

SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Identifier: Platinum Ink

Product Code: PT-M-01-INK

CAS Number: 7440-06-4

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements
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Los Angeles, CA 90024
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Emergency telephone number:
+1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapor.

GHS08 health hazard

Repr. 1B H360FD May damage fertility. May damage the unborn child.

GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Other hazards that do not result in classification No data available

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS02 GHS07 GHS08

Signal word Danger

Hazard-determining components of labelling:

2-Ethoxyethyl acetate

Hazard statements

H226 Flammable liquid and vapor.

H315 Causes skin irritation.

H360FD May damage fertility. May damage the unborn child.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P281 Use personal protective equipment as required.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.

Rinse skin with water/shower.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: N/A

vPvB: N/A

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Dangerous components:

CAS: 98-55-5

EINECS: 202-680-6

alpha-Terpineol

Skin Irrit. 2, H315

7,0%

CAS: 111-15-9

EINECS: 203-839-2

Index number: 607-037-00-7

2-Ethoxyethyl acetate

Flam. Liq. 3, H226; Repr. 1B, H360FD; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332

7,0%

CAS: 9004-70-0

EC number: 618-392-2

Nitrocellulose

Flam. Sol. 1, H228; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335

7,0%

Additional information None known.

Non-Hazardous Ingredients

CAS: 7440-06-4

EINECS: 231-116-1

Platinum

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

If inhaled:

Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

Seek immediate medical advice.

In case of skin contact:

Instantly wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

In case of eye contact:

Rinse opened eye for several minutes under running water. Then consult doctor.

If swallowed:

Seek medical treatment.

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

No data available

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

No data available

SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing agents CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Carbon monoxide and carbon dioxide

Nitrogen oxides (NO_x)

Platinum oxide

5.3 Advice for firefighters

Protective equipment:

Wear self-contained breathing apparatus.

Wear full protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

6.2 Environmental precautions: Do not allow product to enter drains, sewage systems, or other water courses system or water bodies.

6.3 Methods and materials for containment and cleanup:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of contaminated material as waste according to section 13.

Ensure adequate ventilation.

Prevention of secondary hazards: Keep away from ignition sources.

6.4 Reference to other sections

See Section 7 for information on safe handling

See section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Keep containers tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation/exhaustion at the workplace.
Open and handle container with care.
Information about protection against explosions and fires:
Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.
7.2 Conditions for safe storage, including any incompatibilities
Requirements to be met by storerooms and containers: No special requirements.
Information about storage in one common storage facility: Store away from oxidising agents.
Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well-sealed containers.
Store in a locked cabinet or with access restricted to technical experts or their assistants.
7.3 Specific end use(s) No data available

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

8.1 Control parameters

Components with critical values that require monitoring at the workplace:

7440-06-4 Platinum (79,0%)

AGW (Germany) Long-term value: 1 E mg/m³
EU, 13

PEL (USA) Long-term value: 0,002 mg/m³
soluble salts, as Pt

REL (USA) Long-term value: 1* 0,002** mg/m³
*Metal **soluble salts, as Pt

TLV (USA) Long-term value: 1* 0,002** mg/m³
*metal **soluble salts, as Pt

111-15-9 2-Ethoxyethyl acetate (7,0%)

AGW (Germany) Long-term value: 10,8 mg/m³, 2 ppm
8(II);EU, DFG, H, Z

PEL (USA) Long-term value: 540 mg/m³, 100 ppm
Skin

REL (USA) Long-term value: 2,7 mg/m³, 0,5 ppm
Skin

TLV (USA) Long-term value: 27 mg/m³, 5 ppm
Skin; BEI

Ingredients with biological limit values:

111-15-9 2-Ethoxyethyl acetate (7,0%)

BGW (Germany) 50 mg/l

Untersuchungsmaterial: Urin

Probennahmezeitpunkt: bei Langzeitexposition: Nach mehreren vorangegangenen Schichten

Parameter: Ethoxyessigsäure

BEI (USA) 100 mg/g creatinine

Medium: urine

Time: end of shift at end of workweek

Parameter: 2-Ethoxyacetic acid

Additional information: No data

8.2 Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures should be adhered to in handling the chemicals.

Keep away from foodstuffs, beverages and food.

Instantly remove any soiled and impregnated garments.

Wash hands during breaks and at the end of the work.

Store protective clothing separately.

Do not inhale dust / smoke / mist.

Maintain an ergonomically appropriate working environment.

Breathing equipment: Use breathing protection with high concentrations.

