

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

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PRODUCT NAME	Molybdate Orange Pigment
PRODUCT CODE	PWM-1075
CHEMICAL CLASS	Inorganic Lead compound
CHEMICAL FORMULA	Pb(CrMoS)O <sub>4</sub>
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 <sub>4</sub>	>60

**3- HAZARDS IDENTIFICATION**

<b>HAZARD DESCRIPTION</b>	T Toxic N Dangerous for the environment
<b>INFORMATION PERTAINING TO PARTICULAR DANGERS FOR MAN AND ENVIRONMENT</b>	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**

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

**5- FIRE FIGHTING MEASURES**

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

**6- ACCIDENTAL RELEASE MEASURES**

<b>PERSON RELATED SAFETY PRECAUTIONS</b>	Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation
<b>MEASURES FOR ENVIRONMENTAL PROTECTION</b>	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.
<b>MEASURES FOR CLEANING / COLLECTING</b>	Dispose contaminated material as waste according to item 13.
<b>OTHER PROCEDURES</b>	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**

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:**

Lead chromate	Mg/m <sup>3</sup>
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**

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**

<b>FORM</b>	Powder	<b>SOLUBILITY IN WATER</b>	Insoluble
<b>MELTING POINT</b>	844°C	<b>COLOUR</b>	Orange
<b>BOILING POINT</b>	N/A	<b>ODOR</b>	Odorless
<b>FREEZING POINT</b>	N/A	<b>MOLECULAR WEIGHT</b>	993
<b>BULK DENSITY</b> ±15 %	590kg/m <sup>3</sup>	<b>EVAPORATION DENSITY</b>	N/A
<b>SPECIFIC GRAVITY</b>	5,9±0,1	<b>EVAPORATION RATE</b>	N/A
<b>OTHER DATA</b>		<b>pH</b>	7,5±0,1

**10-STABILITY AND REACTIVITY**

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

**11-TOXICOLOGICAL INFORMATION**

Acute toxicity and primary irritant effect.

<b>ON THE SKIN</b>	Irritant to skin and mucous membranes.
<b>ON THE EYE</b>	Strong irritant with the danger of severe eye injury.
<b>SENSITIZATION</b>	No sensitizing effects known.
<b>SUBACUTE TO CHRONIC TOXICITY</b>	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 TOXICOLOGICAL INFORMATION	<p>May cause harm to the unborn child.</p> <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/m<sup>3</sup>.

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/m<sup>3</sup>.

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/m<sup>3</sup> 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.
- S 60        This material and its container must be disposed of as hazardous waste.
- S 61        Avoid release to the environment. Refer to special instructions/Safety data sheets.

**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.