BB&G AWES recovered Carbon Black
Material Safety Data Sheet ("MSDS")

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name:	Black Belt recovered Carbon
Registration number:	(not relevant, mixture)
Alternative names:	-

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

Relevant identified uses: Filler for rubber, pigment for plastics, paints and inks

1.3. Details of the supplier of the safety data sheet

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FAO Germano Carreira
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2495-402 Fátima
Portugal
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1.4. Emergency telephone number

24h emergency information service: +351 912 029 396

2. HAZARDS IDENTIFICATION

2.1. Classification of the mixture

Classification according to Regulation 1272/2008/EC (CLP):	Not considered as hazardous mixture.
Warning H statements:	None

2.2. Label elements according to Regulation 1272/2008/EC (CLP)

Warning H statements:	None
Precautionary P statements:	None

2.3. Other hazards

The product has no other known specific hazards for human or environment.
The product does not meet the criteria for PBT or vPvB substances.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance:

Substance: Not relevant (mixture)

3.2. Mixture

Mixture: Carbon black (C),
Zinc sulphide (ZnS)
Silicon dioxide (SiO_2)

To the present knowledge of the supplier, the product does not contain any other ingredients which are classified and which would contribute to the classification of the mixture and require reporting in this section.

Description	CAS number	EC number	REACH registr.	Conc. % wt.	Classification acc. to 1272/2008/EC (CLP)		
					H phrase	H cat.	H picto
Carbon black	1333-86-4	215-609-9	01-2119384822-32	70-80%	-	-	-
Zinc sulphide	1314-98-3	215-252-3	-	3-10%	-	-	-
Silicon dioxide (amorphous)	7631-86-9	231-545-4	-	2-20%	-	-	-

4. FIRST AID MEASURES

4.1. Description of first aid measures

General advice: In case of accident or when feeling unwell, immediately seek medical advice and show this material safety data sheet.

In case of ingestion: Rinse mouth immediately and drink plenty of water.
In case of feeling unwell obtain medical help.

In case of inhalation: Take the victim into fresh air, keep him warm and let him rest.
In case of feeling unwell obtain medical help.

In case of skin contact: Immediately wash the skin surface with plenty of water and soap (for 15 minutes).
Remove contaminated clothing and wash before reuse.
In case of skin irritation or rashes: obtain medical help.

In case of eye contact: Flush with water holding eyelids apart and moving the eyeballs (for at least 10 – 15 minutes).
Remove contact lenses if present. Continue rinsing.

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

Frequent or prolonged skin contact may cause skin irritation.
Contact with eyes can cause irritation.

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

First aid, decontamination, symptomatic treatment.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media

5.1.1. Suitable extinguishing media:

Extinguishing powder, foam, carbon dioxide, water spray.

5.1.2. Unsuitable extinguishing media:

Do not use full water jet.

5.2. Special hazards arising from the substance or mixture

The inhalation of combustion products (e.g. hydrogen sulphide, carbon monoxide, carbon dioxide) can have serious adverse effects on health.

5.3. Advise for firefighters

Wear full protective chemical resistant clothing and self-contained breathing apparatus.
The extinguishing water should not be allowed to drains, soil or watercourses.
Remove product from danger area.
Cool the closed containers affected by the fire with water spray.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel:

Keep unprotected people away, allow only well-trained experts wearing suitable protective clothing to abide in the field of accident.

6.1.2. For emergency responders:

Avoid contact with skin, eyes and clothing.
Do not breathe dust/fume/gas/mist/vapours/spray.
In the presence of vapour, dust and aerosols wear appropriate respiratory protection.
Wear appropriate personal protective equipment (see Section 8).

6.2. Environmental precautions

Avoid release to the environment. Dispose the spillage and the resulting waste according to the applicable environmental regulations. Do not allow the product and the resulting waste to enter sewers/soil/surface or ground water. Contain and dispose contaminated washing water.

6.3. Methods and material for containment and cleaning up

Collect the spilled mixture mechanically, then place the collected waste into appropriate, labelled, closable waste container till proper removal/disposal. Avoid dust formation.

