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UNIVERSAL PHOTONICS™ INCORPORATED

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NUVITE Chemical Compounds is a Division of UPI

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 13-Mar-2023

Revision Number 1

1. Identification

1.1. Product identifier

Product Code(s) PC2241 SERIES

Product Name NUSHINE IIF9

Contains Silicon Carbide

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use Restricted to professional users

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Supplier

Universal Photonics, Inc.
85 Jetson Lane
Central Islip, NY 11722

For further information, please contact

1.4. Emergency telephone number

Emergency Telephone Verisk 3E™: ACCT # 3665 Access Code: 333748
Domestic: 1-866-519-4752
International: +1-760-602-8700

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Carcinogenicity	Category 1B - (H350i)
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2.2. Label elements

Contains Silicon Carbide

**Signal word**

Danger

Hazard statements

H350i - May cause cancer by inhalation

Precautionary Statements - EU (§28, 1272/2008)

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P405 - Store locked up

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

2.3. Other hazards

No information available.

3. Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Silicon Carbide	206-991-8	409-21-2	20 - 30%	Carc. 1B (H350i)	No data available
Aluminum Oxide	215-691-6	1344-28-1	10 - 20%	No data available	No data available
Isoparaffinic Hydrocarbon	265-149-8	64742-47-8	10 - 20%	Asp. Tox. 1 (H304)	No data available

Full text of H- and EUH-phrases: see section 16

4. First-aid measures

4.1. Description of first aid measures**General advice**

IF exposed or concerned: Get medical advice/attention.

Inhalation

Remove to fresh air.

Eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact

Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Ingestion Clean mouth with water and drink afterwards plenty of water.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms No information available.

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

Note to physicians Treat symptomatically.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical No information available.

5.3. Advice for firefighters

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

8. Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	United Kingdom	France	Spain	Germany
Silicon Carbide 409-21-2	-	TWA: 10 mg/m ³ TWA: 4 mg/m ³ STEL: 30 mg/m ³ STEL: 12 mg/m ³	TWA: 10 mg/m ³	TWA: 10 mg/m ³ TWA: 3 mg/m ³	TWA: 1.25 mg/m ³ TWA: 10 mg/m ³
Aluminum Oxide 1344-28-1	-	TWA: 10 mg/m ³ TWA: 4 mg/m ³	TWA: 10 mg/m ³	TWA: 10 mg/m ³	TWA: 1.25 mg/m ³ TWA: 10 mg/m ³
Isoparaffinic Hydrocarbon 64742-47-8	-	-	-	-	TWA:
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Silicon Carbide 409-21-2	-	TWA: 10 mg/m ³ TWA: 3 mg/m ³ TWA: 0.1 fiber/cm ³	-	TWA: 0.1 fiber/cm ³	-
Aluminum Oxide 1344-28-1	-	TWA: 10 mg/m ³	-	-	TWA: 5 mg/m ³ TWA: 2 mg/m ³
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Silicon Carbide 409-21-2	TWA: 5 mg/m ³ STEL 10 mg/m ³	TWA: 3 mg/m ³ TWA: 10 mg/m ³	TWA: 10 mg/m ³	TWA: 0.1 fiber/cm ³ STEL: 0.3 fiber/cm ³	TWA: 3 mg/m ³ TWA: 0.1 f/cc TWA: 10 mg/m ³ STEL: 30 mg/m ³ STEL: 9 mg/m ³ STEL: 0.3 f/cc
Aluminum Oxide 1344-28-1	TWA: 5 mg/m ³ STEL 10 mg/m ³	TWA: 3 mg/m ³ STEL: 24 mg/m ³	TWA: 2.5 mg/m ³ TWA: 1.2 mg/m ³	TWA: 10 mg/m ³ STEL: 20 mg/m ³	TWA: 10 mg/m ³ TWA: 4 mg/m ³ STEL: 30 mg/m ³ STEL: 12 mg/m ³
Isoparaffinic Hydrocarbon 64742-47-8	-	TWA: 50 ppm TWA: 350 mg/m ³ TWA: 5 mg/m ³ STEL: 100 ppm STEL: 700 mg/m ³	-	-	-

Biological occupational exposure limits

Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Silicon Carbide 409-21-2	- () -		-	-	-
Aluminum Oxide 1344-28-1	60 µg/g Creatinine - urine (Aluminum) - after end of work day, at the end of a work week/end of the shift - () -	50 µg/g creatinine - urine (Aluminum) - after several shifts (for long-term exposures)	-	-	-

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Personal protective equipment

Eye/face protection No special protective equipment required.

