

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/15/2019

Reviewed on 08/15/2019

1 Identification**- Product identifier**

- **Trade name:** BlueGrip S2
- **Part number:** S2
- **Application of the substance / the mixture** Adhesives

- Details of the supplier of the safety data sheet**- Manufacturer/Supplier:**

Blue Photon Technology & Workholding Systems LLC
1002 Industrial Park Drive
Shelby, MI 49455
Tel: 1-855-777-2040
Fax: 1-231-255-9640
E-mail: info@bluephotongrip.com
Website: www.bluephotongrip.com

- Information department: Product Safety Department**- Emergency telephone number:**

United States: 1-800-424-9300
International: +1-703-527-3887

2 Hazard(s) identification**- Classification of the substance or mixture**

GHS08 Health hazard

Repr. 1B H360 May damage fertility or the unborn child.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H336 May cause drowsiness or dizziness.

- Label elements**- GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).**- Hazard pictograms**

GHS07 GHS08

- Signal word Danger**- Hazard-determining components of labeling:**

Urethane acrylate
Acrylic Esters
acrylic acid
2-hydroxyethyl methacrylate
2-Butenedioic acid (2Z)
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

- Hazard statements

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H360 May damage fertility or the unborn child.
H336 May cause drowsiness or dizziness.

- Precautionary statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P264 Wash face, hands and any exposed skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.

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P272	Contaminated work clothing must not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P280	Wear protective gloves.
P280	Wear eye protection / face protection.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a poison center/doctor if you feel unwell.
P362+P364	Take off contaminated clothing and wash it before reuse.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P321	Specific treatment (see on this label).
P337+P313	If eye irritation persists: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

- Classification system:**- NFPA ratings (scale 0 - 4)**

2	1	0	Health = 2
			Fire = 1
			Reactivity = 0

- HMIS-ratings (scale 0 - 4)

HEALTH 2	Health = *2
FIRE 1	Fire = 1
REACTIVITY 0	Reactivity = 0

- Other hazards**- Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures

- **Description:** Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:

	Urethane acrylate Repr. 1B, H360; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H336	40 – 49%
CAS: 5888-33-5	Acrylic Esters Skin Sens. 1B, H317	20 – 29%
CAS: 868-77-9	2-hydroxyethyl methacrylate Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317	10 – 19%
CAS: 67762-90-7	Amorphous Silica Combustible Dust	5 – 9%
CAS: 79-10-7	acrylic acid Flam. Liq. 3, H226; Skin Corr. 1A, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	5 – 9%
CAS: 110-16-7	2-Butenedioic acid (2Z) Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	1 – 4%
CAS: 7473-98-5	2-hydroxy-2-methylpropiophenone Acute Tox. 4, H302	1 – 4%
CAS: 162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide Skin Sens. 1, H317	≤ 1%

4 First-aid measures

- Description of first aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.

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- **Information for doctor:**
 - **Most important symptoms and effects, both acute and delayed** No further relevant information available.
 - **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
 - **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
 - **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
 - **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Wear protective clothing.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
Dispose of the collected material according to regulations.
- **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.

7 Handling and storage

- **Handling:**
 - **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
 - **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
 - **Storage:**
 - **Requirements to be met by storerooms and receptacles:** No special requirements.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
 - **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

CAS: 79-10-7 acrylic acid

REL	Long-term value: 6 mg/m ³ , 2 ppm Skin
TLV	Long-term value: 5.9 mg/m ³ , 2 ppm Skin

- **Additional information:** The lists that were valid during the creation were used as basis.

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- Exposure controls**- Personal protective equipment:****- General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.

- Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Nitrile rubber, NBR

- Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- Eye protection:

Tightly sealed goggles

- Body protection: Protective work clothing

9 Physical and chemical properties

- Information on basic physical and chemical properties**- General Information****- Appearance:****- Form:**

Pasty

- Color:

According to product specification

- Odor:

Characteristic

- Odor threshold:

Not determined.

- pH-value:

Not determined.

- Change in condition**- Melting point/Melting range:**

Undetermined.

- Boiling point/Boiling range:

> 100 °C (> 212 °F)

- Flash point:

97 °C (206.6 °F)

- Flammability (solid, gaseous):

Not applicable.

- Ignition temperature:

374 °C (705.2 °F)

- Decomposition temperature:

Not determined.

- Auto igniting:

Product is not selfigniting.

- Danger of explosion:

Product does not present an explosion hazard.

- Explosion limits:**- Lower:**

Not determined.

- Upper:

26.0 Vol %

- Vapor pressure at 20 °C (68 °F):

> 0 hPa (> 0 mm Hg)

- Density at 20 °C (68 °F):~ 1.05 g/cm³ (~ 8.76225 lbs/gal)**- Relative density**

Not determined.

- Vapor density

Not determined.

- Evaporation rate

Not determined.

