

SAFETY DATA SHEET



Graphite with Tungsten Additive: AXF-5Q5W, AXF-5Q10W, AXF-5Q20W

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : Graphite with Tungsten Additive: AXF-5Q5W, AXF-5Q10W, AXF-5Q20W

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

Identified uses : Not available.

1.3 Details of the supplier of the safety data sheet

Supplier : Poco Graphite, SARL
An Entegris Company
1, rue des Vergers
69760 Limonest - France
Tel: ++33 (0) 472 52 00 40
Fax: ++33 (0) 472 52 00 49

e-mail address of person responsible for this SDS : todd_bendure@entegris.com

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : Toll free: CHEMTREC, U.S. : 1-800-424-9300 International: +1-703-527-3887

Hours of operation : (24/7)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Directive 1999/45/EC [DPD]

The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : Not classified.

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Signal word : Warning

Hazard statements : Causes serious eye irritation.

Precautionary statements

Prevention : P280 - Wear eye or face protection.
P264 - Wash hands thoroughly after handling.

Response : P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.

Storage : Not applicable.

Disposal : Not applicable.

Risk phrases : This product is not classified according to EU legislation.

Safety phrases : Not applicable.

Supplemental label elements : Safety data sheet available for professional user on request.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

SECTION 2: Hazards identification

Tactile warning of danger : Not applicable.

2.3 Other hazards

Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII : Not applicable.

Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : Not applicable.

Other hazards which do not result in classification : Not available.

SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
France Tungsten	EC: 231-143-9 CAS: 7440-33-7	10 - 15	Not classified.	Eye Irrit. 2, H319 See Section 16 for the full text of the H statements declared above.	[1]
Germany Tungsten	EC: 231-143-9 CAS: 7440-33-7	10 - 15	Not classified.	Eye Irrit. 2, H319 See Section 16 for the full text of the H statements declared above.	[1]
Italy Graphite Synthetic	EC: 231-153-3 CAS: 7440-44-0	75-90	Not classified.	Not classified.	[2]
Tungsten	EC: 231-143-9 CAS: 7440-33-7	10-15	Not classified.	Eye Irrit. 2, H319 See Section 16 for the full text of the H statements declared above.	[2]
Netherlands Tungsten	EC: 231-143-9 CAS: 7440-33-7	10 - 15	Not classified.	Eye Irrit. 2, H319 See Section 16 for the full text of the H statements declared above.	[1]
Portugal Tungsten	EC: 231-143-9 CAS: 7440-33-7	10-15	Not classified.	Eye Irrit. 2, H319 See Section 16 for the full text of the H statements declared above.	[2]
Spain Tungsten	EC: 231-143-9 CAS: 7440-33-7	10 - 15	Not classified.	Eye Irrit. 2, H319 See Section 16 for the full text of the H statements declared above.	[1]
United Kingdom (UK) Tungsten	EC: 231-143-9 CAS: 7440-33-7	10-15	Not classified.	Eye Irrit. 2, H319	[2]

SECTION 3: Composition/information on ingredients

				See Section 16 for the full text of the H statements declared above.
--	--	--	--	--

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
 [2] Substance with a workplace exposure limit
 [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
 [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 20 minutes. Get medical attention if symptoms occur.
- Inhalation** : Move exposed person to fresh air.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

4.2 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Fine dust clouds may form explosive mixtures with air.
- Hazardous combustion products** : Decomposition products may include the following materials:
 carbon dioxide
 carbon monoxide

5.3 Advice for firefighters

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
- Additional information** : Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Non-sparking tools should be used when working with dust. See also Section 8 for additional information on hygiene measures.

- 6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. See section 13 for waste disposal information.

6.3 Methods and materials for containment and cleaning up

- Small spill** : Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.
- Large spill** : If emergency personnel are unavailable vacuum or carefully scoop up spilled materials and place in an appropriate container for disposal. Avoid creating dusty conditions and prevent wind dispersal.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Dust levels must be kept within prescribed limits. Spilled product should be cleaned up and a high standard of housekeeping maintained. Avoid generating dust as the product may form flammable dust/air mixtures. Transfer product using proper grounding and bonding procedures to avoid static accumulation. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- 7.2 Conditions for safe storage, including any incompatibilities** : Maintain graphite blocks in stable position. Any machined generated dust should be maintained in closed container.

7.3 Specific end use(s)

- Industrial sector specific solutions** : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
<p>France No exposure limit value known.</p>	
<p>Germany No exposure limit value known.</p>	
<p>Italy Graphite Synthetic Tungsten</p>	<p>ACGIH (United States). TWA: 10 mg/m³ 8 hour(s). Form: Nuisance particulates. ACGIH TLV (United States, 2/2010). TWA: 5 mg/m³, (as W) 8 hour(s). Form: Insoluble STEL: 10 mg/m³, (as W) 15 minute(s). Form: Insoluble</p>
<p>Netherlands No exposure limit value known.</p>	
<p>Portugal Tungsten</p>	<p>Instituto Português da Qualidade (Portugal, 3/2007). STEL: 10 mg/m³ 15 minute(s). TWA: 5 mg/m³ 8 hour(s).</p>
<p>Spain No exposure limit value known.</p>	
<p>United Kingdom (UK) Tungsten</p>	<p>EH40/2005 WELs (United Kingdom (UK), 8/2007). STEL: 10 mg/m³, (as W) 15 minute(s). TWA: 5 mg/m³, (as W) 8 hour(s).</p>

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Ensure dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

8.2 Exposure controls

Appropriate engineering controls : It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling dusts generated from this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures : Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Eye/face protection : Safety eyewear should be used when there is a likelihood of exposure. Recommended: Safety glasses with side shields.

