SAFETY DATA SHEET

BACKPLANE

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	BACKPLANE
Product Code:	BP-B311
Recommended Use:	As a component of an electroluminescent coating system
Uses Advised Against:	Other uses other than recommended
Supplier:	Darkside Scientific 650 W. Smith Road C18 Medina, OH 44256
Telephone Number:	1-855-465-8645
Emergency Contact:	Infotrac
Emergency Telephone Number:	1-352-323-3500
Hours of Operation:	24 Hours Per Day / 7 Days Per Week

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910 (OSHA Hazard Communication Standard).

Classification(s):

- Flammable Liquid 2
- Eye Damage 1
- Eye Irritant 2
- Skin Irritant 2
- Acute Toxicity 3 - Inhalation
- Acute Toxicity 3 - Dermal
- Acute Toxicity 3 - Oral
- Reproductive 2
- STOT-SE 2 – Damage to organs
- STOT-SE 3 – Drowsiness/Dizziness
- STOT RE 3 – Respiratory Irritant
- Skin Sensitizer 1
- Skin Corrosive 1B
- Carcinogen 1B
- Aspiration Toxicity 1

GHS label elements, including precautionary statements in accordance with 29 CFR 1910 (OSHA Hazard Communication Standard).

Signal Word: **DANGER**

Pictogram(s):

Hazard Statements:

H225	Highly flammable liquid and vapor
H301	Toxic if swallowed
H304	May be fatal if swallowed and enters airways
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H331	Toxic if inhaled

H335	May cause respiratory irritation
H336	May causes drowsiness or dizziness
H350	May cause cancer
H361d	Suspected of damaging the unborn child
H373	May causes damage to organs through prolonged or repeated exposure

Precautionary Statements:

P202	Do not handle until all safety precautions have been read and understood
P210	Keep away from heat, sparks, open flames and hot surfaces. NO SMOKING
P233	Keep container tightly closed
P240	Ground and bond container and receiving equipment
P241	Use explosion-proof electrical, ventilating and light equipment
P242	Use only non-sparking tools
P243	Take precautionary measures against static discharge
P260	Do not breathe dust, fumes, gas, mist, vapors or spray
P264	Wash hands and any exposed body parts thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P271	Use only outdoors or in a well-ventilated area
P272	Contaminated work clothing should not be allowed out of the workplace
P280	Wear protective gloves, protective clothing, eye protection and face protection
P312	Call a POISON CENTER or doctor/physician if you feel unwell
P321	Specific treatment: See first aid section on the container label
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303 + P361 + P353	IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position 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
P332 + P337 + P313	If skin and/or eye irritation occurs: Get medical advice/attention
P370 + P378	In case of fire: Use alcohol resistant foam, carbon dioxide, or dry chemical extinguishing agents for extinction
P405	Store locked up
P403 + P233 + P235	Store in a well-ventilated place. Keep container tightly closed. Keep cool
P501	Dispose of contents/container in accordance with local, regional, national and international regulations

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Composition of Product: Mixture
CAS# Does not apply to mixtures.

INGREDIENTS	CAS#	% m/m
n-butyl acetate	123-86-4	30-60%
xylene	1330-20-7	20-40%
n-butanol	71-36-3	5-10%
2-methoxy-1-methylethyl acetate	108-65-6	<20%
toluene	108-88-3	<5%
solvent naphtha	64742-95-6	<10%
ethylbenzene	100-41-4	<25%
iso-butanol	78-83-1	<5%
Copper	7440-50-8	30-40%
Silver	7440-22-4	10-20%
2-butoxyethyl acetate	112-07-2	≤1.4%
butylated polyoxymethylene urea	68002-19-7	≤1.5%

SECTION 4. FIRST AID MEASURES

Inhalation:	Remove victim to fresh air and keep in a rest position comfortable for breathing.
Skin:	Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.
Eyes:	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so – continue rinsing. If eye irritation persists: Get medical advice/attention
Ingestion:	Immediately call a POISON CENTER or doctor/physician. Rinse mouth. DO NOT induce vomiting.

SECTION 5. FIRE FIGHTING MEASURES

Suitable extinguishing media:	Alcohol resistant foam, carbon dioxide or dry chemical extinguishing agents.
UN-Suitable extinguishing media:	Water jets
Specific hazards arising from the chemical:	Keep away from any possible contact with water because of violent reaction and possible flash fire. Highly flammable with toxic fumes. Reacts violently – is explosive.
Special protective actions for firefighters:	Wear protective gloves, protective clothing, eye protection, and face protection Wear respirator. Prevent, by any means, spillage from entering drains or water courses. Cool containers to prevent explosion.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Wear protective gloves, protective clothing, eye protection, and face protection
Wear respirator.
Keep unprotected persons away.
Remove ignition sources; use non-sparking tools.
Ventilate area.
Contain and collect - Remove with inert absorbent – NOT sawdust.
DO NOT incinerate closed containers.
Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.
Prevent, by any means, spillage from entering drains or water courses.

