

M Paintstik® White, Yellow, Black and M-10 Paintstik® White

Safety Data Sheet

according to Regulation (EC) No. 453/2010

Date of issue: 06/01/2015

Version: 1.0

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

1.1. Product identifier

Product form : Mixture
Product name. : M Paintstik® White, Yellow, Black and M-10 Paintstik® White

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

1.2.1. Relevant identified uses

Main use category : Industrial use, Professional use
Use of the substance/mixture : Marking.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LA-CO Industries Europe S.A.S.
Parc Industriel de la Plaine de
l'Ain - Allée des Combes.
01150.BLYES.France.
Phone: +33 (0)4 74 46 23 23
Fax: +33 (0)4 74 46 23 29
E-mail: info@eu.laco.com
Web: http://www.markal.com



1.4. Emergency telephone number

Emergency number : 24-hour emergency: CHEMTREC- U.S. : 1-800-424-9300 International: +1-703-527-3887

EU Member State	Officieel adviesorgaan	Adres	Noodnummer
AUSTRIA	Vergiftungsinformationszentrale (Poisons Information Centre)	Allgemeines Krankenhaus Waehringer Geurtel 18-20 1090 Wien	+43 1 406 43 43
BELARUS	The Belarus Republican Poisons Centre	Kizhevatova str. 58 Minsk 220115	+375 (0)17 201 9158
BELGIUM	Centre Anti-Poisons/Antigifcentrum c/o Hôpital Central de la Base - Reine Astrid	Rue Bruyn 1 B -1120 Bruxelles/Brussel	+32 70 245 245
BULGARIA	Национален токсикологичен информационен център National Clinical Toxicology Centre, Emergency Medical Institute "Pirogov"	21 Totleben Boulevard 1606 SOFIA	+359 2 9154 409
CROATIA	Poisons Control Centre Institute of Medical Research & Occupational Health	Ksaverska Cesta 2 P.O. Box 291 HR-10000 Zagreb	+385 1 234 8342
CZECH REPUBLIC	Toxikologické informační středisko Clinic For Occupational Medicine, 1st Medical Faculty, Charles University	Na Bojišti 1 120 00 Praha 2	+42 2 2491 9293 +42 2 2491 5402
DENMARK	Gifflinjen Bispebjerg Hospital	Bispebjerg Bakke 23, 60, 1 DK-2400 København NV	+45 82 12 12 12 +45 35 31 55 55
ESTONIA	Mürgistusteabekeskus	Gonsiori 29 15027 Tallinn	+372 626 93 90
FINLAND	Myrkytystietokeskus	P.O.B 340 (Haartmaninkatu 4) HUS SF - 00029 Helsinki	+358 9 471 977
FRANCE	ORFILA		+33 1 45 42 59 59
GERMANY	Berliner Betrieb für Zentrale Gesundheitliche Aufgaben	Oranienburger Strasse 285 13437 Berlin	+49 30 19240
GERMANY	Informations und Beratungszentrum für Vergiftungsfälle	Kirrberger Straße, Gebäude 9 D-66421 Homburg/Saar	+49 6841 19240
GERMANY	Beratungstelle bei Vergiftungen, Klinische Toxikologie und Beratungstelle bei Vergiftungen	Langenbeckstrasse 1 55131 Mainz	+49 6131 19240
GREECE	Poisons Information Centre	11527 Athens	+30 10 779 3777
HUNGARY	Országos Kémiai Biztonsági Intézet (National Institute of Chemical Safety) Egészségügyi Toxikológiai Tájékoztató Szolgálat (Health Toxicological Information Service)	1437 Budapest PO Box 839 1097 Budapest, Nagyvárad tér 2	+36 80 20 11 99
ICELAND	Eitrunarmiðstöðin	Eitrunarmiðstöðin 108 Reykjavik	+354 543 22 22
IRELAND	National Poisons Information Centre	Beaumont Hospital PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2166

