

T H E L E A D I N G E D G E

PRODUCT DATA SHEET

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: POCO EDM-AF5, EDM-4, EDM-3, EDM-2, EDM-1, EDM-200, EDM-180, EDM-150, EDM-100, EDM-160

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

PRODUCT IDENTIFIER

Product name	POCO EDM-AF5, EDM-4, EDM-3, EDM-2, EDM-1, EDM-200, EDM-180, EDM-150, EDM-100, EDM-160
EC number	231-153-3
REACH Registration number	01-2119486977-12-0051
CAS number	7440-44-0
Product code	Not available.
Product description	Not available.
Product type	Solid block.
Other means of identification	Not available.

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

Electrical discharge machining electrodes, other industrial manufacturing components.

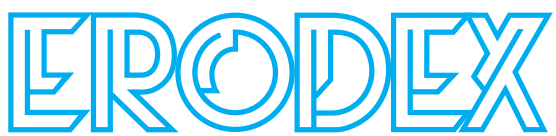
Details of the supplier of the safety data sheet

Supplier's details

Erodex (UK) Ltd
Tipper Industrial Estate
Park Road
Halesowen
West Midlands
B63 2RH
United Kingdom
+44 (0)1384 892011

e-mail address of person responsible for this SDS

graham.eccles@erodex.com



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REACH Importer of Record

Tetra Tech International, Inc.

Fuchsstrasse 1

67688 Rodenbach

Germany

Email: tanya.sagermann@tetrattech.com

Competent Person

Tetra Tech International, Inc. (Only Representative)

Fuchsstrasse 1

67688 Rodenbach

Germany

Email: tanya.sagermann@tetrattech.com

Emergency telephone number

National advisory body / Poison Centre

Telephone number: Toll free: CHEMTREC, U.S. : 1-800-424-9300 International: +1-703-527-3877
Hours of operation: (24/7)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

Product definition Mono-constituent substance

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

Not classified.

Classification according to Directive 67/548/EEC [DSD]

Not classified.

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

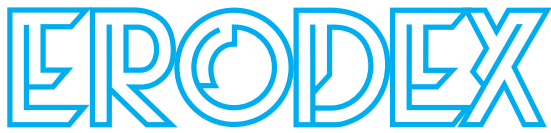
See Section 11 for more detailed information on health effects and symptoms.

Label elements

Signal word No signal word.
Hazard statements No known significant effects or critical hazards.

Precautionary statements

Prevention Not applicable.
Response Not applicable.
Storage Not applicable.
Disposal Not applicable.
Supplemental label elements Safety data sheet available on request.



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Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings
Tactile warning of danger

Not applicable.

Not applicable.

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.

SECTION 2: HAZARDS IDENTIFICATION

Other hazards which do not result in classification

May form combustible dust concentrations in air during processing activities (including; but not limited to: cutting, sanding, drilling, machining, dust control equipment, other dust generating activities). Users of this material should perform combustibility testing, prior to use, specific to their use conditions if dust is to be generated.

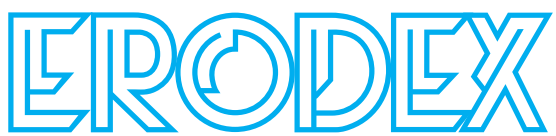
SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture

Mono-constituent substance

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
Graphite Synthetic	EC: 231-153-3 CAS: 7440-44-0	>99	Not classified	Not classified	[A][2]

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.



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Type

[A] Constituent

[B] Impurity

[C] Stabilising additive

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

See Section 16 for the full text of the R-phrases declared above.

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

SECTION 4: FIRST AID MEASURES

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.

Inhalation

Move exposed person to fresh air.

Skin contact

In case of contact, immediately flush skin with plenty of water for at least 20 minutes.

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.

Protection of first-aiders

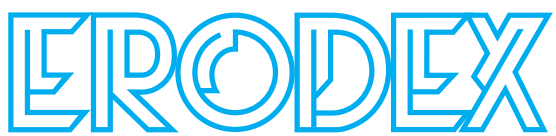
No action shall be taken involving any personal risk or without suitable training.

Most important symptoms and effects, both acute and delayed

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

Over-exposure signs/symptoms

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



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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: FIRE FIGHTING MEASURES

Extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

Suitable extinguishing media

Unsuitable extinguishing media

None known.

Special hazards arising from the substance or mixture

Hazards from the substance or mixture

Fine dust clouds may form explosive mixtures with air.

Hazardous thermal decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Advice for firefighters

Special protective actions for fire-fighters

No special precaution is required.

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

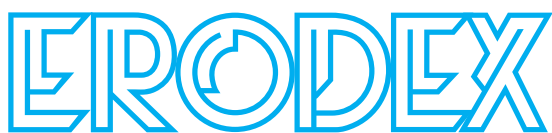
Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Minimize exposure to dust. Keep unnecessary and unprotected personnel from entering. Provide adequate ventilation. Put on appropriate personal protective equipment.



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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 the information in "For non-emergency personnel".

Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. See section 13 for waste disposal information.

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. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

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.

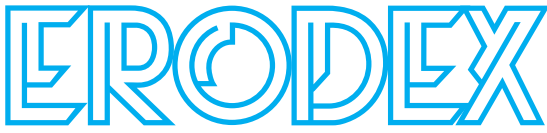
SECTION 7: HANDLING AND STORAGE

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).

Precautions for safe handling

Protective measures

Provide adequate ventilation. 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. Put on appropriate personal protective equipment (see Section 8).



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Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. 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. Dust levels must be kept within prescribed limits. Spilled product should be cleaned up and a high standard of housekeeping maintained. Transfer product using proper grounding and bonding procedures to avoid static accumulation. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Maintain graphite blocks in stable position. Any machined generated dust should be maintained in closed container.

