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Version 3

## Section 1: PRODUCT AND COMPANY INFORMATION

**Product Code(s)** IKUF000024

**Product Name** NuviINK GUH-NK Black X4

**Description** UV LED Black Inkjet Ink

**Synonyms** None

**Recommended Use** UV LED Printing Ink for Industry Use Only by Qualified Personnel

**Manufacturer:**

Amica Systems  
18 Technology Dr. Suite 147  
Irvine, CA 92618 USA  
Telephone: +1(949)748-1578  
[www.amicasystems.com](http://www.amicasystems.com)

**Emergency:**

Health Emergency  
Poison Control Center +1(800)222-1222  
Chemical Emergency  
INFOTRAC Domestic +1(800)535-5053  
INFOTRAC International +1(352)323-3500

## Section 2: HAZARD IDENTIFICATION

**OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910/1200)

Acute toxicity – Oral	Category 5
Acute toxicity – Dermal	Category 5
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Reproductive toxicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

**GHS Label Elements**



**Signal Word**

WARNING  
DANGER

**Hazard Statements**

H303 - May be harmful if swallowed.  
H313 - May be harmful in contact with skin.  
H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H318 - Causes serious eye damage.  
H335 - May cause respiratory irritation.  
H360 - May damage fertility or the unborn child.  
H373 - May cause damage to organs (respiratory Tract, Liver) through prolonged or repeated exposure if inhaled.  
H400 - Very toxic to aquatic life.  
H410 - Very toxic to aquatic life with long lasting effects.

**Precautionary Statements – Prevention**

- P203 - Obtain, read and follow all safety instructions before use.  
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray.  
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.  
 P264 - Wash face, hands and any exposed skin thoroughly after handling. Do not touch eyes.  
 P271 - Use only outdoors or in a well-ventilated area.  
 P272 - Contaminated work clothing should not be allowed out of the workspace.  
 P273 - Avoid release to the environment.  
 P280 - Wear protective gloves/ protective clothing/ eye protection/face protection.

**Precautionary Statements - Response**

IF SWALLOWED: Get medical help.

IF exposed or concerned: Get medical advice.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Get medical help if you feel unwell.

Collect spillage.

**IF ON SKIN:**

Get medical help.

Wash with plenty of soap and water.

Specific treatment (see medical advice on this label).

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical help.

**IF IN EYES:**

Immediately rinse with water for several minutes.

Remove contact lenses if present and easy to do. Continue rinsing.

Get medical help.

**Precautionary Statements – Storage**

P403 - Store in a well-ventilated place. Keep container tightly closed.

P405 - Store locked up.

**Precautionary Statements – Disposal**

P501 - Dispose of contents/container to an approved waste disposal plant.

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

This Material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Chemical name	CAS No.	Weight %	Classification (Reg. 1272/2008)
Isobornyl acrylate	5888-33-5	30-50*	Skin Irrit. 2 (H315), Eye Irrit. 2A (H319), Skin Sens. 1 (H317), STOT SE 3 (H335), Aquatic Acute 1 (H400), Aquatic Chronic 1 (H410)
Acrylic Monomer Blend	Proprietary	10-30*	Skin Irrit. 2 (H315), Eye Dam. 1 (H318), Skin Sens. 1 (H317), Repr. 2 (H361), Aquatic Acute 2 (H401), Aquatic Chronic 2 (H411)
1,6-Hexandioldiacrylate	13048-33-4	1-10*	Skin Irrit. 2 (H315), Eye Irrit. 2 (H319), Skin Sens. 1 (H317), Repr. 2 (H361), Aquatic Acute 1 (H400), Aquatic Chronic 2 (H411)
Lactam	Proprietary	1-10*	Eye Irrit. 2A (H319), Skin Sens. 1 (H317), Acute Tox. 4 (H302, H312), STOT RE 1 (H372)
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	1-10*	Skin Sens. 1B (H317), Repr. 1B (H360), Aquatic Acute 2 (H401), Aquatic Chronic 2 (H411)
Photoinitiator Blend	Proprietary	1-10*	Skin Sens. 1 (H317)
Carbon Black	1333-86-4	1-10*	Carcin. 2 (H351)

Remaining ingredients are not considered hazardous in accordance with the Globally Harmonized System (GHS)

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

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**Section 4: FIRST AID MEASURES**