Recommended filter device for short term use:

Use a respirator with multi-purpose combination (US) or type ABEK (EN 14387) as a backup to engineering controls. Risk assessment should be performed to

determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards such as NIOSH (USA)

or CEN (EU).

Protection of hands:

Inspect gloves prior to use.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Material of gloves Impervious gloves

Eye protection:

Safety glasses

Face protection

Body protection: Protective work clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:

Form: Paste

Smell: Not determined

Odor threshold: Not determined.

pH: Not determined.

Melting point/Melting range: Not determined

Boiling point/Boiling range: Not determined

Sublimation temperature / start: Not determined

Inflammability (solid, gas) Not determined.

Ignition temperature: 380 °C

Decomposition temperature: Not determined

Self-inflammability: Product is not selfigniting.

Danger of explosion: Not determined.

Critical values for explosion:

Lower: Not determined

Upper: Not determined

Steam pressure: Not determined

Density Not determined

Relative density Not determined.

Vapor density Not determined.

Evaporation rate Not determined.

Solubility in / Miscibility with

Water: Not miscible or difficult to mix

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

Solvent content:

Organic solvents: 7,0 %

Solids content: 86,0 %

9.2 Other information No data available

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity No data available

10.2 Chemical stability Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions Reacts with strong oxidising agents

10.4 Conditions to avoid No data available

10.5 Incompatible materials: Oxidising agents

10.6 Hazardous decomposition products:

Carbon monoxide and carbon dioxide

Nitrogen oxides (NO_x)

Platinum oxide

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.

LD/LC50 values that are relevant for classification:

98-55-5 alpha-Terpineol

Oral LD50 3200 mg/kg (RAT)

111-15-9 2-Ethoxyethyl acetate

Oral LD50 2700 mg/kg (rat)

Skin irritation or corrosion: May cause irritation

Eye irritation or corrosion: May cause irritation

Sensitization: No sensitizing effect known.

Germ cell mutagenicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for components in this product.

Carcinogenicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for components in this product.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

Reproductive toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for components in this product.

Specific target organ system toxicity - repeated exposure: No effects known.

Specific target organ system toxicity - single exposure: No effects known.

Aspiration hazard: No effects known.

Subacute to chronic toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:

Product is suspected to cause injury to foetus.

May cause harm to the unborn child.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity: No data available

12.2 Persistence and degradability No data available

12.3 Bioaccumulative potential No data available

12.4 Mobility in soil No data available

Additional ecological information:

Water hazard class 1 (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities to reach groundwater, water courses, or sewage systems.

Avoid transfer into the environment.

12.5 Results of PBT and vPvB assessment

PBT: N/A

vPvB: N/A

12.6 Other adverse effects No data available

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Recommendation

Hand over to disposers of hazardous waste.

Must be specially treated under adherence to official regulations.

Consult official regulations for proper disposal.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION

UN-Number

ADR, IMDG, IATA UN1263

14.2 UN proper shipping name

ADR 1263 PAINT, special provision 640E

IMDG, IATA PAINT

14.3 Transport hazard class(es)

ADR

Class 3 (F1) Flammable liquids.

Label 3

IMDG, IATA

Class 3 Flammable liquids.

Label 3

Packing group

ADR, IMDG, IATA III

14.5 Environmental hazards:

Marine pollutant: No

14.6 Special precautions for user Warning: Flammable liquids.

Kemler Number: 30

EMS Number: F-E,S-E

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

Code N/A

Transport/Additional information:

ADR

Excepted quantities (EQ): E1

Limited quantities (LQ) 5L

Transport category 3

Tunnel restriction code D/E

UN "Model Regulation": UN1263, PAINT, special provision 640E, 3, III

SECTION 15. REGULATORY INFORMATION

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

Australian Inventory of Chemical Substances

All ingredients are listed.

Standard for the Uniform Scheduling of Medicines and Poisons

None of the ingredients is listed.

National regulations

Information about limitation of use:

Employment restrictions concerning young persons must be observed.

Employment restrictions concerning women of child-bearing age must be observed.

For use only by technically qualified individuals.

Classification according to VbF: N/A

Technical instructions (air):

Class Share in %

NK 7,0

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

Other regulations, limitations and prohibitive regulations

ELINCS (European List of Notified Chemical Substances)

None of the ingredients is listed.

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.

111-15-9 2-Ethoxyethyl acetate

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

None of the ingredients is listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use)

None of the ingredients is listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the

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