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LATVIA	Valsts Toksikoloģijas centra Saindēšanās un zāļu informācijas centrs	2 Hipocrate Street LV 1038 Riga	+371 67 04 24 73
LITHUANIA	Apsinuodijimų kontrolės ir informacijos biuras	Siltnamiu 29 2043 Vilnius	+370 5 236 20 52/+370 687 53 378
MALTA	Medicines & Poisons Info Office	Mater Dei Hospital, Msida MSD 2090 Malta	25450000
NETHERLANDS	Nationaal Vergiftigingen Informatie Centrum National Institute for Public Health and the Environment, NB this service is only available to health professionals	Huispostnummer B.00.118, PO Box 85500 3508 GA Utrecht	+31 30 274 88 88
PORTUGAL	Centro de Informação Antivenenos Instituto Nacional de Emergência Médica (INEM)	Rua Almirante Barroso, 36 1000-013 Lisboa	808 250 143 (for use only in Portugal), +351 21 330 3284
ROMANIA	Biroul pentru Regulamentul Sanitar International si Informare Toxicologica	Str. Dr. Leonte Anastasievici Nr.1-3, Sector 5 50463 Bucuresti	+40 21 318 36 06
SLOVAKIA	Národné toxikologické informačné centrum University Hospital Bratislava	Limbová 5 833 05 Bratislava	+421 2 54 77 4 166
SPAIN	Servicio de Información Toxicológica Instituto Nacional de Toxicología, Departamento de Madrid	Calle Luis Cabrera 9 E-28002 Madrid	+34 91 562 04 20
SWEDEN	Giftinformationscentralen Swedish Poisons Information Centre, Karolinska Hospital	Box 60 500 SE-171 76 Stockholm	+46 8 33 12 31 (International) 112 (National)
SWITZERLAND	Centre Suisse d'Information Toxicologique	Freiestrasse 16 Postfach CH-8028 Zurich	+41 44 251 51 51 (International) 145 (National)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

EUH phrases

: EUH210 - Safety data sheet available on request

2.3. Other hazards

PBT: not yet assessed

vPvB: not yet assessed

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixture

Components with health hazards above the applicable thresholds or with Exposure Limits are shown. Exact concentrations withheld as trade secret; ranges due to batch/product differences.

Name	Product identifier	%	Classification according to Directive 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
limestone	(CAS No) 1317-65-3 (EC no) 215-279-6	0 – 40	Not classified	Not classified
Aluminum hydroxide	(CAS No) 21645-51-2 (EC no) 244-492-7	0 – 40	Not classified	Not classified
antimony nickel titanium oxide yellow C.I. 77788	(CAS No) 8007-18-9 (EC no) 232-353-3	0 – 30	Not classified	Not classified
sodium dihydrogenorthophosphate	(CAS No) 7558-80-7 (EC no) 231-449-2	0 – 30	Not classified	Not classified
graphite	(CAS No) 7782-42-5 (EC no) 231-955-3	0 – 20	Not classified	Not classified
Titanium dioxide	(CAS No) 13463-67-7 (EC no) 236-675-5	0 – 20	Not classified	Not classified
Silica gel	(CAS No) 112926-00-8 (EC no) *601-214-2	0 – 5	Not classified	Not classified

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Name	Product identifier	%	Classification according to Directive 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Aluminum oxide	(CAS No) 1344-28-1 (EC no) 215-691-6	0 – 1	Not classified	Not classified
nickel dihydroxide	(CAS No) 12054-48-7 (EC no) 235-008-5 (EC index no) 028-008-00-X	< 0.01	Carc.Cat.1; R49 Repr.Cat.2; R61 Muta.Cat.3; R68 T; R48/23 Xn; R20/22 Xi; R38 R42 R43 N; R50/53	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1A, H350i Repr. 1B, H360D STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of R-, H- and EUH-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
- First-aid measures after skin contact : Wash skin with mild soap and water.
- First-aid measures after eye contact : If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- First-aid measures after ingestion : Drink plenty of water. Call a POISON CENTER/doctor/physician if you feel unwell.

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

Symptoms/injuries after inhalation : Inhalation may cause: irritation, coughing, shortness of breath.

Symptoms/injuries after eye contact : Fumes and dust : May cause slight irritation.

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

All treatments should be based on observed signs and symptoms of distress in the patient.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide. Dry powder. Foam.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : No particular fire or explosion hazard.

Hazardous decomposition products in case of fire : Carbon dioxide. Carbon monoxide.