6.4. Reference to other sections

For further and detailed information see sections 7, 8 and 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Observe conventional hygiene precautions.
Avoid contact with skin, eyes and clothing.
Do not breathe dust/fume/gas/mist/vapours/spray.
Technical measures: Ensure adequate ventilation and punctual suction at critical points.
Avoid dust formation.
Precautions against fire and explosion:
Take precautionary measures against static discharge.
Avoid dust formation.
Keep away from ignition sources - no smoking.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage condition:
Keep container tightly closed in a cool, well-ventilated place. Protect from moisture.
Keep away from food, beverages and animal feed.
Dust explosion class: dust explosion hazard.
Incompatible materials: acids and bases, oxidising agents.
Packaging material: no special prescriptions.

7.3. Specific end use(s)

Industrial production of rubber, plastics, paints and inks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits ("OEL"):

Description	CAS number	EC number	Short term exposure limit ("STEL", 15 minutes)	Long term exposure limit Time weighted Average ("LTEL" or "TWA", 8 hours)
Dust	-	-	10 mg/m^3	4 mg/m^3
Carbon black	1333-86-4	215-609-9	7 mg/m^3	3,5 mg/m^3
Zinc sulphide	1314-98-3	215-251-3	10 mg/m^3	3 mg/m^3
Silicon dioxide	7631-86-9	231-545-4	2,4 mg/m^3	6 mg/m^3

Relevant Derived No Effect Levels ("DNEL") of components of the mixture:

Description	CAS number	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Carbon black	1333-86-4	2 mg/m^3	Human, inhalatory	Industry	Chronic, local effects
Carbon black	1333-86-4	2 mg/m^3	Human, inhalatory	Industry	Chronic, systemic effects
Zinc sulphide	1314-98-3	83 mg/m^3	Human, dermal	Industry	Chronic, systemic effects
Zinc sulphide	1314-98-3	5 mg/m^3	Human, inhalatory	Industry	Chronic, systemic effects
Zinc sulphide	1314-98-3	0,83 mg/m^3	Human, oral	Consumer	Chronic, systemic effects
Zinc sulphide	1314-98-3	83 mg/m^3	Human, dermal	Consumer	Chronic, systemic effects
Zinc sulphide	1314-98-3	2,5 mg/m^3	Human, inhalatory	Consumer	Chronic, systemic effects
Silicon dioxide	7631-86-9	4 mg/m^3	Human, inhalatory	Industry	Chronic, systemic effects

Relevant Predicted No Effect Concentrations ("PNEC") of components of the mixture:

Description	CAS number	Threshold level	Organism	Environment	Exposure time
Carbon black	1333-86-4	5 mg/l	Aquatic organisms	Freshwater	Short term (single instance)
Carbon black	1333-86-4	5 mg/l	Aquatic organisms	Marine water	Short term (single instance)
Zinc sulphide	1314-98-3	20,5 µg/l	Aquatic organisms	Freshwater	Short term (single instance)
Zinc sulphide	1314-98-3	6,1µg/l	Aquatic organisms	Marine water	Short term (single instance)
Zinc sulphide	1314-98-3	100 µg/l	Aquatic organisms	Sewage treatment plant	Short term (single instance)
Zinc sulphide	1314-98-3	117,8 mg/kg	Aquatic organisms	Freshwater sediment	Short term (single instance)

Description	CAS number	Threshold level	Organism	Environment	Exposure time
Zinc sulphide	1314-98-3	56,5 mg/kg	Aquatic organisms	Marine sediment	Short term (single instance)
Zinc sulphide	1314-98-3	35,6 mg/kg	Terrestrial organisms	Soil	Short term (single instance)
Silicon dioxide	7631-86-9	-	-	-	-

8.2. Exposure controls

It is the employer's duty to keep concentration levels down to a minimum achievable by existing technological means. Avoid leaking onto clothing and floors.

8.2.1. Appropriate engineering controls

Handle product in a closed system and use local and general ventilation.

8.2.2. Individual protection measures (personal protective equipment)

Avoid contact with skin, eyes and clothes.
Remove and wash contaminated clothing before reuse.
Do not eat, drink, or smoke at work.
Wash hands before breaks and at end of work.

Eye/face protection:
Use appropriate protective glasses with side shields (EN 166).

Skin protection:
Hand protection: use appropriate protective gloves (EN 374). Chemical protective gloves must be chosen depending on workplace specific risk concentration and amount. Consider breakthrough times and properties of the glove material. It is recommended to verify the chemical resistance of the gloves with the glove manufacturer.
Use appropriate protective clothes.

