

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name HYPLUS SI BLACK
Version # 02
Revision date 05-Dec-2012
CAS # Mixture
Product code 00132695IM
Manufacturer information TOYO Ink America, LLC.
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Wood Dale, IL 61091 US
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Chemtrec 800-424-9300
Chemtrec Acct. CCN22523

2. Hazards Identification

Emergency overview Health injuries are not known or expected under normal use.
Potential health effects
Routes of exposure Not applicable.
OSHA regulatory status Please see section 11 and 15 for product and component exposure guidelines. Components not listed in section 3 are not a physical or health hazard as defined in 29 CFR 1910.1200.

3. Composition / Information on Ingredients

| Hazardous components | CAS # | Percent |
|--------------------------|------------|---------|
| Manganese Tallate | 8030-70-4 | 0.5 - 1 |
| Non-hazardous components | CAS # | Percent |
| Cobalt Tallate | 61789-52-4 | 0.5 - 1 |

4. First Aid Measures

General advice If you feel unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures

Flash point 253.4 °F (123 °C) estimated
Flammable properties None known.
Protection of firefighters
Protective equipment and precautions for firefighters Move containers from fire area if you can do so without risk. In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers. Cool containers exposed to flames with water until well after the fire is out.
Specific methods In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.
Suitable extinguishing media Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

6. Accidental Release Measures

Personal precautions Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained.
Environmental precautions Prevent further leakage or spillage if safe to do so.
Methods for containment ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.

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| Methods for cleaning up | <p>Large Spills: Dike far ahead of spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills in original containers for re-use.</p> |
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7. Handling and Storage

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| Handling | DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Handle and open container with care. |
| Storage | Keep away from heat, sparks and open flame. Use care in handling/storage. |

8. Exposure Controls / Personal Protection

Personal protective equipment

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| Respiratory protection | Wear suitable respiratory protective equipment if exposed to high level of mists are likely. |
| General hygiene considerations | Handle in accordance with good industrial hygiene and safety practice. |
| Eye protection | Use safety glasses or goggles |

9. Physical & Chemical Properties

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| Solubility (water) | Insoluble |
| Vapor pressure | 0 hPa estimated |
| Decomposition temperature | Not available. |
| pH | Not available. |
| Boiling point | 557.6 °F (292 °C) estimated |
| Evaporation rate | Not available. |
| Percent volatile | 1.65 % estimated |
| Density | 0.9419 lb/cu ft estimated |
| Specific gravity | 0.942 estimated |
| VOC (Weight %) | 6.2407 % estimated (58.7840 g/l, 0.49 lbs/gal) |

10. Chemical Stability & Reactivity Information

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|----------------------------|---|
| Chemical stability | Material is stable under normal conditions. |
| Conditions to avoid | Heat, flames and sparks. |

11. Toxicological Information

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| Carcinogenicity | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. | |
| US ACGIH Threshold Limit Values: A3 carcinogen | | |
| Cobalt Tallate | 61789-52-4 | A3 Confirmed animal carcinogen with unknown relevance to humans. |
| Further information | This product has no known adverse effect on human health. | |

12. Ecological Information

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| Environmental effects | An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. |
| Persistence and degradability | Not available. |

13. Disposal Considerations

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| Disposal instructions | Dispose of contents/container in accordance with local/regional/national/international regulations. Disposal to water is prohibited. |
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14. Transport Information

Not available.

15. Regulatory Information

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| Canadian regulations | This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR. |
| International regulations | Additional information is given in the Material Safety Data Sheet. |
| US TSCA Inventory: Registration Status | |
| Cobalt Tallate | 61789-52-4 Listed. |
| Manganese Tallate | 8030-70-4 Listed. |
| Superfund Amendments and Reauthorization Act of 1986 (SARA) | |
| Contains a Section 302 extremely hazardous substance | No |
| Contains a Section 311 hazardous chemical | No |
| Hazard categories | Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No |
| State regulations | This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. |
| US federal regulations | This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. |

CERCLA/SARA Hazardous Substances - Not applicable.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

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|----------------|------------|------------|
| Cobalt Tallate | 61789-52-4 | 0.1 % N096 |
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US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

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|-------------------|------------|--------------|
| Cobalt Tallate | 61789-52-4 | N096 Listed. |
| Manganese Tallate | 8030-70-4 | N450 Listed. |

US TSCA Inventory: Registration Status

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|-------------------|------------|---------|
| Cobalt Tallate | 61789-52-4 | Listed. |
| Manganese Tallate | 8030-70-4 | Listed. |

16. Other Information

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| HMIS® ratings | Health: 1 Flammability: 1 Physical hazard: 1 |
| NFPA ratings | Health: 1 Flammability: 1 Instability: 1 |
| Issue date | 05-Dec-2012 |
| This data sheet contains changes from the previous version in section(s): | Hazards Identification: US Hazardous Hazards Identification: Emergency overview Hazards Identification: OSHA regulatory status First Aid Measures: General advice Accidental Release Measures: Methods for containment Accidental Release Measures: Personal precautions Handling and Storage: Handling Handling and Storage: Storage Exposure Controls / Personal Protection: General hygiene considerations Toxicological Information: Carcinogenicity Regulatory Information: United States Regulatory Information: US federal regulations |

Disclaimer

TOYO INK AMERICA,LLC has prepared this material safety data sheet (MSDS) in compliance with 29CFR 1910.1200. The MSDS is offered in good faith based on data available to us that we believe to be true and accurate, and is intended to describe the product solely with respect to health, safety, and the environment. No responsibility is accepted that the information is sufficient or correct in all cases. As such, it must not be interpreted as a guarantee of any specific property of the product, and no warranty is made regarding the accuracy of this data. It also can not be assumed that all possible safety measures are contained in this Data Sheet or that other measures may not be required under varying circumstances. The customer shall be solely responsible for deciding whether said information is suitable and beneficial. We assume no responsibility for damage or injury from the use of the product described herein.