<b>General Advice</b>	In case of serious or persistent conditions, call a doctor or emergency medical care.
<b>Eye Contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while flushing. If symptoms persist, call a physician.
<b>Skin Contact</b>	Immediately wash skin with plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.
<b>Ingestion</b>	Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Clean mouth with water and afterwards drink plenty of water. Consult a physician.
<b>Inhalation</b>	Remove to fresh air. Avoid direct contact with skin. Immediate medical attention is required. If not breathing, give artificial respiration. Artificial respiration and/or oxygen may be necessary. If symptoms persist, call a physician.
<b>Notes to Physician</b>	Eye Contact - Emergency Medical Treatment Procedures: Some photoinitiators cure in the near UV and visible light range. Keep overhead lighting OFF as a precaution. Flush eyes for an additional 15-30 minutes prior to examination under light. DO NOT use UV light with fluorescent stain to examine injured eye without copious irrigation of the eye. May cause sensitization of susceptible persons. Use of epinephrine may be indicated. Treat symptomatically.
<b>Self-Protection of the First Aider</b>	Use personal protective equipment as required. Avoid contact with skin, eyes and clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

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**Section 5: FIRE-FIGHTING MEASURES**

<b>Suitable Extinguishing Media</b>	Use Carbon dioxide (CO <sub>2</sub> ), Dry chemical, or foam. Cool containers with flooding quantities of water until well after fire is out.
<b>Special Protective Equipment for Firefighters</b>	Wear self-contained breathing apparatus and full protective gear for firefighting if necessary.

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**Section 6: ACCIDENTAL RELEASE MEASURES**

<b>Environmental Precautions</b>	Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent the material from entering drains or water courses. Do not flush into surface water or sanitary sewer system.
<b>Personal Precautions</b>	Evacuate personnel to safe areas. Ensure adequate ventilation, wear protective gloves/clothing and eye/face protection.
<b>Methods for Cleaning Up</b>	Take up with sand or other non-combustible absorbent material and place into containers for later disposal. Use personal protective equipment as required.

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**Section 7: HANDLING AND STORAGE**

<b>Handling</b>	Use personal protective equipment as required. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Use with local exhaust ventilation. Protect from light.
<b>Storage</b>	Keep container tightly closed in a dry and well-ventilated place. Protect from light. Keep out of the reach of children. Keep in properly labeled containers.

## Section 8: EXPOSURE CONTROL/PERSONAL PROTECTION

<b>Engineering Measures</b>	Ventilation systems. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.
<b>Personal Protective Equipment</b>	
<b>Respiratory Protection</b>	Provide adequate ventilation. Provide extract ventilation at the points where emissions occur. Static electricity and formation of sparks must be prevented. Do not breathe vapors, mist or gas.
<b>Skin and Body Protection</b>	Wear protective nitrile rubber gloves and impervious protective clothing.
<b>Eye/Face Protection</b>	Wear tight-fitting safety glasses with side-shields.
<b>Environmental Exposure Controls</b>	Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains.
<b>Hygiene Measures</b>	When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food and drink.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid
<b>Color</b>	Black
<b>Odor</b>	Acrylic

<u>Property</u>	<u>Values</u>
<b>pH</b>	No information available
<b>Melting point/range (°C)</b>	No information available
<b>Boiling point/range (°C)</b>	No information available
<b>Flash point</b>	> 95°C
<b>Flammability limit in air</b>	No information available
<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Vapor pressure</b>	No information available
<b>Vapor density</b>	No information available
<b>Specific gravity</b>	No information available
<b>VOC content</b>	No information available
<b>Evaporation rate</b>	No information available
<b>Water Solubility</b>	Practically insoluble
<b>Viscosity at 25 °C</b>	10-25 cP

## Section 10: STABILITY AND REACTIVITY

<b>Conditions to Avoid</b>	Protect from light. Polymerization occurs when exposed to white light, ultraviolet light or heat. Heat, flames, and sparks.
<b>Materials to Avoid</b>	Avoid contact with radical forming initiators, strong oxidizing agents, peroxides, strong acids and bases or reactive metals.
<b>Hazardous Decomposition Products</b>	No decomposition if stored and applied as directed.
<b>Hazardous Polymerization</b>	None under normal processing.

## Section 11: TOXICOLOGY INFORMATION

### Acute Toxicity

#### Information on Likely Routes of Exposure

Inhalation	Irritating to respiratory tract. Avoid breathing vapors or mists.
Eye contact	Causes serious eye damage.
Skin contact	Irritating to skin. May cause allergic skin reaction.
Ingestion	Moderately Toxic. Do NOT taste or swallow.

