Safety Data Sheet

according to 1907/2006/EC, Article 31

Date of Print: 11/11/2015

Version: 2.0

SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product Identifier

Substance name: SupraNano Black Latent Fingerprint Powder

Product no.: 01BLK060

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant identified uses: Professional Uses [SU 22]; Law enforcement/forensic applications. [PC0] Other; Fingerprint development

Uses advised against: No further relevant information available

1.3 Details of Supplier of Safety Data Sheet

Manufacturer: ArroGen Supranano Ltd.

Address: INEX Business Facility, Herschel Annex
Newcastle University Campus
Newcastle upon Tyne
NE1 7RU
United Kingdom
www.arrogengroup.co.uk

1.4 Emergency Telephone Number

Telephone number: +44 (0) 560 364 6985 (Languages: English)

Opening hours: Monday – Friday, 0900 - 1700

SECTION 2: Hazards Identification

2.1 Classification of the Substance or Mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]

GHS07 Warning

Skin Irrit. 1	H315	Causes skin irritation
Eye Irrit. 2	H319	Causes serious eye irritation
STOT SE 3	H335	May cause respiratory irritation

2.2 Labelling according to Regulation (EC) No 1272/2008 [CLP]:

This mixture is classified and labelled according to the CLP regulation

Hazard pictograms:	GHS07	
Signal word:	Warning	
Hazard statements:	H315	Causes skin irritation
	H319	Causes serious eye irritation
	H335	May cause respiratory irritation
Precautionary statements:	P261	Avoid breathing dust/fume/gas/mist/vapours/spray
	P280	Wear protective gloves/protective clothing. 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.
	P405	Store locked up
	P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
Supplemental hazard information (EU):		Not applicable

2.3 Other Hazards

Care should be taken to avoid dust formation.

SECTION 3: Composition/Information on Ingredients

3.2 Mixtures

Description of Mixture: Black Powder
Hazardous Ingredients: Carbon black, iron (II,III) oxide

CAS No.	EC No.	% [Weight]	Name	Classification according to Regulation (EC) No. 1278/2008 (CLP)	Classification according to Directive 67/548/EEC or Directive 1999/45/EC
9005-84-9		70%	Starch	Not applicable	Not applicable
1333-86-4	215-609-9	5 – 15%	Carbon Black	Not applicable	Not applicable
1317-61-9	215-277-5	5 – 15%	Iron(II,III) Oxide	Flam. Sol. 2, H228 Eye Irrit. 2, H319 STOT SE 3, H335	X_i; Irritant, R36/R37/R38

SECTION 4: First Aid Measures

4.1 Description of First Aid Measures

Following inhalation: Supply fresh air. If required, provide artificial respiration. Keep warm. Consult doctor if symptoms persist. Seek immediate medical advice.

Following skin contact: Instantly wash with water and soap and rinse thoroughly. Seek immediate medical advice

Following eye contact: Rinse opened eye for several minutes under running water. Then consult doctor.

Following ingestion: Seek medical treatment

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

If ingested: Irritating if swallowed; redness of mouth and throat may occur.

If inhaled: Dust may be irritating to respiratory tract. Provide appropriate local exhaust ventilation at machinery and at places where dust can be generated. Chronic lung conditions may be aggravated by high concentrations of dust.

If contact with skin: May cause mechanical irritation, soiling and skin drying. Avoid contact with skin. No cases of sensitization in humans have been reported.

If contact with eyes: May cause mechanical irritation. Avoid contact with eyes.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

No further relevant information available

SECTION 5: Firefighting Measures

5.1 Extinguishing Media

Suitable extinguishing media: Use foam, carbon dioxide or dry chemical.

For safety reasons unsuitable extinguishing agents: Water: may scatter and spread fire. DO NOT USE high pressure media which could cause formation of a potentially explosive dust-air mixture.

5.2 **Special Hazards Arising from the Substance or Mixture**

If this product is involved in a fire, the following can be released: Metal oxide, carbon monoxide, carbon dioxide and sulphur dioxides.

5.3 **Advice for Firefighters**

Protective equipment: Wear self-contained breathing apparatus. Wear full protective suit.