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- Solubility in / Miscibility with	
- Water:	Not miscible or difficult to mix.
- Partition coefficient (n-octanol/water):	Not determined.
- Viscosity:	
- Dynamic at 20 °C (68 °F):	200,000 mPas
- Kinematic:	Not determined.
- Solvent content:	
- VOC content:	0.00 % 0.0 g/l / 0.00 lb/gal
- Solids content:	10.3 %
- Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
 - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
 - **Acute toxicity:**

- LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

Oral	LD50	2,984 mg/kg (rat)
Dermal	LD50	5,250 mg/kg (rabbit)
Inhalative	LC50/4 h	93.3 mg/l

Urethane acrylate

Oral	LD50	4,300 mg/kg (rat)
Dermal	LD50	> 5,000 mg/kg (rabbit)

CAS: 868-77-9 2-hydroxyethyl methacrylate

Oral	LD50	5,050 mg/kg (rat)
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CAS: 79-10-7 acrylic acid

Oral	LD50	250 mg/kg (rat)
Dermal	LD50	280 mg/kg (rabbit)
Inhalative	LC50/4 h	11 mg/l (ATE)

CAS: 110-16-7 2-Butenedioic acid (2Z)

Oral	LD50	708 mg/kg (rat)
Dermal	LD50	1,560 mg/kg (rabbit)

CAS: 7473-98-5 2-hydroxy-2-methylpropiophenone

Oral	LD50	1,694 mg/kg (rat)
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- Primary irritant effect:

- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.

- Sensitization:

- Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Corrosive
Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- Carcinogenic categories

- IARC (International Agency for Research on Cancer)

CAS: 79-10-7	acrylic acid
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- NTP (National Toxicology Program)

None of the ingredients is listed.

- OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.

- Persistence and degradability No further relevant information available.

- Behavior in environmental systems:
- Bioaccumulative potential No further relevant information available.

- Mobility in soil No further relevant information available.

- Ecotoxicological effects:
- Remark: Very toxic for fish

- Additional ecological information:
- General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

- Results of PBT and vPvB assessment
- PBT: Not applicable.

- vPvB: Not applicable.

- Other adverse effects No further relevant information available.

13 Disposal considerations

- Waste treatment methods
- Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
- DOT, IMDG, IATA

UN1760

- UN proper shipping name
- DOT

Corrosive liquids, n.o.s. (Acrylic acid, stabilized)

- IMDG

CORROSIVE LIQUID, N.O.S. (ACRYLIC ACID, STABILIZED,

- IATA

CORROSIVE LIQUID, N.O.S. (ACRYLIC ACID, STABILIZED)

- Transport hazard class(es)
- DOT

- Class

8 Corrosive substances

- Label

8

- IMDG

- Class

8 Corrosive substances

- Label

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- IATA	
	
- Class	8 Corrosive substances
- Label	8
- Packing group	
- DOT, IMDG, IATA	II
- Environmental hazards:	
- Marine pollutant:	Product contains environmentally hazardous substances: Isobornyl Acrylate No Yes (DOT) Symbol (fish and tree)
- Special precautions for user	
- Danger code (Kemler):	Warning: Corrosive substances
- EMS Number:	80
- Segregation groups	F-A,S-B
- Stowage Category	Acids
- Stowage Code	B SW2 Clear of living quarters.
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	
	Not applicable.
- Transport/Additional information:	
- DOT	
- Quantity limitations	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
- Remarks:	Special marking with the symbol (fish and tree).
- IMDG	
- Limited quantities (LQ)	1L
- Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
- UN "Model Regulation":	
	UN 1760 CORROSIVE LIQUID, N.O.S. (ACRYLIC ACID, STABILIZED), 8, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

- Section 355 (extremely hazardous substances):

None of the ingredients is listed.

- Section 313 (Specific toxic chemical listings):

CAS: 79-10-7 acrylic acid

- TSCA (Toxic Substances Control Act):

All components have the value ACTIVE.

- Hazardous Air Pollutants

CAS: 79-10-7 acrylic acid

- Proposition 65

- Chemicals known to cause cancer:

None of the ingredients is listed.

- Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

- Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

- Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

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- Carcinogenic categories

- EPA (Environmental Protection Agency)

None of the ingredients is listed.

- TLV (Threshold Limit Value established by ACGIH)

CAS: 79-10-7 acrylic acid

A4

- NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

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

*16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Safety, Health and Environmental Affairs

- **Date of preparation / last revision** 08/15/2019 / 54

- Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 VOC: Volatile Organic Compounds (USA, EU)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 NIOSH: National Institute for Occupational Safety
 OSHA: Occupational Safety & Health
 TLV: Threshold Limit Value
 PEL: Permissible Exposure Limit
 REL: Recommended Exposure Limit
 Flam. Liq. 3: Flammable liquids – Category 3
 Acute Tox. 4: Acute toxicity – Category 4
 Skin Corr. 1A: Skin corrosion/irritation – Category 1A
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
 Skin Sens. 1: Skin sensitisation – Category 1
 Skin Sens. 1B: Skin sensitisation – Category 1B
 Repr. 1B: Reproductive toxicity – Category 1B
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

- * **Data compared to the previous version altered.**