Respiratory protection:
In the presence of vapour, dust, and aerosols use appropriate respiratory protective device: Particulate filter device (DIN EN 143), filter type: P2. If the formation of dust is above the exposure limit values, use suitable respiratory protection.

Thermal hazards:
None known.

8.2.3. Environmental exposure controls

No specific prescription. The requirements detailed in Section 8 assume skilled work under normal conditions and usage of the product for appropriate aims. If conditions differ from normal or work is carried out under extreme conditions an expert's advice should be sought out before deciding upon further protective measures.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties of the mixture

Property	Information
Physical state	Solid
Appearance	Powder or pellets (0,1 – 3 mm)
Colour	Black
Odour	Odourless
pH value	7 – 10 (20°C, 50 g/l)
Melting point	Not determined
Freezing point	Not determined
Initial boiling point and boiling range	Not determined
Flash point	Not applicable
Evaporation rate	Not determined
Flammability (solid, gas)	Heavily Flammable
Explosive properties	Dust explosive Dust explosion category ST1
Explosion limits of dust clouds	Lower: 60 g/m^3 Upper: No date available
Maximum explosion pressure	8 barg
Auto-ignition temperature	Pellets: >195°C Powder: >205°C
Ignition temperature	>600°C
Smouldering temperature	>400°C
Minimum ignition energy	>1 kJ
Decomposition temperature	>300°C
Burning number	4
Vapour pressure	Not determined
Vapour density	Not determined
Specific gravity	1,7 - 1,9 kg/l at 20°C
Bulk density	80 – 150 kg/m^3 (powder) 380 – 450 kg/m^3 (densified powder) 350 – 450 kg/m^3 (pellets)
Solubility	Not soluble in water
Oxidising properties	None

10. STABILITY AND REACTIVITY

10.1. **Reactivity:**
Stable within normal storage and handling conditions at ambient temperature.

10.2. **Chemical stability:**
Stable within normal storage and handling conditions at ambient temperature.

10.3. Possibility of hazardous reactions:
Contact with acids and oxidising agents liberates toxic gases.

10.4. **Conditions to avoid:**
Moisture, heat. Keep away from ignition sources. Avoid dust.

10.5. **Incompatible materials:**
Strong acids and bases, oxidising agents.

10.6. Hazardous decomposition products:
Hydrogen sulphide (H_2S).

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects:
Test data is not available for the complete mixture. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)
This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

Acute toxicity: Not known. Shall not be classified as acutely toxic.

Acute toxicity of components of the mixture

Description	CAS number	Value	Organism	Exposure route	Endpoint
Carbon black	1333-86-4	>8.000 ppm	Rat	Oral	LD_{50}
Zinc sulphide	1314-98-3	>2,000 ppm	Rat	Oral	LD_{50}
Zinc sulphide	1314-98-3	>2,000 ppm	Rat	Dermal	LD_{50}
Zinc sulphide	1314-98-3	>5,000 mg/l	Rat	Inhalation	LC_{50}/4h
Silicon dioxide	7631-86-9	>5,000 ppm	Rat	Oral	LD_{50}
Silicon dioxide	7631-86-9	>2,2 mg/l	Rat	Inhalation	LC_{50}/4h

Skin corrosion/irritation:
Not known. The product was not tested.

Serious eye damage/eye irritation:
Not known. The product was not tested.

Respiratory or skin sensitisation:
Not known. The product was not tested.

Germ cell mutagenicity:
Not known. The product was not tested.

Carcinogenicity:

Shall not be classified as carcinogenic. According to Regulation No 1272/2008/EC, this mixture does not meet the criteria for classification as carcinogenic.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Description	CAS number	Concentration % weight	Classification	Reference	Date
Carbon black	1333-86-4	90%	2B	Volume 65, 93	1997, 2010
Zinc sulphide	1314-98-3	0,1%	3	Volume 65	1997
Silicon dioxide	7631-86-9	27%	3	Volume 65	1997

Reproductive toxicity:
Not known. The product was not tested.

STOT-single exposure:
Not known. The product was not tested.

STOT-repeated exposure:
Not known. The product was not tested.

Aspiration hazard:
Not known. The product was not tested.

11.1.1 For substances subject to registration, brief summaries of the information derived from the test conducted:
No data available.

