SAFETY DATA SHEET

This safety data sheet has been prepared in accordance with the following requirements:
Regulation (EC) Nr. 1907/2006 und Regulation (EC) Nr. 1272/2008

Revised on 24-Sep-2025 **Version** 1.0

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

1.1. Product identifier

Product name ASC300

Article number PG9201

Chemical name	CAS-Nr.	EC Nr (EU Index Nr)	REACH Nr
Iron	7439-89-6	231-096-4	01-2119462838-24-XXXX

Substance/Mixture Substance

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

Recommended use: Powder metallurgical applications

Uses adviced against No identified uses advised against for this product

1.3. Details of the supplier of the safety data sheet

Hersteller
ProGraphite GmbH
Dr.-Schindler-Str. 9
94107 Untergriesbach
Germany

More information:

E-Mail: info@graphite-shop.com

1.4. Emergency phone number

Emergency phone number +49 8593 9383 188 (Only during normal office hours - Central European Time, CET)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation *(EC) Nr. 1272/2008*

According to Regulation (EC) Nr. 1272/2008, this substance is classified as not hazardous **2.2.**

2.2 Label elements

According to Regulation (EC) Nr. 1272/2008, this substance is classified as not hazardous

Hazard statements

This substance is classified as not hazardous under Regulation (EC) No. 1272/2008 (CLP).

2.3. Other hazards

Avoid dust generation; fine dust presents a potential dust explosion hazard if dispersed in sufficient concentration in air and an ignition source is present.

The substance does not meet the PBT/vPvB criteria of REACH Regulation, Annex XIII.

This product does not contain any known or suspected endocrine disruptors.

SECTION 3: Composition / Information on ingredients

3.1 Substances

Chemical name	Content-%	REACH-Registrationnumber	EC Nr (EU Index Nr)	Classification according to regulation (EG) Nr. 1272/2008 [CLP]	Specific concentration limit (SCL):	M-Factor	M-Factor (chronic)
Iron 7439-89-6	> 97	01-2119462838-24-XXXX	231-096-4	-	-	-	-

For the wording of the H and EUH statements, see section 16

Chemical nature Metal.

Acute Toxicity Estimation

Chemical name	Oral LD 50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 h - dust/mist - mg/l	Inhalation LC50 - 4 h- vapour - mg/l	Inhalation LC50 - 4 h - gas - ppm
Iron 7439-89-6	30000	No data available	No data available	No data available	No data available

This product contains no substances of very high concern (SVHC) on the Candidate List at a concentration of ≥0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59).

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice IF exposed or concerned: Get medical advice/attention. Show this Safety Data Sheet to the doctor.

Inhalation Move to fresh air. Seek medical attention if symptoms persist.

Eye contact Rinse immediately and thoroughly with plenty of water, including under the eyelids. Consult a physician if symptoms persist.

Skin contact Wash immediately with soap and plenty of water. If skin irritation or rash occurs: seek

	medical advice/attention
Ingestion	Call a physician. Rinse mouth with water.
Self-protection of the first aider	First aiders should ensure their own protection. See Section 8.

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

Symptoms	No information available.

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

Notes to physician	Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Dry sand, special powder for metal fires, dry sodium chloride
Unsuitable extinguishing media	DO NOT USE WATER, FOAM OR CO2

5.2. Special hazards arising from the substance or mixture

Besondere Gefahren, die von dem Stoff ausgehen	Avoid dust generation; fine dust poses a potential dust explosion hazard if dispersed in sufficient concentration in air and an ignition source is present.
Hazardous combustion products	None known.

5.3. Advice for firefighting

Special protective equipment and precautions for firefighting	Firefighting teams must wear self-contained breathing apparatus and full protective turnout clothing. Use personal protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid dust formation. Remove all sources of ignition. Use required personal protective equipment.
Other information	See protective measures listed in Sections 7 and 8.
For emergency responders	Use the personal protective equipment recommended in Section 8.

6.2. Environmental precautions

Environmental precautions	Do not release into the environment. Do not allow to enter drains or waterways.

