SDS

SAFETY DATA SHEET

SDS-UK\B_4C

BORON CARBIDE POWDER

Section 1 – Product and Company Identification

	Corporate Number	**UK\B_4C**	
	Manufacturer/Distributor	UK Abrasives, Inc. 3045 MacArthur Blvd. Northbrook, IL 60062	
	Phone Numbers	Product Information Transport Emergency Medical Emergency	847-291-3566 847-291-3566 847-291-3566
	Trade Names and Synonyms	BORON CARBIDE	
	CAS Name	BORON CARBIDE	
	CAS Number	12069-32-8	
	Formula	B_4C	
	TSCA Inventory status	Reported/Included	

Section 2 – Hazards Identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)
Eye damage/irritation (Category 2A), H319
Skin corrosion/irritation (Category 2), H316
Acute toxicity (Inhalation)(Category 4), H332

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

Pictogram 

Signal Word Warning

Hazard statement(s)

H316	Causes mild skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

Precautionary statement(s)

P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash hands, forearms, and exposed areas thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear eye protection/face protection and protective gloves.
P302+352	If on skin: Wash with plenty of water and soap.
P304+340	If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+351+338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a poison center/doctor/physician if you feel unwell.
P333+313	If skin irritation occurs: Get medical advice/attention.
P337+313	If eye irritation occurs: Get medical advice/attention.
P362	Take off contaminated clothing and wash it before reuse.
P403+233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS – none

Section 3 – Composition / Information on Ingredients

Chemical Name	CAS #	% (wt)	UN; EINECS	Classification
Boron Carbide	12069-32-8	85-95%	235-111-5	Eye damage/irritation. 2A; H319, Skin corrosion/irritation 2; H316, Acute tox. (inhalation) 4; H332
Nitrogen	7727-37-9	0-2%	231-783-9	Gases under pressure (compressed gas); H280
Boron Oxide (B_2O_3)	1303-86-2	0-2%	215-125-8	Reproductive tox. 1B; H360
Oxygen	7782-44-7	0-1%	231-956-9	Oxdizing gas 1; H270
Iron	7439-89-6	<0.3%	231-096-4	N/A
Silicon	7440-21-3	<0.3%	231-130-8	Flammable solids 2; H228
Graphite	7782-42-5	0-3%	231-955-3	Eye damage/irritation. 2A; H319, STOT (SE) 3; H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4 – First Aid Measures

Eyes	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin	After contact with skin, wash immediately with plenty of water and soap. When in doubt or if symptoms are observed, get medical advice.
After Swallowing	Do not induce vomiting. Never give anything by mouth to an unconscious person. If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.
Inhalation	If breathing is irregular or stopped, administer artificial respiration. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice immediately.
General advice:	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Section 5 – Fire Fighting Measures

Suitable extinguishing media:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special protective equipment for fire fighters:	Wear NIOSH approved positive pressure self-contained breathing apparatus Wear suitable protective clothing.
Hazardous Combustible Products:	Smoke, fumes, oxides of carbons, incomplete combustion products.
Other Information:	Product is not flammable and is not combustible.

Section 6 – Accidental Release Measures

Personal Precautions	Use personal protection equipment. Provide adequate ventilation. Avoid dust formation. Avoid breathing dust, vapors, fumes, and mist.
Environmental Precautions	Avoid release to the environment. Do not let product enter drains.
Methods & material for containment and cleaning up	Pick up and sweep without creating dust. Dispose as waste requiring special attention. Collect in closed and suitable containers for disposal.
Reference to other sections	Information on safe handling: See Section 7. Information on personal protection equipment: See Section 8. Disposal considerations: See Section 13.

Section 7 – Handling & Storage

Precautions for safe handling	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide adequate ventilation as well as local exhaustion at critical locations. When using do not eat, drink, smoke, sniff. Always use protective equipment while handling the product.
Conditions for safe storage	Always close containers tightly after the removal of product. Store in a dry place. Store in a closed container. Store in a well-ventilated place. Keep away from sparks and open flames.

Section 8 – Exposure Controls / Personal Protection

CONTROL PARAMETERS

Components with workplace control parameters

Component	CAS #	Value	Control Parameters	Basis
Boron Carbide	12069-32-8	N/A	N/A	N/A
Nitrogen	7727-37-9	N/A	N/A	N/A
Boron Oxide (B_2O_3)	1303-86-2	TWA TWA PEL (TWA)	10 mg/m^3 10 mg/m^3 15 mg/m^3	US ACGIH US NIOSH US OSHA
Oxygen	7782-44-7	N/A	N/A	N/A
Iron	7439-89-6	N/A	N/A	N/A
Silicon	7440-21-3	REL (TWA) PEL (TWA)	5 mg/m^3 5 mg/m^3	US NIOSH US OSHA
Graphite	7782-42-5	TWA REL (TWA) PEL (TWA) IDLH	2 mg/m^3 2.5 mg/m^3 5 mg/m^3 1250 mg/m^3	US ACGIH US NIOSH USOSHA US IDLH

Personal Protective Equipment Pictograms

EXPOSURE CONTROL

Appropriate engineering controls	Handle in well ventilated areas. Handle in accordance to good industrial hygiene and safety practice. Minimize dust formation.
General protective & hygienic measures	Follow general health and safety measures. Keep away from food, drink and animal feeding stuffs. Remove contaminated, saturated clothing immediately. Wash hands before breaks and after work.

