

MATERIAL SAFETY DATA SHEET**1- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

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| MANUFACTURER | PIGMENT SANAYI A.S. |
| ADDRESS and PHONE NUMBERS | Kemalpasa Asfalti No:44 Kemalpasa Izmir/TURKEY |
| IN CASE OF EMERGENCY | Tel:+902328770400 Fax:+902328770401 |
| PRODUCT NAME | Molybdate Red Pigment |
| PRODUCT CODE | PWM-1025-PK/PWM-1050/PWM-1075/PWM-1150/PWM-1966C / PWM-1125 S-300/S-400/S-500 |
| CHEMICAL CLASS | Inorganic Lead compound |
| CHEMICAL FORMULA | Pb(CrMoS)O ₄ |
| EINECS NO | 235-759-9 |

2- COMPOSITION AND INFORMATION ON INGREDIENTS

| Cas Number | Chemical Name | Formula | % Lead Chromate |
|------------|---|-------------------------|-----------------|
| 12656-85-8 | Lead chromate – Lead sulphate – Lead Molybdate mix. Crystal | Pb(CrMoS)O ₄ | >60 |

3- HAZARDS IDENTIFICATION

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| HAZARD DESCRIPTION | T Toxic N Dangerous for the environment |
| INFORMATION PERTAINING TO PARTICULAR DANGERS FOR MAN AND ENVIRONMENT | R 61 May cause harm to the unborn child R 62 Possible risk of impaired fertility R 33 Danger of cumulative effects. R 40 Possible risks of irreversible effects. |

4- FIRST AID

| LIMITS OF EXPOSURE | |
|---------------------------|--|
| LONG TIME EXPOSURE | ACUTE, CHRONIC |
| | FIRST AID |
| EYE CONTACT : Harmful. | In case of contact, immediately flush eyes with water for at least 15 min. Call a physician. |
| SKIN CONTACT : Harmful. | Flush skin with water and soap, Wash clothes before reuse. |
| INGESTION : -- | Call a physician. |
| INHALATION : Harmful. | If not breathing perform artificial respiration, if breathing give fresh oxygen. Remove to fresh air and call a physician. |
| TOXIC TYPE : | T |
| OTHER ADVISES : | |

5- FIRE FIGHTING MEASURES

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| SUITABLE EXTINGUISHING AGENTS | Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam |
| PROTECTIVE EQUIPMENT | Wear self-contained respirator. Wear fully protective impervious suit. |

6- ACCIDENTAL RELEASE MEASURES

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| PERSON RELATED SAFETY PRECAUTIONS | Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation |
| MEASURES FOR ENVIRONMENTAL PROTECTION | Inform respective authorities in case of seepage into water course or sewage system. Do not allow material to be released to the environment without proper governmental permits. |
| MEASURES FOR CLEANING / COLLECTING | Dispose contaminated material as waste according to item 13. |
| OTHER PROCEDURES | See Section 7 for information on safe handling See Section 8 for information on personal protection equipment. See Section 13 for disposal information. |

7- HANDLING AND STORAGE

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| STORING and LOADING PRECAUTIONS | Keep away from eye and skin contact. Place in closed containers. Keep away from food. If contacted wash thoroughly. |
| HANDLING | Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace. Open and handle container with care. |
| OTHERS | Do not inhale and protect from flammable media. |

8- EXPOSURE CONTROLS AND PERSONAL PROTECTION

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 0.5 m per second.

Components with limit values that require monitoring at the workplace:

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| Lead chromate | Mg/m ³ |
| ACGIH TLV | 0,05 as Pb 0,05 as Cr |
| BELGIUM TWA | 0,05 |
| GERMANY TWA | 0,05 |
| NETHERLANDS TWA | 0,05 |
| USA PEL | 0,001 as Cr(VI) |

Personal Protection

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| EYES | Safety glasses or goggles. Eye-flushing stations. |
| SKIN | Rubber gloves and protective clothes, apron, impervious gloves. |
| INHALATION | Vomit and call a physician. |
| LOCAL VENTILATION EXITS | Mechanical(General) local ventilation is enough. |
| OTHER PROTECTIVE EQUIPMENTS | The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work. Store protective clothing separately. |