SECTION 7. HANDLING AND STORAGE

Storage:	Keep away from heat, sparks, open flames and hot surfaces. Keep away from any contact with water. Keep containers tightly closed. Ground and bond container. Store locked up. Store in a well-ventilated area. Keep cool.
Handling:	Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, open flames and hot surfaces. Keep away from any contact with water. Keep containers tightly closed. Ground and bond container.

	Use explosion-proof electrical, ventilating and light equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust, fumes, gas, mist, vapors or spray. Wash hands and any exposed body parts thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, protective clothing, eye and face protection.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredient name	Exposure limits
n-butyl acetate	**OSHA PEL 1989 (United States, 3/1989).** TWA: 150 ppm 8 hours. TWA: 710 mg/m³ 8 hours. STEL: 200 ppm 15 minutes. STEL: 950 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2020).** TWA: 150 ppm 10 hours. TWA: 710 mg/m³ 10 hours. STEL: 200 ppm 15 minutes. STEL: 950 mg/m³ 15 minutes. **OSHA PEL (United States, 5/2018).** TWA: 150 ppm 8 hours. TWA: 710 mg/m³ 8 hours. ACGIH TLV (United States, 1/2021). STEL: 150 ppm 15 minutes. TWA: 50 ppm 8 hours.
xylene	**ACGIH TLV (United States, 1/2021).** TWA: 100 ppm 8 hours. TWA: 434 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m³ 15 minutes. **OSHA PEL 1989 (United States, 3/1989).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 655 mg/m³ 15 minutes. **OSHA PEL (United States, 5/2018).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
toluene	**OSHA PEL 1989 (United States, 3/1989).** TWA: 100 ppm 8 hours. TWA: 375 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m³ 15 minutes. **OSHA PEL Z2 (United States, 2/2013).** TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes. **NIOSH REL (United States, 10/2020).** TWA: 100 ppm 10 hours. TWA: 375 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m³ 15 minutes. **ACGIH TLV (United States, 1/2021). Ototoxicant.** TWA: 20 ppm 8 hours.

Normal butyl alcohol	**ACGIH TLV (United States, 1/2021).** TWA: 20 ppm 8 hours. **OSHA PEL 1989 (United States, 3/1989). Absorbed through skin.** CEIL: 50 ppm CEIL: 150 mg/m³ **NIOSH REL (United States, 10/2020). Absorbed through skin.** CEIL: 50 ppm CEIL: 150 mg/m³ **OSHA PEL (United States, 5/2018).** TWA: 100 ppm 8 hours. TWA: 300 mg/m³ 8 hours.
solvent naphtha (petroleum), light arom.	none
ethylbenzene	**ACGIH TLV (United States, 1/2021).** TWA: 20 ppm 8 hours. **OSHA PEL 1989 (United States, 3/1989).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2020).** TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes. **OSHA PEL (United States, 5/2018).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours
iso-butanol	**ACGIH TLV (United States, 1/2021).** TWA: 50 ppm 8 hours. TWA: 152 mg/m³ 8 hours. **OSHA PEL 1989 (United States, 3/1989).** TWA: 50 ppm 8 hours. TWA: 150 mg/m³ 8 hours. **NIOSH REL (United States, 10/2020).** TWA: 50 ppm 10 hours. TWA: 150 mg/m³ 10 hours. **OSHA PEL (United States, 5/2018).** TWA: 100 ppm 8 hours. TWA: 300 mg/m³ 8 hours.
2-methoxy-1-methylethyl acetate	**OARS WEEL (United States, 1/2021).** TWA: 50 ppm 8 hours.
copper	**OSHA PEL 1989 (United States, 3/1989).** 0.1 mg/m3 (fume) 1 mg/m3 (dust) **ACGIH TLV (United States, 1/2021).** 1 mg/m3 (dust) 0.2 mg/m3 (fume) **NIOSH REL (United States, 10/2020).** 1 mg/m3 (dust) 0.1 mg/m3 (fume)

siilver	**OSHA PEL 1989 (United States, 3/1989).** 0.01 mg/m3 TWA. **ACGIH TLV (United States, 1/2021).** 0.01 mg/m3 TLV.
2-butoxyethyl acetate	**NIOSH REL (United States, 10/2020).** TWA: 5 ppm 10 hours. TWA: 33 mg/m³ 10 hours. **ACGIH TLV (United States, 1/2021).** TWA: 20 ppm 8 hours.
butylated polyoxymethylene urea	none