11.1.2 Relevant toxicological properties of the hazardous substances:
No data available.

11.1.3 Information on likely routes of exposure:
Ingestion, inhalation, skin contact, eye contact.

11.1.4 Symptoms related to the physical, chemical and toxicological characteristics:
No data available.

11.1.5 Delayed and immediate effects as well as chronic effects from short and long-term exposure:
No data available.

11.1.6 Interactive effects:
No data available.

11.1.7 Absence of specific data:
No information.

11.1.8 Other information:

IARC Category 2B.

12. ECOLOGICAL INFORMATION

12.1. Toxicity:

Due to the low water solubility of the product an aquatic toxicity is unlikely to occur. The product was not tested.

Aquatic acute toxicity of individual components of the mixture

Description	CAS number	Value	Organism	Exposure time	Endpoint
Carbon black	1333-86-4	>10,000 mg/l	Algae	72h	ErC_{50}
Carbon black	1333-86-4	>10,000 mg/l	Algae	72h	EC_{50}
Zinc sulphide	1314-98-3	>0,25 mg/l	Fish	96h	LC_{50}
Zinc sulphide	1314-98-3	>13 µg/l	Algae	72h	ErC_{50}
Silicon dioxide	7631-86-9	>5000 mg/l	Fish	96h	LC_{50}
Silicon dioxide	7631-86-9	>440 mg/l	Algae	72h	LC_{50}

Aquatic acute toxicity of individual components of the mixture

Description	CAS number	Value	Organism	Exposure time	Endpoint
Carbon black	1333-86-4	>5,600 mg/l	Aquatic invertebraes	24h	EC_{50}

12.2 Persistence and degradability:

No data available.

12.3 Bioaccumulation potential:

No data available.

12.4 Mobility in soil:

Practically insoluble.

12.5 Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT or vPvB substances.

12.6 Other adverse effects:

No data available.

13. DISPOSAL CONSIDERATIONS

13.1. **Waste treatment methods:**

Disposal according to the local regulations.

13.1.1. Information regarding the disposal of the product:

Dispose according to the relevant regulations.
Consult relevant authorities about disposal.
For this product no waste disposal key according the European Waste Catalogue (EWC) can be determined, as only the purpose of application defined by the user enables an allocation. The European waste code number has to be determined after a discussion with a specialist dealing with waste disposal.

13.1.2. Information regarding the disposal of the packaging:

Dispose according to the relevant regulations.
The contaminated packaging has to be disposed in the same manner as the product.

13.1.3. Physical/chemical properties that may affect waste treatment options shall be specified:

None known.

13.1.4. Sewage disposal:

Not known.

13.1.5. Special precautions for any recommended waste treatment:

No data available.

14. TRANSPORT INFORMATION

Not a dangerous good in the sense of the transport regulations.

14.1. UN Number:

No data available.

14.2. UN proper shipping name:

No data available.

14.3. Transport hazard class(es):

No data available

14.4. Packaging group:

No data available

14.5. Environmental hazards:

ADR/RID / IMDG-Code / ICAO-TI / IATA-DGR: no
Marine pollutant: no

14.6. Special precautions for user:

See Sections 6 – 8

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code:
Not applicable.

15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:
EC Regulation No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

EC Regulation No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Also observe any national regulations.

15.2. Chemical safety assessment:
No data available.

Full text of the abbreviations in the material safety data sheet:
DNEL: Derived no effect level.
PNEC: Predicted no effect concentration.
CMR effects: carcinogenity, mutagenicity and toxicity for reproduction.
PBT: Persistent, bioaccumulative and toxic.
vPvB: Very Persistent, Very Bioaccumulative.
n.d.: not defined.
n.a.: not applicable.

16. Disclaimer
This material data sheet was prepared for BB&G AWES Lda by Wolfersdorff Consulting Berlin. The information, data and recommendations contained in this safety data sheet are provided in good faith, obtained from reliable sources and believed to be true and accurate as of the date issued; however, no representation is made as to the comprehensiveness of the information. The MSDS shall be used only as a guide for handling the product; in the course of handling and using the product other considerations may arise or be required. Users are cautioned to determine the appropriateness and applicability of the above information to their particular circumstances and

purposes and assume all risk associated with the use of this product. It is the responsibility of the user to fully comply with local, national and international regulations concerning the use of this product.