501

12.4 Mobility in Soil: No data available.

12.5 Results of PBT and vPvB assessment: No data available.

12.6 Other Adverse Effects: No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods:

General information: The user's attention is drawn to the possible existence of local regulations regarding disposal.

Disposal methods: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Incinerate.

Contaminated packages should be as empty as possible. Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Recycle following cleaning or dispose of at an authorised site.

SECTION 14: Transport information

ADR

14.1 UN Number: UN 1866

14.2 Proper Shipping Name: RESIN SOLUTION

14.3 Transport Hazard Class(es)

Class: 3

Label(s): 3

Hazard No. (ADR): 33

Tunnel restriction code: (D/E)

14.4 Packing Group: II

14.5 Environmental hazards: Dangerous for the environment.

14.6 Special precautions for user: –

IMDG

14.1 UN Number: UN 1866

14.2 Proper Shipping Name: RESIN SOLUTION

14.3 Transport Hazard Class(es)

Class: 3

Label(s): 3

EmS No.: F-E, S-E

14.4 Packing Group: II

14.5 Environmental hazards: Marine pollutant

14.6 Special precautions for user: –

IATA

14.1 UN Number: UN 1866

14.2 Proper Shipping Name: RESIN SOLUTION

14.3 Transport Hazard Class(es):

Class: 3

Label(s): 3

14.4 Packing Group: II

14.5 Environmental hazards: Not applicable

14.6 Special precautions for user: –

Other information

Passenger and cargo aircraft: Allowed.

Cargo aircraft only: Allowed.

Other information: No special precautions.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

SECTION 15: Regulatory information

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

National Regulations:

15.2 Chemical safety assessment: No data available.

SECTION 16: Other information

Revision Information: Not relevant.

Key abbreviations or acronyms used:

Note H	The classification and labelling shown for this substance applies to the hazardous property(ies) indicated by the hazard statement(s) in combination with the hazard class(es) and category(ies) shown. The requirements of Article 4 for manufacturers, importers or downstream users of this substance apply to all other hazard classes and categories. For hazard classes where the route of exposure or the nature of the effects leads to a differentiation of the classification of the hazard class, the manufacturer, importer or downstream user is required to consider the routes of exposure or the nature of the effects not already considered. The final label shall follow the requirements of Article 17 and of section 1.2 of Annex I.
Note P	The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w benzene (EINECS No 200-753-7). When the substance is not classified as a carcinogen at least the precautionary statements (P102-)P260-P262-P301 + P310-P331 (Table 3.1) or the S-phrases (2-)23-24-62 (Table 3.2) shall apply. This note applies only to certain complex oil-derived substances in Part 3.

Key literature references and sources for data: No data available.

Wording of the R-phrases and H-statements in section 2 and 3:

H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
R10	Flammable.
R11	Highly flammable.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R62	Possible risk of impaired fertility.
R65	Harmful: may cause lung damage if swallowed.
R67	Vapours may cause drowsiness and dizziness.

Training information: No data available.

Inventory Status

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	Not in compliance with the inventory.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory

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