9- PHYSICAL AND CHEMICAL PROPERTIES

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|------------------------------|----------------------|----------------------------|-----------|
| FORM | Powder | SOLUBILITY IN WATER | Insoluble |
| MELTING POINT | 844°C | COLOUR | Red |
| BOILING POINT | N/A | ODOR | Odorless |
| FREEZING POINT | N/A | MOLECULAR WEIGHT | 993 |
| BULK DENSITY ±15 % | 650kg/m ³ | EVAPORATION DENSITY | N/A |
| SPECIFIC GRAVITY | 5,6±0,1 | EVAPORATION RATE | N/A |
| OTHER DATA | | pH | 6,0±0,1 |

10- STABILITY AND REACTIVITY

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| STABILITY | Stable under normal conditions |
| UNSTABILITY REASONS | Heat and easily oxidized media |
| POLIMERIZATION and ITS DANGERS | None. |
| UNSTABILITY CONDITIONS and MATERIALS | Strong oxidizers and their products, CO ve CO ₂ . |

11- TOXICOLOGICAL INFORMATION

Acute toxicity and primary irritant effect.

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| ON THE SKIN | Irritant to skin and mucous membranes. |
| ON THE EYE | Strong irritant with the danger of severe eye injury. |
| SENSITIZATION | No sensitizing effects known. |
| SUBACUTE TO CHRONIC TOXICITY | Lead and lead compounds may cause abdominal pain, diarrhea, loss of appetite, metallic taste, nausea, vomiting, lassitude, insomnia, muscle weakness, joint and muscle pain, irritability, headache and dizziness. Red blood cells may be damaged resulting in anemia. Gastritis and injury to the kidneys, liver, male gonads, and central nervous system may also occur. Chromium (VI) compounds may cause skin ulceration, gastrointestinal irritation with vomiting and diarrhea, kidney and liver damage. Overexposure may be fatal. Dusts are extremely irritating to the eyes, nose, throat and bronchial tubes. May cause cancers of the lungs, nasal cavity, sinuses, stomach and larynx. |
| ADDITIONAL | May cause harm to the unborn child. |

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| TOXICOLOGICAL INFORMATION | <p>Possible risk of impaired fertility.</p> <p>To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.</p> <p>EPA-A: human carcinogen: sufficient evidence from epidemiologic studies to support a causal association between exposure and cancer.</p> |
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MAK value for lead < 0,1 mg/m³.

BAT values for lead in the blood < 70µg/dL.

Lead(blood-women < 45 years) < 30µg/dL.

δ-Aminolevulinic acid (women < 45 years) < 6 mg/dL.

TLV-TWA value for lead < 0,15 mg/m³.

Carcinogenic effects : None.

12- ECOLOGICAL INFORMATION

Also poisonous for fish and plankton in water bodies. Do not allow material to be released to the environment without proper governmental permits. Dust emissions from approved manufacturing plants must not exceed 5 mg/m³ for lead and chromium with a total mass flow exceeding 25g/h.

13- DISPOSAL INFORMATION

Consult state, local or national regulations for proper disposal. Disposal must be made according to official regulations.

14- TRANSPORT INFORMATION

PROPER SHIPPING NAME : LEAD COMPOUND,SOLUBLE n.o.s.

HAZARD CLASS : 6.1

U.N. NUMBER : 2291

PACKING GROUP : III

Land transport ADR/RID (cross-border)

ADR/RID CLASS : 6.1

U.N. NUMBER : 2291

ITEM : 62C

Maritime transport IMDG:

IMDG CLASS : 6.1

PAGE NUMBER : 6170

U.N. NUMBER : 2291

PACKING GROUP : III

15- REGULATIONS**Hazard symbols :**

T : Toxic

N : Dangerous for the environment

EUROPEAN RISK and SAFETY CODES

- R 61 May cause harm to the unborn child.
- R 62 Possible risk of impaired fertility.
- R 33 Danger of cumulative effects.
- R 40 Possible risks of irreversible effects.
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- S 53 Avoid exposure - obtain special instructions before use.
- S 45 In case of accident or if you feel unwell, seek medical advice immediately.

16- OTHER INFORMATION

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.