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Do not allow run-off from fire fighting to enter drains or water courses.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Use self-contained breathing apparatus. Wear fire/flame resistant/retardant clothing. EN469.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid creating or spreading dust.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Contains no substances known to be hazardous to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Contain and collect as any solid.

Methods for cleaning up : On land, sweep or shovel into suitable containers.

6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes.
Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a dry, cool and well-ventilated place.
Incompatible products : Strong oxidizers.

7.3. Specific end use(s)

Marking.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

nickel dihydroxide (12054-48-7)		
France	Local name	Nickel (dihydroxyde de),en Ni
France	VME (mg/m ³)	1 mg/m ³
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	0.2 mg/m ³ insoluble inorganic compounds, as Ni
Spain	Local name	Dihidróxido de níquel, como Ni
Spain	VLA-ED (mg/m ³)	0.1 mg/m ³
Spain	Notes	C1
Finland	Local name	Nikkeli-(II)-hydroksidi
Finland	HTP-arvo (8h) (mg/m ³)	0.1 mg/m ³
Finland	Huomautus (FI)	Ni
Titanium dioxide (13463-67-7)		
Austria	Local name	Titanium dioxide
Austria	MAK (mg/m ³)	5 mg/m ³ (alveolengängiger Anteil)
Austria	MAK Short time value (mg/m ³)	10 mg/m ³ max. 2x60 min./Schicht (alveolengängiger Anteil)
Belgium	Local name	Titane (dioxyde de)
Belgium	Limit value (mg/m ³)	10 mg/m ³
Belgium	Remark*	(dioxyde de)
Bulgaria	Local name	Титанов диоксид, респирабилен прах
Bulgaria	OEL TWA (mg/m ³)	10 mg/m ³
France	Local name	Titane (dioxyde de),en Ti
France	VME (mg/m ³)	10 mg/m ³
France	Note (FR)	inhalable aerosol
Greece	OEL TWA (mg/m ³)	10 mg/m ³
Italy - Portugal - USA ACGIH	Local name	Titanium dioxide
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
Latvia	Local name	Titānadioksīds
Latvia	OEL TWA (mg/m ³)	10 mg/m ³
Spain	VLA-ED (mg/m ³)	10 mg/m ³
Spain	Notes	inhalable aerosol
Switzerland	Local name	Dioxyde de titane
Switzerland	VME (mg/m ³)	3 mg/m ³
Switzerland	Remark (CH)	(respirable aerosol)
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ inhalable aerosol 4 mg/m ³ respirable aerosol
Denmark	Local name	Titandioxid, beregnet som Ti
Denmark	Grænseværdie (langvarig) (mg/m ³)	6 mg/m ³
Denmark	Grænseværdie (kortvarig) (mg/m ³)	12 mg/m ³
Ireland	OEL (8 hours ref) (mg/m ³)	10 mg/m ³ total inhalable dust 4 mg/m ³ respirable dust
Lithuania	Local name	Titano dioksidas
Lithuania	IPRV (mg/m ³)	5 mg/m ³
Norway	Local name	Titandioksid
Norway	Gjennomsnittsverdier (AN) (mg/m ³)	5 mg/m ³

