

## 1. General information on material, composition and company details

### 1.1 Product specification:

Trade name: **Klinger Graphite Laminate**

Types/identification:

Foil type H	Laminate type PSM	Laminate type TSM
Laminate type HL	Laminate type PDM	Laminate type G
Laminate type SLS	Laminate type PCM	Laminate type XSM
Laminate type SLA	Laminate type SLN	
Laminate type SLG	Laminate type ESM	
Laminate type SML	Laminate type SMB	

### 1.2 Details of the manufacturer:

Manufacturer/supplier:

**Klinger AG Egliswil, Industrie Nord, CH-5704 Egliswil****Phone: +41 (0)62 769 30 30,****Fax: +41 (0)62 769 30 33****Emergency phone number: +41 (0)62 769 30 30**

## 2. Composition/specification of the components

### 2.1 Chemical characteristics:

Material based on graphite

### 2.2. Hazardous components:

None, according to the components included in EC Standard 67/548/EEC

CAS#	Identification according to EC directive	Content	Unit	Reference code	
7782-42-5	Graphite	95 - 99 carbon	%		

### Additional remarks:

None

## 3. Particular dangers

Particular dangers for human beings and environment:

Protective gloves are recommended for handling metal inserted laminates to prevent laceration.

## 4. First aid measures

General comment:	When processed in accordance with the intended use, a small quantity of nuisance dust might be released.
Inhalation:	On inhalation of a substantial amount of dust, remove the person to the fresh air (in case of working dust accumulation).
Skin contact:	Rinse with soap and water.
Eye contact:	Flush well with water lifting the lower lid occasionally.
Ingestion:	Drink water (in case of working dust accumulation).
Medical indications:	None

## 5. Measures against fire

Suitable extinguishing agents:

Foam, refractory sand, carbon dioxide, water sprinkler

Unsuitable extinguishing agents for safety reasons:

Direct water jet

Particular dangers arising from the material itself, the treatment thereof and its decomposition products or combustion gases:

Working dust may glow above 350 °C in oxygenous atmosphere.

When glowing and in the event of fire CO/CO<sub>2</sub> is set free.

Special protective outfit:

None; with insufficient ventilation, respiratory protection against CO/CO<sub>2</sub>

## 6. Measures in case of unintentional release

Personal precautionary measures:

Protective mask (dust respirator or half-mask P1)  
(in case of working dust accumulation)

Ecological protective measures:

None

Method of cleaning:

Mechanical absorption

Additional remarks:

Improper use and use other than in compliance with the stipulations, e.g. grinding, may produce fine dust. In this case suction and filtration facilities are imperative.

## 7. Handling and storage

### 7.1 Handling

Safety instructions for handling:

Protective gloves are recommended for handling metal inserted laminates to prevent laceration.

Safety instructions to prevent fire and explosion:

With proper handling, none

### 7.2 Storage

Requirements for store-rooms and containers:

Store in labeled, closed containers under dry conditions.

Safety instructions for storage together with other materials (incompatibility):

None

Other storage conditions:

None

Storage class:

Not applicable

## 8. Permissible exposure limits and personal protective outfit

### 8.1 Additional remarks on the lay-out of technical installations

Thorough ventilation and suction facilities at the workplace are imperative to avoid dust generation while treating the material mechanically.

### 8.2 Components whose exposure limits at the workplace must be observed

CAS#	Chemical designation of the material	Type of limit	Limit value	Unit
7782-42-5	Graphite (fine dust)	MAK	6	mg/m <sup>3</sup>

### 8.3 Personal protective kit

Respiratory protection:

Mask Mod. P-1 in case of working dust accumulation

Hand protection:

Gloves

Eye preservers:

Safety glasses in case of working dust accumulation

Physical protection:

None

Other safety and hygienic measures:

None

## 9. Physical and chemical properties

### 9.1. Appearance

Form: solid sheet, greasy to touch  
 Colour: grey/black  
 Odour: a faint solvent odour may be detectable with the laminates  
 SLS, SLA, SLN, SLG, ESM

### 9.2 Safety data

Factors	Value/range of application	Unit	Process
Softening point:	Not applicable		
Boiling point/boiling range:	Not applicable		
Melting point/melting range:	Not applicable		
Flash point:	Does not flash; selfextinguishing		
Inflammability:	Not applicable		
Inflammation point:	Not applicable		
Spontaneous ignition:	None		
Fire stimulating properties:	None		
Danger of explosion:	None		
Limits of explosion	lower limit	Not applicable	
	upper limit	Not applicable	
Vapour pressure:	at 20 °C	Not applicable	
Density:	at 20 °C	0.7 - 1.5	g/cm <sup>3</sup>
Solubility:	at 20 °C	Insoluble	
pH-value:		4.5 - 7	
Distribution coefficient (n-octanol/water)		Not applicable	
Viscosity:		Not applicable	
Others:		None	

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## 10. Stability and reactivity

Conditions to avoid:

None

Materials to avoid:

Contact with very strong oxidizers such as fluorine, chlorine, trifluoride and peroxides may cause fires and explosions.

Hazardous decomposition products:

With proper use, none. Otherwise: carbon monoxide and carbon dioxide.

Others:

None

## 11. Toxicity

No toxic effects from handling this material are known.

## 12. Ecology

No negative ecological effects are known.

## 13. Waste management

### 13.1 Product

Recommendation:

Disposal according to the local statutory regulations (for the disposal of carbon)

Waste code No.: 31432

### 13.2 Contaminated packaging

Recommendation:

Disposal according to the local statutory regulations.

## 14. Transportation

Not dangerous goods in terms of transport.

## 15. Regulations

### 15.1 Identification according to the EC directive

Reference code and danger indication of the product:

None

Dangerous components which are named on the label:

None

### 15.2 National regulations

Additional classification according to the decree on hazardous materials:

None

Working restrictions:

None

Emergency regulations:

None

Classification according to VbF:

None

Technical air instructions:

Limitation according to 3.1.3 TA-Luft

Water pollution class:

None

Other regulations, restrictions and bans:

None

## 16. Others

Further information:

The information given in this data sheet is to the best of our knowledge and belief. The statements made describe our products with regard to the safety requirements but do not guarantee the product properties nor are they legally binding.

Contact person:

Mr. Dr. U. Wegmann

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Signed for and on behalf of  
KLINGER AG EGLISWIL

Dr. U. Wegmann, Managing Director  
duly authorized