Specific end use(s) Recommendations

Maintain blocks as shipped, no specific handling or storage identified. Dust or powder from machining process should be kept in closed container.

Industrial sector specific solutions

Not available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

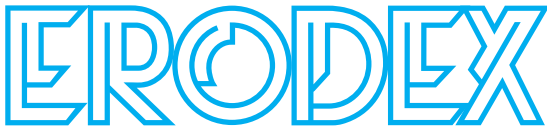
The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

Product/ingredient name	Exposure limit values
Graphite, synthetic	ACGIH (United States). TWA: 10 mg/m ³ 8 hours. Form: Nuisance particulates.

Recommended monitoring procedures

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.

DNELs/DMELs	No DNELs/DMELs available.
PNECs	No PNECs available



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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. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures

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. Ensure that eyewash stations and safety showers are close to the workstation location.

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: Chemical- resistant gloves.

Body protection

No special protective clothing is required.

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.

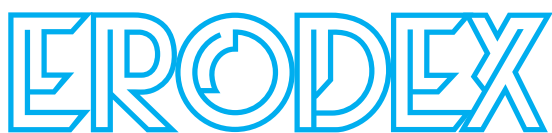
Respiratory protection

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



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Information on basic physical and chemical properties

Appearance

Physical state

Colour

Odour

Odour threshold

pH

Melting point/freezing point

Initial boiling point and boiling range

Flash point

Evaporation rate

Flammability (solid, gas)

Burning time

Burning rate

Upper/lower flammability or explosive limits

Vapour pressure

Vapour density

Relative density

Solubility(ies)

Solubility in water

Partition coefficient: n-octanol/ water

Auto-ignition temperature

Decomposition temperature

Viscosity

Explosive properties

Oxidising properties

Solid block

Gray to black.

Odourless.

Not available.

Not available.

Sublimation temperature: 3650°C (6602°F)

Not available.

Not available.

Not available.

Not available.

Not available.

Not available.

Not available.

Not available.

Not available.

1.4 to 2.

Insoluble in water.

Not available.

Not available.

Not available.

Not available.

Not available.

Not applicable.

Not applicable.

Other information

No additional information

SECTION 10: STABILITY AND REACTIVITY

Reactivity

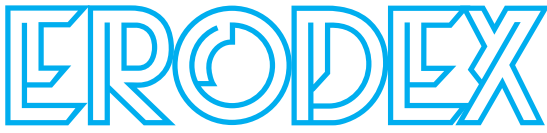
No specific test data related to reactivity available for this product or its ingredients.

Chemical stability

The product is stable.

Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.



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Conditions to avoid

Minimize dust generation and accumulation.

Incompatible materials

Reactive or incompatible with the following materials: oxidising materials.

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

Acute toxicity

There is no data available.

Irritation/Corrosion

Skin	There is no data available.
Eyes	There is no data available.
Respiratory	There is no data available.

Sensitisation

Skin	There is no data available.
Respiratory	There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

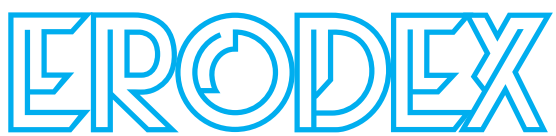
There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.



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Aspiration hazard

There is no data available.

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

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

Symptoms related to the physical, chemical and toxicological characteristics

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

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

Short term exposure

Potential immediate effects	No known significant effects or critical hazards.
Potential delayed effects	No known significant effects or critical hazards.

Long term exposure

Potential immediate effects	No known significant effects or critical hazards.
Potential delayed effects	No known significant effects or critical hazards.

Potential chronic health effects

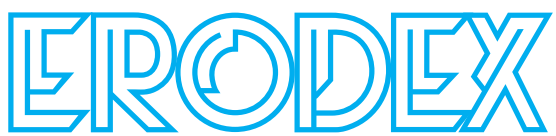
General	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

Other information Not available.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

There is no data available.



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Persistence and degradability

There is no data available.

Bioaccumulative potential

There is no data available.

Mobility in soil

Soil/water partition coefficient (KOC)

There is no data available.

Mobility

Not available.

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).

Waste treatment methods Product

Methods of disposal

The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

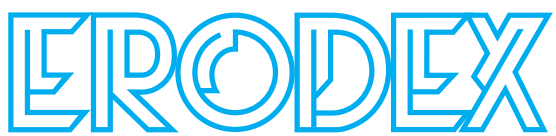
Hazardous waste

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



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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

	ADR/RID	ADN	IMDG	IATA
UN number	Not regulated	Not regulated	Not regulated	Not regulated
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No	No	No	No
Additional information	-	-	-	-

Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not available.

SECTION 15: REGULATORY INFORMATION

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

Annex XIV

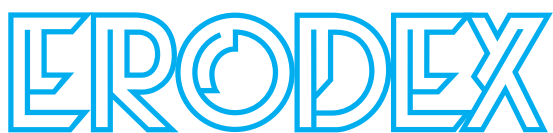
None of the components are listed.

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.



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Seveso II Directive

This product is not controlled under the Seveso II Directive.

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]

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

vPvB = Very Persistent and Very Bioaccumulative

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

Classification	Justification
Not classified	
Full text of abbreviated H statements	Not applicable.
Full text of classifications [CLP/GHS]	Not applicable.
Full text of abbreviated R phrases	Not applicable.

Full text of classifications [DSD/DPD] Not applicable.

History

Date of issue (dd/mm/yyyy) 30/06/2013

Date of previous issue

Version 1

Revised Section(s) Not Applicable

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.