6.3. Methods and material for containment and cleaning up

Methods for containment	If safe to do so, prevent further leakage or spillage.
Cleaning procedures	Collect mechanically and place in suitable containers for disposal. Avoid dust generation.

Prevention of secondary hazards Thoroughly clean contaminated objects and surfaces in accordance with environmental regulations.

6.4. Reference to other sections

Reference to other sections For further information see Section 8. For further information see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Avoid dust formation. Ensure adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Do not smoke. Take measures to prevent electrostatic charge. Fine airborne dust, when present in sufficient concentration and in the presence of an ignition source, can represent a potential hazard as it may cause dust explosions. See Section 8 for further information.

General hygiene measures handle with good industrial hygiene and safety practices.

7.2. Conditions for safe storage, including any unter Berücksichtigung von Unverträglichkeiten

Storage conditions Keep containers tightly closed and store in a dry and well-ventilated place.

TRGS 510 Storage of hazardous substances in movable containers Storage class LGK 10 - 13

7.3. Specific end uses

Certain uses
no information available.

Risk management measures (RMM) The required information is provided in this safety data sheet

SECTION 8: Exposure controls / Personal protection

8.1. Control parameters

Occupational exposure limits This product as supplied does not contain any hazardous substances with workplace exposure limits established by the competent authority

Biological occupational exposure limits In the delivered state, this product does not contain hazardous substances according to the workplace exposure limits established by the competent authority

Derived no-effect level (DNEL)								
Iron (7439-89-6)								
Route of exposure	Long-term, local effects in workers	Long-term, systemic effects in workers	Short-term, local effects in workers	Short-term, systemic effects in workers	Long-term, local effects in consumers	Long-term, systemic effects in consumers	Short-term, local effects in consumers	Short-term, systemic effects in consumers

Inhalation (workers).	3 mg/m³							

8.2. Exposure controls

Technical control measures Use with local exhaust ventilation. Apply only with adequate ventilation to keep airborne dust levels below recommended exposure limits.

Personal protective equipment

Eye/face protection Wear safety glasses with side-shields (or goggles). Eye protection must comply with EN 166.

Hand protection Wear suitable protective gloves. Gloves must comply with EN 374. Observe the glove manufacturer's instructions regarding permeability and breakthrough times. Take into account also specific local conditions under which the product is used, such as risk of cuts, abrasion and duration of contact.

Skin and body protection Wear suitable protective clothing when working. Safety shoes or boots.

Respiratory protection Use particle filter according to EN 143.

Thermal hazards This product does not present thermal hazards and therefore no special consideration is required.

General hygiene measures Do not eat, drink or smoke when using this product. Wash hands and face before breaks and immediately after handling the product.

Environmental exposure controls Dust must be separated from exhaust ventilation to avoid release into the environment. This substance must not be disposed of via the sewage system, into soil or into water bodies.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Solid
Form Powder
Colour grey
Odour Odourless
Odour threshold Not applicable

Property	Values	Remarks • Method
Melting point/freezing point	1538°C***	at 1013 hPa
Boiling point/range	2861°C***	at 1013 hPa
Flammability (solid, gas)	Non-flammable	
Flammability limit in air		
Upper flammability or explosive limit	Not applicable	
Lower flammability or explosive limit	Not applicable	
Flash point	Not applicable	
Auto-ignition temperature	Nicht applicable	
Decomposition temperature	No data available	
pH-value	6*** -*** 7***	
pH (as an aqueous solution)		
Kinematic viscosity	Not applicable	

Dynamic viscosity	Not applicable	
Water solubility	1-15 µg/l	at 20 - 22 °C
Solubility(ies)		
Partition coefficient	Not applicable	
Vapour pressure	Not applicable	solid with melting point >300°C
Relative density	7,87 - 8,2	at 20 °C
Bulk density	2,0-3,0 g/cm^3	
Liquid density	Not applicable	
Vapour density	Not applicable	solid with melting point >300°C
Particle properties		
Particle size	>= 35%: <45µm	
Particle size distribution	No information available	

9.2. Other information

9.2.1. ***Information on hazard classes not otherwise classified***

Dust explosion class	St 1 (ASC100.29 (<45µm))
Burning number	-
Remarks	No data available
Oxidising properties	Not classified

9.2.2. ***Other safety characteristics***
No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity:	Not applicable.
Remarks	Stable under normal conditions.