Hazardous combustion products/special hazards: Fine, dry dust suspensions can explode in presence of ignition. Combustion produces carbon monoxide, carbon dioxide, smoke, soot and minor amount of nitrogen oxides and sulphur. It may not be obvious that material is burning unless the material is stirred and embers and/or sparks are apparent. Material should be observed closely for at least 48 hours to ensure no smoldering material is present.

SECTION 6: Accidental Release Measures

6.1 **Personal Precautions, Protective Equipment and Emergency Procedures**

Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Refer to section 8 for personal protection. Do not create dust. Wet material may produce slippery walking surfaces.

6.2 **Environmental Precautions**

Do not allow material to be released to the environment without proper government permits. Do not allow product to reach sewage system or water bodies. Do not allow to enter the ground/soil.

6.3 **Methods and Material for Containment and Cleaning Up**

Keep away from ignition sources. Ensure adequate ventilation. Vacuum or sweep and transfer to a sealable, labelled container and dispose according to local regulations. If the spilled material contains dust or has the potential to create dust use explosion-proof vacuums and/or cleaning systems suitable for combustible dusts. Use of a vacuum with high efficiency particulate air (HEPA) filtration is recommended. Do not create dust could by using a brush or compressed air. Prevent further leakage or spillage if safe to do so. Dry sweeping is not recommended. Water spray will produce slippery walking surfaces and will not result in satisfactory removal of contamination.

6.4 **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 information on disposal.

SECTION 7: Handling and Storage

7.1 **Precautions for Safe Handling**

Keep containers tightly sealed. Store in a cool, dry place in tightly closed containers. Ensure good ventilation/exhaustion at the workplace. Avoid formation of dust. Minimise release of the mixture into the environment.

Information about protection against explosions and fires: Protect against electrostatic charges.

7.2 **Conditions for Safe Storage, Including any Incompatibilities**

Store in a cool, well-ventilated location. Store in a cool location. Keep away from oxidising agents. Keep container tightly closed until in use.

7.3 **Specific End Use(s)**

The intended used of the product is for the visualisation of latent fingermarks only. The powder should be picked up using a suitable brush, ensuring excess powder is tapped back into the jar. The powder should be brushed gently across the surface of the mark to allow for visualisation. Waste powder should be transferred to a sealable container. See section 13 for information regarding disposal.

7.4 **Reference to Other Sections:**

See section 13 for information on disposal.

SECTION 8: Exposure Controls/Personal Protection

8.1 **Control Parameters** Not required.

8.2 **Exposure Controls**

Personal Protective Equipment

General protective and hygienic measures:	The usual precautionary measures should be adhered to in handling chemicals. Keep away from foodstuffs, beverages and food. Instantly remove any impregnated garments. Wash hands during breaks and at the end of work. Avoid contact with eyes and skin. Handle in accordance with good industrial hygiene and safety practice by using adequate ventilation and personal protection as needed. Maintain an ergonomically appropriate working condition.
Breathing equipment:	Not required in unconfined or well-ventilated areas. Use NIOSH or EU EN149 standard approved respirators for areas where general ventilation is not possible.
Protection of hands:	Check protective gloves prior to each use for their proper condition. 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.
Material of gloves:	Impervious gloves
Penetration time of glove material:	Not determined.
Eye protection:	Safety glasses or splash goggles are advised to be worn while handling.
Body protection:	Protective work clothing.

SECTION 9: Physical and Chemical Properties

9.1	**Information on Basic Physical and Chemical Properties**	
	General Information	
	Appearance:	
	Form:	Powder
	Colour:	Black
	Smell:	Not determined
	Odour threshold:	Not determined
	pH-value:	Not applicable
	Change in condition	
	Melting point/range:	Not determined
	Boiling point/range:	Not determined
	Sublimation temperature/start:	Not determined
	Inflammability (solid, gaseous)	
	Ignition temperature:	Not determined
	Decomposition temperature:	Not determined
	Self-inflammability:	Not determined
	Danger of explosion	
	Critical values for explosion:	
	Lower:	Not determined
	Upper:	Not determined
	Steam pressure:	Not applicable
	Density at 20 °C	Not determined
	Settled apparent density at 20 °C:	Not determined
	Relative density:	Not determined
	Vapour density:	Not applicable
	Evaporation rate:	Not applicable
	Solubility in / Miscibility with water:	Insoluble in water and solvents, dispersible in liquids
	Partition coefficient (n-octanol/water):	Not determined
	Viscosity:	
	Dynamic:	Not applicable
	Kinematic:	Not applicable
9.2	**Other Information:**	No further relevant information available