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

Environmental exposure controls No information available.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Paste
Appearance No information available
Color silver
Odor No information available.
Odor threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	8.5 - 9.5	
Melting point / freezing point	No data available	Not determined
Boiling point / boiling range	100 °C	
Flash point	99 - 99 °C	
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	

Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	1.12 - 1.2	
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	100000	
Dynamic viscosity	No data available	None known
Explosive properties	No information available	
Oxidizing properties	No information available	

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity**10.1. Reactivity**

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

11. Toxicological information**11.1. Information on toxicological effects****Information on likely routes of exposure**

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Numerical measures of toxicity**Acute toxicity**

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

ATEmix (oral)	6,918.10 mg/kg
ATEmix (dermal)	2,007.70 mg/kg
ATEmix (inhalation-gas)	99,999.00 ppm
ATEmix (inhalation-dust/mist)	99,999.00 mg/l
ATEmix (inhalation-vapor)	99,999.00 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Aluminum Oxide	> 5000 mg/kg (Rat)		
Isoparaffinic Hydrocarbon	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h

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

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	European Union
Silicon Carbide	Carc. 1B

Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

11.2. Information on other hazards**11.2.1. Endocrine disrupting properties****Endocrine disrupting properties** No information available

Product Information		
Method	Species	Results

11.2.2. Other information**Neurological effects** No information available**Other adverse effects** No information available**12. Ecological information****12.1. Toxicity****Ecotoxicity****Unknown aquatic toxicity** Contains 0 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Isoparaffinic Hydrocarbon	-	LC50: =45mg/L (96h, Pimephales promelas) LC50: =2.2mg/L (96h, Lepomis macrochirus) LC50: =2.4mg/L (96h, Oncorhynchus mykiss)	-	-

12.2. Persistence and degradability**Persistence and degradability** No information available.**12.3. Bioaccumulative potential****Bioaccumulation** There is no data for this product.**12.4. Mobility in soil****Mobility in soil** No information available.**12.5. Results of PBT and vPvB assessment****PBT and vPvB assessment**

Chemical name	PBT and vPvB assessment
Silicon Carbide	The substance is not PBT / vPvB PBT assessment does not apply
Aluminum Oxide	The substance is not PBT / vPvB PBT assessment does not apply
Isoparaffinic Hydrocarbon	The substance is not PBT / vPvB

12.6. Other adverse effects**Other adverse effects** No information available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

14. Transport information

IMDG

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Marine pollutant	Not applicable
14.6 Special Precautions for Users	
Special Provisions	None
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code	No information available

RID

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special Precautions for Users	
Special Provisions	None

ADR

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special Precautions for Users	
Special Provisions	None

IATA

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special Precautions for Users	
Special Provisions	None

15. Regulatory information

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

National regulations

France**Occupational Illnesses (R-463-3, France)**

Chemical name	French RG number	Title
Silicon Carbide 409-21-2	RG 25	-
Isoparaffinic Hydrocarbon 64742-47-8	RG 84	-

Germany

Water hazard class (WGK) slightly hazardous to water (WGK 1)

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorization per REACH Annex XIV
Silicon Carbide - 409-21-2	28. 75.	

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Does not comply
KECL	Does not comply
PICCS	Does not comply
AICS	Does not comply

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report No information available

16. Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H304 - May be fatal if swallowed and enters airways

H350i - May cause cancer by inhalation

Legend

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)
 Ceiling Maximum limit value * Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapor	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitization	Calculation method
Skin sensitization	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set

RTECS (Registry of Toxic Effects of Chemical Substances)

World Health Organization

Revision date

13-Mar-2023

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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End of Safety Data Sheet