10.2. Chemical stability

Stability	Stable under normal conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None under normal processing.
Hazardous polymerisation	Will not occur.

10.4. Conditions to avoid

Conditions to avoid	Avoid dust generation; fine dust poses a potential dust explosion hazard if dispersed in sufficient concentration in air and an ignition source is present.

10.5. Incompatible materials

Incompatible materials	Strong oxidising agents, strong acids and strong bases.

10.6. Hazardous decomposition products

Hazardous decomposition products	Under normal conditions of use, none known

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) Nr. 1272/2008

Information on likely routes of exposure

Product information No data available

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity

Component information

Chemical name	LD50 oral	LD50 dermal	LC50 Einatmen
Iron	= 30 g/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Iron (7439-89-6)

Method	Species	Route of exposure	Effective dose	Exposure time	Results
OECD-Test-Nr. 404: acute dermal irritation/corrosion	Rabbit	Dermal		1 hour	Not irritating

Serious eye damage/irritation Based on available data, the classification criteria are not met.

Iron (7439-89-6)

Method	Species	Route of exposure	Effective dose	Exposure time	Results
OECD-Test-Nr. 405: acute eye irritation/corrosion	Rabbit	Eye			Not Irritating

Respiratory or skin sensitisation Based on available data, the classification criteria are not met

Eisen (7439-89-6)

Method	Species	Route of exposure	Results
	Guinea pig	Dermal	Not a skin sensitiser

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Information on the components
Iron (7439-89-6)

Method	Species	Results
OECD-Test-Nr. 471: bacterial reverse mutation test	in-vitro	Not mutagenic

The table below shows ingredients that are above the limit considered relevant and are listed as mutagenic.

Carcinogenicity Based on available data, the classification criteria are not met.

Information on the components
Iron (7439-89-6)

Method	Species	Results
		No data available

The following table indicates which authority lists each component as a carcinogen.

Reproductive toxicity Based on available data, the classification criteria are not met

Iron (7439-89-6)

Method	Species	Results
		No data available

The table below shows ingredients that are above the limit considered relevant and are listed as toxic for reproduction.

STOT - single exposure Based on available data, the classification criteria are not met.

STOT - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties Not listed.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Iron (7439-89-6)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
					No data available

12.2. Persistence and degradability

Persistence and degradability Methods for determining biodegradability are not applicable to inorganic substances

12.3. Bioaccumulative potential

Bioaccumulation Does not bioaccumulate.

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment .

Chemical name	Results of PBT and vPvB assessment
Iron	This substance is not a PBT/vPvB. PBT assessment not applicable

12.6. Endocrine disrupting properties

Endocrine disrupting properties Not listed

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Dispose of in accordance with applicable federal, state and local regulations

Additional information Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport Information

IATA

14.1 UN number or ID number Not regulated
14.2 Proper UN shipping name Not regulated

14.3 Transport hazard class(es) Not regulated
14.4 Verpackungsgruppe Not regulated
14.5 Umweltgefahren Not regulated
14.6 Special precautions for user None

IMDG:

14.1 UN number or ID number Not regulated
14.2 Proper UN shipping name Not regulated

14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Marine pollutant Not regulated
Environmental hazards Not regulated
14.6 Special precautions for user None

14.7 Bulk transport according to IMO instruments No information available

RID Not regulated
14.1 UN/ID-Nr Not regulated
14.2 Proper UN shipping name
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards Not applicable
14.6 Special precautions for user
Sondervorschriften None

ADR
14.1 UN number or ID number Not regulated
14.2 Proper UN shipping name Not regulated