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nickel dihydroxide (12054-48-7)		
Slovakia	NPHV (priemerná) (mg/m3)	5 mg/m ³
Sweden	Local name	Titanium dioxide total dust
Sweden	nivågränsvärde (NVG) (mg/m3)	5 mg/m ³
Sweden	Anmärkning (SE)	total dust, 1
Portugal	Local name	Dióxido de titânio
Portugal	OEL TWA (mg/m ³)	10 mg/m ³
Croatia	Local name	Titanov dioksid
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	10 mg/m ³ inhalable dust 4 mg/m ³ respirable dust
Aluminum oxide (1344-28-1)		
Austria	MAK (mg/m ³)	10 mg/m ³ (gemessen als einatembarer Aerosolanteil) 5 mg/m ³ (alveolengängiger Anteil)
Austria	MAK Short time value (mg/m ³)	20 mg/m ³ (gemessen als einatembarer Aerosolanteil) max. 2x60 min./Schicht 10 mg/m ³ (alveolengängiger Anteil) max. 2x60 min./Schicht
Belgium	Limit value (mg/m ³)	10 mg/m ³
Belgium	Remark*	(oxyde d') (en Al)
France	Local name	Aluminium (trioxyde de di-)
France	VME (mg/m ³)	10 mg/m ³
France	Note (FR)	(respirable aerosol)
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	3 mg/m ³
Germany	Remark (TRGS 900)	(gemessen als alveolengängiger Staubanteil)
Spain	Local name	Óxido de aluminio
Spain	VLA-ED (mg/m ³)	10 mg/m ³
Switzerland	Local name	Aluminium, fumée d'oxyde
Switzerland	VLE (mg/m ³)	24 mg/m ³
Switzerland	VME (mg/m ³)	3 mg/m ³
Switzerland	Remark (CH)	4x15
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ (inhalable aerosol) 4 mg/m ³ (respirable aerosol)
Denmark	Local name	Aluminiumoxid, beregnet som Al, total (2005)
Denmark	Grænseværdie (langvarig) (mg/m3)	5 mg/m ³
Denmark	Grænseværdie (kortvarig) (mg/m3)	10 mg/m ³ (total) 4 mg/m ³ (respirabel)
Hungary	Local name	DIALUMÍNIUM-TRIOXID (Al-ra számítva)
Hungary	AK-érték	6 mg/m ³
Hungary	Megjegyzések (HU)	(respirable aerosol)
Ireland	OEL (8 hours ref) (mg/m3)	10 mg/m ³ (total inhalable dust) 4 mg/m ³ (respirable dust)
Lithuania	IPRV (mg/m3)	2 mg/m ³
Lithuania	Remark (LT)	(alveolinė frakcija. Biūrėk IX skyriaus 3 pastabà.)
Norway	Local name	Aluminiumoksid
Norway	Gjennomsnittsverdier (AN) (mg/m3)	10 mg/m ³
Norway	Merknader (NO)	1)
Poland	NDS (mg/m3)	2.5 mg/m ³ (dymy, pyl calkowity) 1.2 mg/m ³ (dymy, pyl respirabilny)
Romania	Local name	Oxid de aluminiu (aerosoli)
Romania	OEL TWA (mg/m ³)	2 mg/m ³
Romania	OEL TWA (ppm)	0.5 ppm
Romania	OEL STEL (mg/m ³)	5 mg/m ³
Romania	OEL STEL (ppm)	1.2 ppm
Slovakia	NPHV (priemerná) (mg/m3)	1.5 mg/m ³ (respirabilná frakcia) 4 mg/m ³ (inhalovateľná frakcia)
Sweden	nivågränsvärde (NVG) (mg/m3)	5 mg/m ³ (inhalable aerosol) 2 mg/m ³ (respirable aerosol)
Portugal	Local name	Óxido de alumínio