Personal protective equipment

Respiratory Protection	Handling should be held in ventilated places and air-purifying respirators should be worn in places where there is risk assessment. Use respirators and components that have been tested and approved under government standards such as NIOSH (US) or CEN (EU). Wear NISOH approved dust masks if dust has the potential to become airborne.
Hand Protection	Wear protective gloves (EN 374). Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with this product.
Eye / Face Protection	Protective eye glasses with side-shields that are tested and approved under government standards such as NIOSH (US) or EN 166 (EU).
Body Protection	Wear a complete suit that will protect from chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Section 9 – Physical & Chemical Properties

Information on basic physical and chemical properties

Physical form	Solid
Appearance	Light to dark grey/black granular or powder
Odor	None
pH	No data available
Melting Point	2450ºC (4442 ºF)
Boiling Point	No data available
Flash Point	Not applicable
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Upper explosive limits	No data available
Lower explosive limits	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Relative Density	2.51 (water = 1)
Water Solubility	Insoluble
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	Not applicable
Explosive properties	No data available
Oxidizing properties	Not applicable
Vapor pressure	No data available
Density (at 20°C)	2.51 g/cm^3

Section 10 – Stability & Reactivity

Reactivity	No data available
Chemical Stability	Stable under recommended storage conditions
Possibility of hazardous reactions	No dangerous reactions known. Decomposition will not occur if used & stored according to specifications.
Conditions to avoid	Excessive heat, sparks, open flames, and ignition sources.
Incompatible materials	Strong oxidizing agents, strong bases and acids.
Hazardous decomposition products	Carbon oxides (CO, CO_2). Oxides of boron.

Section 11 – Toxicological Information

Information on toxicological effects

Acute toxicity

- Harmful if inhaled

- Boron oxide ATE oral = 3150 mg/kg

Skin corrosion / irritation	➢ No data available
Serious eye damage / irritation	➢ No data available
Respiratory or skin sensitization	➢ No data available
Germ cell mutagenicity	➢ No data available
Reproductive toxicity	➢ No data available
STOT-Single exposure	➢ No data available
STOT – repeated exposure	➢ No data available
Aspiration hazards	➢ No data available

Potential health effects

Inhalation: Dust may cause irritation to the respiratory tract.
Ingestion: May be harmful if swallowed.
Eyes: May cause serious eye irritation.
Skin: Prolonged contact with dust ay cause mild skin irritation.

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Section 12 – Ecological Information

Toxicity	➢ No data available
Persistence and degradability	➢ No data available
Bio accumulative potential	➢ No data available
Mobility in soil	➢ No data available
Result of PBT and vPvB assessment	➢ PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
Other adverse effect	➢ An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 – Disposal Considerations

Waste Treatment Methods
Consult the appropriate authorities about waste disposal. Deliver to an approved waste disposal company.
Clean contaminated objects and areas thoroughly observing environmental regulations. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

Section 14 – Transit Information

DOT (US):
Not dangerous goods

IMDG:
Not dangerous goods

IATA:
Not dangerous goods

Section 15 – Regulatory Information

OSHA Hazards
No OSHA Hazards

SARA 302 Components
SARA 302: No chemicals in this product are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Delayed (chronic) health hazard. Immediate (acute) health hazard).

Massachusetts Right to Know

Chemical Name:	CAS #
Boron Oxide	1303-86-2
Silicon	7440-21-3

Pennsylvania Right to Know

Chemical Name:	CAS #
Boron Oxide	1303-86-2
Oxygen	7782-44-7
Nitrogen	7727-37-9
Silicon	7440-21-3

New Jersey Right to Know

Chemical Name:	CAS #
Boron Oxide	1303-86-2
Oxygen	7782-44-7
Nitrogen	7727-37-9
Silicon	7440-21-3

California Prop. 65 Components
This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

International Inventories:
All components in the product are in compliance to the following international inventories list:

USA (TSCA):	In compliance
EU (EINECS):	In compliance
Canada (DSL):	In compliance
Canada (NDSL):	Not listed
Japan (ENCS):	In compliance
Philippines (PICCS):	In compliance
Korea (KECL):	In compliance
Australia (AICS):	In compliance
China (IECSC):	In compliance

Legend:

TSCA	United States Toxic Substances Control Act Section 8 (b) Inventory
EINECS/ELINCS	European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
DSL/NDSL	Canadian Domestic Substances List/Non-Domestic Substances List
ENCS	Japan Existing and New Chemical Substances
PICCS	Philippines Inventory of Chemicals and Chemical Substances
KECL	Korean Existing and Evaluated Chemical Substances
AICS	Australian Inventory of Chemical Substances
IECSC	China Inventory of Existing Chemical Substances

Section 16 – Other Information

HMIS RATING	
Health Hazard:	1*
Flammability:	0
Physical Hazard:	0

NFPA RATING	
Health Hazard:	1
Flammability:	0
Reactivity Hazard:	0

Full text of H-Statements referred to under sections 2 and 3.

H228	Flammable solid.
H270	May cause or intensify fire; oxidizer.
H280	Contains gas under pressure; may explode if heated.
H316	Causes mild skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H360	May damage fertility or the unborn child.
Oxidizing gas 1	Oxidizing gas Category 1
Flammable solid 2	Flammable solid Category 2
Acute tox. (inhalation) 4	Acute toxicity (Inhalation) Category 4
Eye damage/irritant 2A	Eye damage/irritant Category 2A
Skin corrosion/irritation 2	Skin corrosion/irritation Category 2
STOT (SE) 3	Specific target organ toxicity (Single exposure) Category 3

Employee should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees.

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Responsibility for SDS:

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End of SDS