14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards Not applicable
14.6 Special precautions for user None

SECTION 15: Regulatory Information

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

National regulations

Water hazard class (WGK) Classification according to AwSV: not hazardous to water (nwg)

TA Luft (German regulation on air pollution control)	
Designation	Number
Total dust	5.2.1
Dust-like inorganic substances	Not applicable
Vapor- or gaseous inorganic substances	Not applicable
Organic substances	Not applicable
Carcinogenic substances	Not applicable
Mutagenic substances	Not applicable
Reproductive toxic	Not applicable

Other regulations
BGI 546 »Handling of hazardous substances«.
BGI 564 »Activities involving hazardous substances – For employees«.
TRGS 510 »Storage of hazardous substances in portable containers«.
TRGS 900 - Occupational exposure limits.
European Union
Directive 98/24/EC on the protection of workers' health and safety from risks related to chemical agents at work must be observed.

Directive 94/33/EC on the protection of young people at work must be observed.

Directive 92/85/EC on the protection of pregnant and breastfeeding women at work must be observed.

Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values must be observed.

Authorizations and/or restrictions on use:
This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV). This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Persistent organic pollutants
Not applicable

Category for hazardous substances under the Seveso Directive (2012/18/EU)
Not controlled

Regulation on ozone-depleting substances (EC) No. 1005/2009
Not applicable

International Inventories:

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS ENCS	Complies
IECSC	Complies
KECI	Complies
PICCS	Complies
AICS	Complies
NZIoC	Complies
	Complies

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

15.2. Chemical Safety Assessment

Chemical Safety Assessment A chemical safety assessment has been carried out for the base powder.

SECTION 16: Other Information

Key or legend for abbreviations and acronyms used in the safety data sheet

Abbreviations

EC50 (- UVA) : Median effective concentration
LC50: Median lethal concentration
LD50: Median lethal dose

NOEC: No observed effect concentration
OEL: Occupational exposure limit
PBT: Persistent, bioaccumulative and toxic
PNEC: Predicted no effect concentration
STEL: Short-term exposure limit
TWA: Time-weighted average
vPvB: Very persistent and very bioaccumulative
NGV: Limit value
SVHC: Substance of very high concern

Legend Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

TWA:	Time-weighted average	STEL:	Short-term exposure limit
Ceiling:	Maximum limit value	*	Skin designation
+	Sensitizers		

Classification procedures	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - Gas	Calculation method
Acute inhalation toxicity - Vapors	Calculation method
Acute inhalation toxicity - Dust/Mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/irritation	Calculation method
Respiratory sensitization	Calculation method
Skin sensitization	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozon e	Calculation method

Relevant literature references and sources of data used to compile the safety data sheet
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency (EPA) ChemView Database
European Food Safety Authority (EFSA)
Committee for Risk Assessment of the European Chemicals Agency (ECHA_RAC)
European Chemicals Agency (ECHA_API)
Environmental Protection Agency Acute Exposure Guideline Levels (AEGLs)
U.S. EPA Federal Insecticide, Fungicide, and Rodenticide Act
U.S. EPA High Production Volume Chemicals
Hazardous Substances Data Bank
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine ChemID Plus (NLM, CIP)
PubMed (NLM)
U.S. National Toxicology Program (NTP)
New Zealand Chemical Classification and Information Database (CCID)
OECD Environment, Health, and Safety Publications
OECD High Production Volume Chemicals Program
OECD Screening Information Data Set (SIDS)
World Health Organization (WHO)

Revised on 24-Sep-2025

This material safety data sheet complies with the requirements of Regulation (EU) No. 1907/2006
Disclaimer
The information provided in this safety data sheet is accurate to the best of our knowledge as of the date of publication. It is intended solely as guidance for safe handling, use, processing, storage, transportation, disposal, and in the case of spillage, and is not to be considered a guarantee or quality specification. This information relates only to the specifically designated material and may not be valid for such material used in combination with other materials or in any process unless specified.

End of Safety Data Sheet