Engineering Controls:	Prevent build-up of vapors by supplying sufficient ventilation and cross-ventilation. If the applicable Occupational Exposure Limits (OELs) may be exceeded, wear an appropriate NIOSH approved respirator.
Respiratory Protection:	A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's usage. A NIOSH approved air purifying respirator with an organic vapor cartridge may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in circumstances where an air purifying respirator may not be sufficient.
Eye Protection:	Use face shield and/or solvent resistant safety eyewear designed to protect against splash of liquids.
Hand Protection:	Use gloves to prevent skin contact. Use impervious gloves to prevent skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.
Other Protective Equipment:	Refer to environmental, health and safety manager for guidance regarding types of personal protective equipment and their operations.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Value
Appearance	Viscous Liquid
Odor	Pungent
pH	Not Available
Boiling Point	>35°C
Melting Point	Not Available
Flash Point	<23°C
Explosive Properties	Not Available
Oxidizing Properties	Not Available
Vapor Pressure	Not Available
Density	8.453 lbs./gal
Water Solubility	Not Available
Fat Solubility	Not Available
Partition Coefficient	Not Available
Viscosity	Not Available
Vapor Density	Not Available
Evaporation Rate	Not Available
Auto Ignition Temperature	Not Available
L.E.L.	Not Available

U.E.L.	Not Available
% Non-Volatile	Not Available
Regulatory VOC	6.38 lbs./gal.
Actual VOC	6.38 lbs./gal.

SECTION 10. STABILITY AND REACTIVITY

Stability Information:	Stable under normal conditions.
Conditions to Avoid:	Sparks, open flame, other ignition sources.
Chemical Incompatibility:	Explosives, toxic gases, oxidizing substances, organic peroxides, poisonous substances and infectious substances
Hazardous Decomposition Products:	Carbon dioxide, Carbon, monoxide and Nitrogen containing gases.

SECTION 11. TOXICOLOGICAL INFORMATION

Hazardous Component	CAS #	LD50 Oral mg/kg	LD50 Skin mg/kg	LC50 Inhal/gas ppmV	LC50 Inhal/mist mg/lt
n-butyl acetate	123-86-4	14000 (rat)	>5000 (rabbit)	Not Available	Not Available
xylene	1330-20-7	4300 (rat)	5000 (rabbit)	Not Available	Not Available
2-methoxy-1-methylethyl acetate	108-65-6	Not Available	Not Available	Not Available	Not Available
toluene	108-88-3	7000 (rat)	>2000 (rabbit)	Not Available	Not Available
solvent naphtha	64742-95-6	>5000 (rat)	Not Available	Not Available	Not Available
ethylbenzene	100-41-4	3500 (rat)	5000 (rabbit)	Not Available	Not Available
iso-butanol	78-83-1	2460 (rat)	Not Available	Not Available	Not Available
copper	7440-50-8	Not Available	Not Available	Not Available	Not Available
silver	7440-22-4	>5000 (rat)	>2000 (rat)	Not Available	Not Available
2-butoxyethyl acetate	112-07-2	2400 mg/kg (rat)	1500 mg/kg (rabbit)	Not Available	Not Available
butylated polyoxymethylene urea	68002-19-7	Not Available	Not Available	Not Available	Not Available

SECTION 12. ECOLOGICAL INFORMATION

May have short term environmental effects. Contain, monitor & remove.

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Bio accumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Available ecological data of ingredients:

Hazardous Component	CAS #	Aquatic Toxicity
xylene	1330-20-7	LC50 goldfish = 13 mg/L 24 h LC50 rainbow trout = 13.5 mg/L 96 h EC50 daphnia magna = 3.82 mg/L 48 h
toluene	108-88-3	LC50 fathead minnow = 25mg/L 96 h LC50 rainbow trout = 24 mg/L 96 h LC50 bluegill = 24 mg/L 96 h EC50 water flea = 11.3 mg/L 48 h

copper	7440-50-8	LC50 fathead minnow = 0.0319-0.0544 mg/L 96 h
silver	7440-22-4	LC50 fathead minnow = 0.0023-0.0033 mg/L 96 h

SECTION 13. DISPOSAL INFORMATION

Waste Description for Unused Product:	Spent or discarded material is a hazardous waste.
Disposal Methods:	Information in this SDS is provided only as a guide. Consult with proper authority to determine proper waste disposal procedures. Clean up and dispose of waste and clean-up materials in accordance with all federal, state, and local environmental regulations.

SECTION 14. TRANSPORT INFORMATION

Department of Transportation (DOT)

Shipping Name: PAINT or PAINT RELATED MATERIAL
IMO Class: 3
UN Number: UN1263
Packing Group: II
Required Label(s): Flammable Liquid

SECTION 15. REGULATORY INFORMATION

Toxic Substances Control Act (TSCA) Inventory Status:	All components of this product are listed on or exempt from listing on the TSCA inventory.
CERCLA:	7440-50-8 Copper = Listed 7440-22-4 Silver = Listed
SARA 313 Reportable:	This product contains the following substances listed as toxic chemicals under 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA): 7440-50-8 Copper 7440-22-4 Silver
California Proposition 65	The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986 – Proposition 65. “WARNING: This product contains chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.”
SARA/CERCLA Section 302	N/A

SECTION 16. OTHER INFORMATION

SDS prepared 09/29/2022

EUH066 Repeated exposure may causes skin dryness or cracking

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END OF SAFETY DATA