Skin protection

Hand protection : Use gloves appropriate for work or task being performed. Recommended: Natural rubber (latex).

SECTION 8: Exposure controls/personal protection

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Lab coat.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Not required under normal conditions of uses. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Solid.
- Colour** : Gray to black.
- Odour** : Odourless.
- pH** : Not available.
- Melting point** : Sublimation temperature: 3650°C (6602°F)
- Initial boiling point and boiling range** : 3648.9°C
- Flash point** : Not available.
- Evaporation rate** : Not available.
- Flammability** : Not available.
- Vapour pressure** : Not available.
- Vapour density** : Not available.
- Relative density** : 2.35 to 2.75
- Solubility(ies)** : Insoluble in water.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : Minimize dust generation and accumulation.
- 10.5 Incompatible materials** : Reactive or incompatible with the following materials: oxidizing materials.
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Tungsten	Eyes - Mild irritant	Rabbit	-	-	-
	Skin - Mild irritant	Rabbit	-	-	-

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

- Inhalation** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Eye contact** : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Inhalation** : No specific data.
- Ingestion** : No specific data.
- Skin contact** : No specific data.
- Eye contact** : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Target organs : Contains material which may cause damage to the following organs: blood, cardiovascular system, upper respiratory tract, skin, eyes.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Remarks : Not available.

12.2 Persistence and degradability

Remarks : Not available.

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Product is not hazardous to water

SECTION 12: Ecological information

12.5 Results of PBT and vPvB assessment

- PBT** : Not applicable.
vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

- Methods of disposal** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
- Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

Packaging

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

14.1 International transport regulations

- ADR/ADNR/IMDG/IATA** : Not regulated.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Substances of very high concern

None of the components are listed.

- Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

Other EU regulations

- Europe inventory** : All components are listed or exempted.
- Black List Chemicals** : Not listed
- Priority List Chemicals** : Not listed
- Integrated pollution prevention and control list (IPPC) - Air** : Listed
- Integrated pollution prevention and control list (IPPC) - Water** : Listed

National regulations

France

- Reinforced medical surveillance** : Act of July 11, 1977 determining the list of activities which require reinforced medical surveillance: not applicable

SECTION 15: Regulatory information

Germany

- Hazard class for water** : nwg Appendix No. 4
- References** : WGK1. Gemäß VwVws vom 17. Mai 1999
- Technical instruction on air quality control** : TA-Luft Number 5.2.1: 85-100%
- AOX** : The product does not contain organically bound halogens which could lead to an AOX value in waste water.
- D.Lgs. 152/06** : 100% Not classified.

Netherlands

- Water Discharge Policy (ABM)** : Slightly harmful to aquatic organisms. Abatement effort: B

- 15.2 Chemical Safety Assessment** : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

- Abbreviations and acronyms** : ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 DNEL = Derived No Effect Level
 EUH statement = CLP-specific Hazard statement
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number

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

Eye Irrit. 2, H319

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Eye Irrit. 2, H319	Calculation method

France

- Full text of abbreviated H statements** : H319 Causes serious eye irritation.
- Full text of classifications [CLP/GHS]** : Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
- Full text of abbreviated R phrases** : Not applicable.
- Full text of classifications [DSD/DPD]** : Not applicable.

Germany

- Full text of abbreviated H statements** : H319 Causes serious eye irritation.
- Full text of classifications [CLP/GHS]** : Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
- Full text of abbreviated R phrases** : Not applicable.
- Full text of classifications [DSD/DPD]** : Not applicable.

Italy

- Full text of abbreviated H statements** : H319 Causes serious eye irritation.
- Full text of classifications [CLP/GHS]** : Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
- Full text of abbreviated R phrases** : Not applicable.
- Full text of classifications [DSD/DPD]** : Not applicable.

SECTION 16: Other informationNetherlands

- Full text of abbreviated H statements** : H319 Causes serious eye irritation.
- Full text of classifications [CLP/GHS]** : Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
- Full text of abbreviated R phrases** : Not applicable.
- Full text of classifications [DSD/DPD]** : Not applicable.

Portugal

- Full text of abbreviated H statements** : H319 Causes serious eye irritation.
- Full text of classifications [CLP/GHS]** : Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
- Full text of abbreviated R phrases** : Not applicable.
- Full text of classifications [DSD/DPD]** : Not applicable.

Spain

- Full text of abbreviated H statements** : H319 Causes serious eye irritation.
- Full text of classifications [CLP/GHS]** : Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
- Full text of abbreviated R phrases** : Not applicable.
- Full text of classifications [DSD/DPD]** : Not applicable.

United Kingdom (UK)

- Full text of abbreviated H statements** : H319 Causes serious eye irritation.
- Full text of classifications [CLP/GHS]** : Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
- Full text of abbreviated R phrases** : Not applicable.
- Full text of classifications [DSD/DPD]** : Not applicable.

History

- Date of issue (dd/mm/yyyy)** : 01/06/2011
- Date of previous issue** : 01/04/2008
- Version** : 2

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.