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nickel dihydroxide (12054-48-7)		
Portugal	OEL TWA (mg/m ³)	10 mg/m ³
Croatia	Local name	Aluminijev oksid
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	10 mg/m ³ inhalable dust 4 mg/m ³ respirable dust
Aluminum hydroxide (21645-51-2)		
Austria	MAK (mg/m ³)	5 mg/m ³
Austria	MAK (ppm)	10 ppm (gemessen als einatembarer Aerosolanteil) 5 ppm (alveolengängiger Anteil)
Austria	MAK Short time value (mg/m ³)	10 mg/m ³
Austria	MAK Short time value (ppm)	20 ppm (gemessen als einatembarer Aerosolanteil) max. 2x60 min./Schicht 10 ppm (alveolengängiger Anteil) max. 2x60 min./Schicht
Latvia	Local name	Alumīnija hidroksīds
Latvia	OEL TWA (mg/m ³)	6 mg/m ³
Switzerland	VME (mg/m ³)	3 mg/m ³
Switzerland	Remark (CH)	(alveolengängige Fraktion)
Lithuania	Local name	Aliuminio hidroksidas
Lithuania	IPRV (mg/m ³)	6 mg/m ³
Lithuania	Remark (LT)	F
Poland	NDS (mg/m ³)	2.5 mg/m ³ dymy, pyl calkowity 1.2 mg/m ³ dymy, pyl respirabilny
Slovakia	NPHV (priemerná) (mg/m ³)	1.5 mg/m ³ (respirabilná frakcia) 4 mg/m ³ (inhalovateľná frakcia)
Silica gel (112926-00-8)		
Belgium	Local name	Silices amorphes : précipités (gel de silice)
Belgium	Limit value (mg/m ³)	10 mg/m ³
Finland	Local name	Piidioksidi, saostettu
Finland	HTP-arvo (8h) (mg/m ³)	5 mg/m ³
limestone (1317-65-3)		
Belgium	Local name	Calcium (carbonate de)
Belgium	Limit value (mg/m ³)	10 mg/m ³
Belgium	Remark*	(carbonate de)
Bulgaria	Local name	Калциев карбонат
Bulgaria	OEL TWA (mg/m ³)	10 mg/m ³
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
Spain	VLA-ED (mg/m ³)	10 mg/m ³
Spain	Notes	inhalable aerosol
Switzerland	Local name	Carbonate de calcium
Switzerland	VME (mg/m ³)	3 mg/m ³
Switzerland	Remark (CH)	(respirable aerosol)
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ (total dust) 4 mg/m ³ (respirable dust)
Hungary	Local name	KALCIUM-KARBONÁT
Hungary	AK-érték	10 mg/m ³
Hungary	Megjegyzések (HU)	inhalable aerosol
Ireland	OEL (8 hours ref) (mg/m ³)	10 mg/m ³ total inhalable dust 4 mg/m ³ respirable dust
Croatia	Local name	Limeston (sedimentna stijena)
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	10 mg/m ³ inhalable dust 4 mg/m ³ respirable dust
antimony nickel titanium oxide yellow C.I. 77788 (8007-18-9)		
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	0.2 mg/m ³ nickel metal and insoluble compounds, as Ni; 0.5 mg/m ³ antimony and compounds, as Sb
graphite (7782-42-5)		
Austria	Local name	Graphite (all forms except fibres) (respirable dust) (natural & synthetic)
Austria	MAK (mg/m ³)	5 mg/m ³ (gemessen als alveolengängige Fraktion)

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nickel dihydroxide (12054-48-7)		
Austria	MAK Short time value (mg/m ³)	10 mg/m ³ (gemessen als alveolengängige Fraktion max. 2x60 min./Schicht)
Belgium	Local name	Graphite (excepté fibres) (fraction alvéolaire)
Belgium	Limit value (mg/m ³)	2 mg/m ³
Belgium	Remark*	(excepté fibres) (fraction alvéolaire)
Bulgaria	Local name	Графит Инхалабилна фракция
Bulgaria	OEL TWA (mg/m ³)	5 mg/m ³
France	VME (mg/m ³)	2 mg/m ³
France	Note (FR)	(fraction alvéolaire)
Greece	OEL TWA (mg/m ³)	10 mg/m ³
Italy - Portugal - USA ACGIH	Local name	Graphite
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³
Italy - Portugal - USA ACGIH	Remark (ACGIH)	(respirable dust)
Spain	VLA-ED (mg/m ³)	2 mg/m ³
Spain	Notes	(inhalable aerosol)
Switzerland	Local name	Graphite naturel
Switzerland	VME (mg/m ³)	5 mg/m ³ (inhalable aerosol) 2.5 mg/m ³ (respirable aerosol)
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ (inhalable aerosol) 4 mg/m ³ (respirable aerosol)
Denmark	Local name	Grafit, naturlig, respirabel
Denmark	Grænseværdie (langvarig) (mg/m ³)	2.5 mg/m ³
Denmark	Grænseværdie (kortvarig) (mg/m ³)	5 mg/m ³
Denmark	Anmærkninger (DK)	(naturlig, respirabel)
Finland	Local name	Grafiitti
Finland	HTP-arvo (8h) (mg/m ³)	2 mg/m ³
Lithuania	Local name	Anglies dulkės (jskaitant suodžius)
Lithuania	IPRV (mg/m ³)	3 mg/m ³
Norway	Gjennomsnittsverdier (AN) (mg/m ³)	5 mg/m ³ (Grafitt, naturlig, totalstøv) 2 mg/m ³ (Grafitt, naturlig, respirabelt støv)
Sweden	nivågränsvärde (NVG) (mg/m ³)	5 mg/m ³
Sweden	Anmärkning (SE)	(inhalable aerosol)
Portugal	Local name	Grafite (todas as formas excepto fibras de grafite)
Portugal	OEL TWA (mg/m ³)	2 mg/m ³
Croatia	Local name	Prašina grafita
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	10 mg/m ³ inhalable dust 4 mg/m ³ respirable dust

