

according to Regulation (EC) No 1907/2006

markSolid 015.M9LP

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

1.1. Product identifier

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

Use of the substance/mixture

Firing coating for metals

1.3. Details of the supplier of the safety data sheet

Company name: Pigmentum GmbH Street: Schillerstr. 35
Place: D-90547 Stein

Telephone: +49 (0) 911-2126-0 Telefax: +49 (0) 911-21260-10

e-mail: office@markSolid.de

Responsible Department:

Responsible for the safety data sheet: sds@gbk-ingelheim.de

Emergency telephone: +49 (0) 6132 / 84463 (GBK Gefahrgut Buero GmbH,

Ingelheim)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Indications of danger: Harmful, Irritant

R-phrases:

Irritating to eyes and respiratory system. Limited evidence of a carcinogenic effect.

GHS classification

Hazard categories:

Serious eye damage/eye irritation: Eye Irrit. 2

Carcinogenicity: Carc. 2

Specific target organ toxicity - single exposure: STOT SE 3

Hazard Statements:

Causes serious eye irritation. Suspected of causing cancer. May cause respiratory irritation.

2.2. Label elements

Signal word: Warning
Pictograms: GHS07-GHS08





Hazardous components which must be listed on the label

molybdenum trioxide

Hazard statements

H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.

Precautionary statements

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if



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present and easy to do. Continue rinsing.

2.3. Other hazards

High risk of slipping due to leakage/spillage of product. After contact with eyes: Do not rub eyes - contains inorganic fillers, which irritate the eyes mechanically like other inert materials.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Pigment dispersion based on Nickel iron chromite black spinel

Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification	
Index No	GHS classification	
REACH No		
215-204-7	molybdenum trioxide	25 - 30 %
1313-27-5	Carc. Cat. 3, Xi - Irritant R40-36/37	
042-001-00-9	Carc. 2, Eye Irrit. 2, STOT SE 3; H351 H319 H335	

Full text of R and H phrases: see Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated clothes and wash before re-use. Take away from danger area and lay down affected person. In the event of persistent symptoms receive medical treatment.

After inhalation

Move to fresh air in case of accidental inhalation of vapours.

In the event of symptoms refer for medical treatment.

After contact with skin

Wash off immediately with soap and plenty of water.

Consult a doctor if skin irritation persists.

After contact with eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Consult a physician.

After ingestion

Never give anything by mouth to an unconscious person. Do not induce vomiting.

Rinse out mouth and give plenty of water to drink.

Consult a physician.

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

Irritating to eyes and respiratory system. After contact with eyes: Do not rub eyes - contains inorganic fillers, which irritate the eyes mechanically like other inert materials.

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

Treat symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Foam, carbon dioxide (CO2), dry chemical, water-spray.



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Extinguishing media which must not be used for safety reasons

Full water jet.

5.2. Special hazards arising from the substance or mixture

In case of fire and/or explosion do not breathe fumes.

5.3. Advice for firefighters

In case of fire, wear suitable respiratory equipment with positive air supply.

Additional information

Product itself does not burn. Aqueous solution.

Use fire fighting measures that suit the environment and products stored Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

In case of vapour formation use respirator. Avoid contact with skin, eyes and clothing. Skin or eye contact may cause temporary mechanical irritation. Observe protective instructions (see Sections 7 and 8).

6.2. Environmental precautions

Do not discharge into the drains or bodies of water.

6.3. Methods and material for containment and cleaning up

Take up with absorbent material (e.g. sand, kieselguhr, acid binder, general-purpose binder, sawdust). Shovel into suitable container for disposal.

6.4. Reference to other sections

Information for disposal look up chapter 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Provide sufficient air exchange and/or exhaust in work rooms.

Avoid contact with the skin and the eyes.

Advice on protection against fire and explosion

No special measure necessary.

Further information on handling

Take the usual precautions when handling with chemicals.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a dry, cool and well-ventilated place.

Advice on storage compatibility

Incompatible with oxidizing agents.

Further information on storage conditions

Keep away from food, drink and animal feeding stuffs. Keep from freezing.

7.3. Specific end use(s)

Firing, ceramic coating for anodized aluminum

SECTION 8: Exposure controls/personal protection

8.1. Control parameters



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Exposure limits (EH40)

	CAS No	Chemical name	ml/m³	mg/m³	F/ml	Category	Origin
ſ	1332-58-7	Kaolin respirable dust	-	2		TWA (8 h)	WEL
			-	-		STEL (15 min)	WEL
1		Molybdenum compounds (as Mo), soluble compounds	-	5		TWA (8 h)	WEL
		'	-	10		STEL (15 min)	WEL

8.2. Exposure controls

Occupational exposure controls

Provide sufficient air exchange and/or exhaust in work rooms.