SECTION 10: Stability and Reactivity

10.1	**Reactivity**	No information known
10.2	**Chemical Stability**	Stable under recommended storage conditions
	Thermal Decomposition/conditions to avoid:	No decomposition if used and stored according to specifications.
10.3	**Possibility of Hazardous Reactions**	Reacts with strong oxidising agents

10.4	**Conditions to Avoid**	Do not expose to heat above 300 °C. Keep away from oxidising agents in order to avoid exothermic reactions.
10.5	**Incompatible Materials**	Oxidising agents such as chlorates, bromates and nitrates.
10.6	**Hazardous Decomposition Products**	Metal oxide, carbon monoxide, carbon dioxide and oxides of sulphur. In combustion emits smoke, soot and toxic fumes.

SECTION 11: Toxicological Information

11.1 Information on Toxicological Effects

11.1.1 Acute toxicity:

Hazardous components	EC No.	CAS no.	LC/LD_{50} values relevant for classification
Iron(II,III) Oxide	215-277-5	1317-61-9	No effects known

Skin irritation or corrosion: May cause irritation
Eye irritation or corrosion Causes serious eye irritation.
Sensitization: No sensitizing effect known.
Germ cell mutagenicity: No effects known.
Carcinogenicity: No effects known.
Reproductive toxicity: No effects
Specific organ system toxicity
Repeated exposure: No effects known.
Single exposure: May cause respiratory irritation.
Aspiration hazard: No effects known
Other information (experimental toxicity): CARBON BLACK: Mutagenic effects have been observed on tests with bacteria and with laboratory animals.
Additional toxicological information: The acute and chronic toxicity of this substance is not fully known.

SECTION 12: Ecological Information

12.1 Toxicity
Aquatic toxicity: No further relevant information available
12.2 Persistence and Degradability: No further relevant information available
12.3 Bioaccumulative Potential: No further relevant information available
12.4 Mobility in Soil: No further relevant information available
Additional ecological information: Do not allow material to be released to the environment without proper government permits. Generally not hazardous for water. Avoid transfer into the environment.
12.5 Results of PBT and vPvB Assessment
PBT: Not applicable
vPvB: Not applicable
12.6 Other Adverse Effects: No further relevant information available.

SECTION 13: Disposal Considerations

13.1 Waste Treatment Methods
Recommendation: Hand over to disposers of hazardous waste. Must be treated under adherence to official regulations. Consult state, local or national regulations for proper disposal of used and unused product.
Packaging: Disposal must be in line with official regulations.

SECTION 14: Transport Information

14.1	**UN Number:**	Not applicable
14.2	**UN Proper Shipping Name:**	Not applicable
14.3	**Transport Hazard Class(es):**	Not applicable
14.4	**Packing Group**	Not applicable
14.5	**Environmental Hazards:**	Not applicable
14.6	**Special Precautions for User:**	Not applicable
14.7	**Transport in Bulk According to Annex II of MARPOL73/78 and the IBC Code:**	Not applicable

SECTION 15: Regulatory Information

15.1 **Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture**

No data available

15.2 **Chemical Safety Assessment**

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other Information

16.1 **Disclaimer:**

The above information is believed to be correct, however it does not proclaim to be all-inclusive and shall be used only as a guide. ARRO SupraNano Ltd shall not be held liable for any damage from handling or contact with the above product. Independent judgement of the suitability of this product should be exercised in supplement to this information to ensure proper use and protect the health and safety of employees.

(i) **Abbreviations and acronyms:**

GHS:	Globally Harmonized System of Classification and Labelling of Chemicals
CAS:	Chemical Abstracts Service (division of the American Chemical Society)
LC_{50}:	Lethal concentration, 50 percent
LD_{50}:	Lethal dose, 50 percent

(ii) **Key literature references and sources for data**

Toxicity Values: Retrieved from Toxicology Data Network http://toxnet.nlm.nih.gov/

This SDS has been compiled and is solely intended for this product.