8.2. Exposure controls

Appropriate engineering controls	: Avoid dispersal of dust in the air (ie, clearing dust surfaces with compressed air). Either local exhaust or general room ventilation is usually required.
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: It is a good industrial hygiene practice to minimize skin contact. In case of repeated or prolonged contact wear gloves. Use rubber gloves. EN 374.
Eye protection	: In case of dust production: protective goggles. EN 166.
Respiratory protection	: In case of inadequate ventilation wear respiratory protection. Use air-purifying respirator equipped with particulate filtering cartridges. EN 12083.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: A solid crayon-like marker.
Colour	: white. yellow. Black.
Odour	: Oily.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 66 °C

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Freezing point	: No data available
Boiling point	: No data available
Flash point	: 204 °C
Self ignition temperature	: 343 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: insoluble in water.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

VOC content : 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous Polymerization may occur.

10.4. Conditions to avoid

Heat. Open flame.

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

Thermal decomposition generates : Carbon dioxide. Carbon monoxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

nickel dihydroxide (12054-48-7)	
LD50 oral rat	1515 mg/kg
LD50 dermal rat	> 2 g/kg
LC50 inhalation rat (mg/l)	1200 mg/m ³ 4 h
ATE (oral)	1515.000 mg/kg bodyweight
ATE (dust,mist)	1.500 mg/l/4h
sodium dihydrogenorthophosphate (7558-80-7)	
LD50 oral rat	> 2000 mg/kg No mortality observed
LD50 dermal rabbit	> 7940 mg/kg No mortality observed
LC50 inhalation rat (mg/l)	> 0.83 mg/l/4h No mortality observed
Titanium dioxide (13463-67-7)	
LD50 oral rat	> 5000 mg/kg
LC50 inhalation rat (mg/l)	> 6.82 mg/l/4h
Aluminum oxide (1344-28-1)	
LD50 oral rat	> 15900 mg/kg
LC50 inhalation rat (mg/l)	7.6 mg/l/4h
ATE (vapours)	7.600 mg/l/4h
ATE (dust,mist)	7.600 mg/l/4h
limestone (1317-65-3)	
LD50 oral rat	6450 mg/kg
ATE (oral)	6450.000 mg/kg bodyweight

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antimony nickel titanium oxide yellow C.I. 77788 (8007-18-9)	
LD50 oral rat	> 2000 mg/kg no deaths occurred
LC50 inhalation rat (mg/l)	no mortality after 7h
graphite (7782-42-5)	
LD50 oral rat	> 2000 mg/kg No mortality observed
LC50 inhalation rat (mg/l)	> 2000 mg/m ³ 4 h, no mortality observed
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified.

nickel dihydroxide (12054-48-7)	
NOAEL (chronic,oral, animal/male,2 years)	2.2 mg/kg bodyweight read across Nickel Sulphate Hexahydrate
NOAEL (chronic,oral, animal/female,2 years)	2.2 mg/kg bodyweight read across Nickel Sulphate Hexahydrate
Titanium dioxide (13463-67-7)	
NOAEL (chronic,oral, animal/male,2 years)	5 mg/kg bodyweight rat
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

nickel dihydroxide (12054-48-7)	
LC50 fishes 1	15.3 mg/l 96 h
EC50 Daphnia 1	> 200 µg/l 48 h
sodium dihydrogenorthophosphate (7558-80-7)	
LC50 fishes 1	> 1000 µg/l 48 h
EC50 Daphnia 1	<= 15 ppm 48 h
Aluminum oxide (1344-28-1)	
EC50 Daphnia 1	> 1470 mg/l
NOEC (acute)	> 50 mg/l
limestone (1317-65-3)	
LC50 fishes 1	> 200 mg/l
antimony nickel titanium oxide yellow C.I. 77788 (8007-18-9)	
LC50 fishes 1	> 10000 mg/l Leuciscus idus
graphite (7782-42-5)	
LC50 fishes 1	> 100 mg/l 96 h, no mortality observed
EC50 Daphnia 1	> 100 mg/l 48 h, no mortality observed

12.2. Persistence and degradability

nickel dihydroxide (12054-48-7)	
Persistence and degradability	Not readily biodegradable.
limestone (1317-65-3)	
Persistence and degradability	Not readily biodegradable.