Protective and hygiene measures

At work do not eat, drink, smoke or take drugs.

Wash hands before breaks and immediately after handling the product.

Avoid contact with eyes and skin.

Respiratory protection

Breathing apparatus (particle filter) only if dust is formed.

Hand protection

Chemical-resistant gloves (EN 374)

Follow the recommendations of the glove manufacturer for breakthrough properties especially for workplace conditions involving mechanical stress and contact duration.

Eye protection

Safety goggles with side protection.

Skin protection

Protection clothes

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: pasty
Colour: Grey
Odour: Odourless

Test method

pH-Value (at 20 °C): 4,2

Changes in the physical state

Melting point:

n.a.

Boiling point:

100-110 °C

Flash point:

n.a.

Oxidizing properties

Not combustible.

Water solubility: Aqueous suspension

9.2. Other information

No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.



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10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Keep from freezing. Keep away from heat and sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicocinetics, metabolism and distribution

Harmful.

Acute toxicity

CAS No	Chemical name						
	Exposure routes	Method	Dose	Species	Source		
1313-27-5	molybdenum trioxide						
	oral	LD50	2690 mg/kg	Ratte			
	` ′	LC50 mg/l	> 5,840	Ratte			

Irritation and corrosivity

Irritating to eyes and respiratory system.

Severe effects after repeated or prolonged exposure

STOT - Single exposure: 3

STOT - Repeated exposure: Not classified.

Aspiration hazard: Not classified.

Carcinogenic/mutagenic/toxic effects for reproduction

Carcinogenicity: 2. Limited evidence of a carcinogenic effect.

Mutagenicity: Not classified. Reproductive toxicity: Not classified.

Additional information on tests

After contact with eyes: Do not rub eyes - contains inorganic fillers, which irritate the eyes mechanically like other inert materials.

Further information

Classification in compliance with the assessment procedure specified in the EC guidelines 1999/45/EG.

SECTION 12: Ecological information

12.1. Toxicity

Ecological data are not available.



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CAS No	Chemical name							
	Aquatic toxicity	Method	Dose	h	Species	Source		
1313-27-5	molybdenum trioxide							
	Acute fish toxicity	LC50	130 mg/l	96	Onchorhynchus mykiss			
	Acute algae toxicity		> 100 mg/l	72	Algae			
	Acute crustacea toxicity	EC50	150 mg/l	48	Daphnia magna			

12.2. Persistence and degradability

Not determined

12.3. Bioaccumulative potential

Not determined

12.4. Mobility in soil

Not determined

12.5. Results of PBT and vPvB assessment

Not determined

12.6. Other adverse effects

Low hazard to waters.

Further information

Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Where possible recycling is preferred to disposal.

Waste disposal number of waste from residues/unused products

080120 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF

COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU and removal of paint and varnish; aqueous suspensions

containing paint or varnish other than those mentioned in 08 01 19

Contaminated packaging

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse. Packaging that cannot be cleaned should be disposed of like the product.

SECTION 14: Transport information

Land transport (ADR/RID)

Other applicable information (land transport)

No hazardous material as defined by the transport regulations.

Inland waterways transport (ADN)

Other applicable information (inland waterways transport)

No hazardous material as defined by the transport regulations.

Marine transport (IMDG)

Other applicable information (marine transport)

No hazardous material as defined by the transport regulations.

Air transport (ICAO)

Other applicable information (air transport)

No hazardous material as defined by the transport regulations.

14.5. Environmental hazards



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Dangerous for the environment: no

14.6. Special precautions for user

Handle in accordance with good industrial hygiene and safety practice.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

The transport takes place only in approved and appropriate packaging.

SECTION 15: Regulatory information

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

National regulatory information

Employment restrictions: Observe employment restrictions for young people. Observe employment

restrictions for child bearing mothers and nursing. Observe employment

restrictions for women of child-bearing age.

Water contaminating class (D):

1 - slightly water contaminating

Additional information

The substance resp. all components are in:

TSCA: listed

EINECS/ELINCS: listed

DSL: listed AICS: listed

ENCS/MITI: listed
PICCS (PH): listed
KECI (KR): listed
HSNO listed
IECS listed

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

Changes in chapter:

Full text of R phrases referred to under Sections 2 and 3

36/37 Irritating to eyes and respiratory system.40 Limited evidence of a carcinogenic effect.

Full text of H statements referred to under Sections 2 and 3

H319 Causes serious eye irritation.
 H335 May cause respiratory irritation.
 H351 Suspected of causing cancer.

Further Information

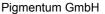
Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.

The delivery specifications are contained in the corresponding product sheet.

This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

(n.a. = not applicable; n.d. = not determined)





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(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)