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Irritating to skin.
Serious eye damage/eye irritation	Risk of serious damage to eyes. Irritating to eyes.
Sensitization	May cause an allergic skin reaction.
Mutagenic effects	No information available.
Carcinogenic effects	Note: The IARC (International Agency for Research on Cancer) has listed carbon black as "possibly carcinogenic to humans". However, Amica systems has concluded that the presence of carbon black in this mixture does not present a health hazard. The IARC classification is based on studies in rats using high concentrations of pure, unbound carbon black particles of respirable size. The carbon black in this mixture is dispersed in a liquid and is not expressed as "free" carbon black particles. Therefore, this classification does not apply to this product.
Reproductive toxicity	May damage fertility. May cause harm to the unborn child
STOT – single exposure	May cause respiratory irritation.
STOT – repeated exposure	May cause damage to respiratory tract and liver through prolonged or repeated exposure.
Aspiration hazard	No information available.

#### Numerical measures of toxicity – Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (Oral)	2911 mg/kg
ATEmix (dermal)	2490 mg/kg
ATEmix (inhalation-mist)	No information available.

#### Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Isobornyl acrylate	4350 mg/kg (Rat)	>3000 mg/kg (Rabbit)	
Acrylic Monomer Blend	>2000 mg/kg (Rat)	>2000 mg/kg (Rabbit)	
1,6-Hexandioldiacrylate	>5000 mg/kg (Rat)	3650 mg/kg (Rabbit)	
Lactam	1114 mg/kg (Rat)	1700 mg/kg (Rat)	
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	>5000 mg/kg (Rat)	>2000 mg/kg (Rabbit)	
Photoinitiator Blend	>2000 mg/kg (Rat)	>2000 mg/kg (Rat)	

## Section 12: ECOLOGICAL INFORMATION

### Acute aquatic toxicity

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Isobornyl acrylate	EC <sub>50</sub> , 72 hours: 1.98mg/L	LC <sub>50</sub> , 96 hours: 0.704mg/L	EC <sub>50</sub> , 48 hours: 0.092mg/L
Acrylic Monomer Blend	EC <sub>50</sub> , 72 hours: 26.53mg/L	LC <sub>50</sub> , 96 hours: 3.75mg/L	EC <sub>50</sub> , 48 hours: 26.53mg/L
1,6-Hexandioldiacrylate	EC <sub>50</sub> , 72 hours: 2.33mg/L	LC <sub>50</sub> , 96 hours: 0.38mg/L	LC <sub>50</sub> , 48 hours: 2.7mg/L
Lactam	-	-	-
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	EC <sub>50</sub> , 72 hours: >2.01mg/L	LC <sub>50</sub> , 48 hours: 1.4mg/L	EC <sub>50</sub> , 48 hours: 3.53mg/L
Photoinitiator Blend	-	-	-

**Persistence and degradability** No information available

**Bioaccumulation/Accumulation** No information available

**Mobility** No information available

**Other Adverse Effects** No information available

## Section 13: DISPOSAL CONSIDERATIONS

**Waste from Residues/Unused Products** Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Dispose of in accordance with local and national regulations. All waste should be disposed of using a Registered Waste Carrier operating under the Environmental Protection Act (Duty of Care) Regulations 1992 (S.I. No. 2839).

**Contaminated Packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Other Information** According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

## Section 14: TRANSPORT INFORMATION

### DOT

UN Number	UN3082
UN Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.(Acrylate)
Transport Hazard Class(es)	
Class	9
Label(s)	9
Packing Group	III
Environmental Hazards	Yes
Special precautions for user	Not regulated if packaging <= 5L

### IATA

UN Number	UN3082
UN Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.(Acrylate)
Transport Hazard Class(es)	
Class	9
Label(s)	9MI (Miscellaneous)
Packing Group	III
Environmental Hazards	Yes
Special precautions for user	SPECIAL PROVISION A197

## Other information

Passenger and cargo aircraft Allowed.  
Cargo aircraft only Allowed.

**IMDG**

UN Number UN3082  
UN Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Acrylate)  
Transport Hazard Class(es)  
Class 9  
Label(s) 9  
EmS No. F-A, S-F  
Packing Group III  
Limited quantity 5.00L  
Excepted quantity E1  
  
Environmental Hazards Yes  
Special precautions for user CODE 2.10.2.7

**Section 15: REGULATORY INFORMATION****US. Toxic Substances Control Act (TSCA)**

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substance Control Act (U.S. EPA TSCA) 8(b) inventory.

**US. OSHA Classification**

This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

**US State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS No.	California Prop. 65
Carbon Black	1333-86-4	Carcinogen

**US State Right-to-Know Regulations**

This product is subjected to U.S. State Right-to-know regulations as noted below.

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Rhode Island
Carbon Black		X	X	X

**Section 16: OTHER INFORMATION**

**Prepared by** Amica Systems  
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**Issue Date** 02-April-2019  
  
**Revision Date** 04-October-2021  
  
**Revision Note** No information available

**Disclaimer**

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of Safety Data Sheet**