12.3. Bioaccumulative potential

nickel dihydroxide (12054-48-7)	
BCF fish 1	600 - 26500 whole body d.w.; 0 to 26 day exposure
limestone (1317-65-3)	
Bioaccumulative potential	Does not biaccumulate significantly.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

M Paintstik® White, Yellow, Black and M-10 Paintstik® White	
PBT: not yet assessed	
vPvB: not yet assessed	

12.6. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials : Avoid release to the environment.
EURLW code : For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number

Not considered a dangerous good for transport regulations

14.2. UN proper shipping name

Proper Shipping Name (ADR) :

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

No additional information available

14.6.2. Transport by sea

No additional information available

14.6.3. Inland waterway transport

Carriage prohibited (ADN) : No

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no substances with Annex XVII restrictions

M Paintstik® White, Yellow, Black and M-10 Paintstik® White is not on the REACH Candidate List

Contains no REACH candidate substance

Contains no REACH Annex XIV substances.

VOC content : 0 %

15.1.2. National regulations

All components are listed on the EEC inventory European Inventory of Existing Commercial Chemical Substances (EINECS).

All ingredients are listed in the Toxic Substances Control Act (TSCA).

All ingredients are listed on the Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL).

Germany

Water hazard class (WGK) : 1 - slightly hazardous to water

WGK remark : Classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

Original Document.

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Data sources

: ACGIH 2000.

Canadian Centre for Occupational Health and Safety. Accessed at:
http://www.ccohs.ca/oshanswers/legisl/whmis_classifi.html.

ESIS (European chemical Substances Information System; accessed at:
<http://esis.jrc.ec.europa.eu/index.php?PGM=cla>.

European Chemicals Agency (ECHA) Registered Substances list. Accessed at
<http://echa.europa.eu/>. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.

National Fire Protection Association; Fire Protection Guide to Hazardous Materials; 10th edition.

OSHA 29CFR 1910.1200 Hazard Communication Standard.

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

TSCA Chemical Substance Inventory. Accessed at
<http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html>.

Abbreviations and acronyms

: ACGIH (American Conference of Government Industrial Hygienists).

ATE: Acute Toxicity Estimate.

CAS (Chemical Abstracts Service) number.

CLP: Classification, Labelling, Packaging.

GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).

LD50: Lethal Dose for 50% of the test population.

OSHA: Occupational Safety & Health Administration.

PBT: Persistent, Bioaccumulative, Toxic.

STEL: Short Term Exposure Limits.

TSCA: Toxic Substances Control Act.

TWA: Time Weight Average.

Other information

: None.

Full text of R-, H- and EUH-phrases::

Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Carc. 1A	Carcinogenicity (inhalation) Category 1A
Carc. 2	Carcinogenicity Category 2
Muta. 2	Germ cell mutagenicity Category 2
Repr. 1B	Reproductive toxicity Category 1B
Resp. Sens. 1	Respiratory sensitisation Category 1
Skin Irrit. 2	skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitisation Category 1
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H341	Suspected of causing genetic defects
H350i	May cause cancer by inhalation
H351	Suspected of causing cancer
H360D	May damage the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
R20/22	Harmful by inhalation and if swallowed.
R38	Irritating to skin.
R42	May cause sensitization by inhalation.
R43	May cause sensitisation by skin contact.
R48/23	Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R49	May cause cancer by inhalation.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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R61	May cause harm to the unborn child.
R68	Possible risk of irreversible effects.
N	Dangerous for the environment
T	Toxic
Xi	Irritant
Xn	Harmful.

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LA-CO EU CLP SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.