

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Date of issue: 1/16/2015

Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Trade name : Metalon™ HPR-059 Carbon Screen Ink

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

Use of the substance/mixture : Commercial Ink

1.3. Details of the supplier of the safety data sheet

NCC Nano LLC dba Novacentrix
400 Parker Drive, Suite 1110
Austin, TX 78728
T (512) 491-9500
msds@novacentrix.com

1.4. Emergency telephone number

Emergency number : ChemTel Inc. 1 (800) 255-3924 ; Intl. +01 (813) 248-0585 (24 hr)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Sensitization — Skin, Category 1 H317

Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) : Warning
Contains : Carbon black; Dispersant
Hazard statements (GHS-US) : H317 - May cause an allergic skin reaction
Precautionary statements (GHS-US) : P261 - Avoid breathing fume, mist, vapours, spray
P272 - Contaminated work clothing must not be allowed out of the workplace
P280 - Wear eye protection, protective gloves, protective clothing
P302+P352 - If on skin: Wash with plenty of soap
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P363 - Wash contaminated clothing before reuse
P501 - Dispose of contents/container to comply with applicable local, national and international regulation

2.3. Other hazards

Other hazards which do not result in classification : This product contains Carbon Black. Airborne and unbound particles of Carbon Black is classified as "Group 2B (possibly carcinogenic to humans)" by IARC. Chronic inhalation studies performed with fine dust particles resulted in lung tumors in animals. There is inadequate evidence in humans for the carcinogenicity of carbon black (IARC monographs volume 93). Under normal condition of use; inhalation of fine dust particles is not expected to occur.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

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Name	Product identifier	%	GHS-US classification
Carbon black	(CAS No) 1333-86-4	5 - 15	Carc. 2, H351
Dispersant*	(CAS No) Trade Secret	4 - 8	Skin Sens. 1, H317

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

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 : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If exposure symptoms persist, seek medical advice.
- First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse and then wash skin thoroughly with water and soap. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice and attention.
- First-aid measures after ingestion : If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek immediate medical advice.

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

- Symptoms/injuries after inhalation : Inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
- Symptoms/injuries after skin contact : May cause an allergic skin reaction.
- Symptoms/injuries after eye contact : May cause slight temporary irritation.
- Symptoms/injuries after ingestion : May cause irritation to the digestive tract.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Combustion generates smoke fumes, carbon monoxide and dioxide, nitrogen oxides (NOx), and various hydrocarbon compounds.
- Explosion hazard : Prolonged exposure to fire may cause containers to rupture/explode.
- Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Advice for firefighters

- Firefighting instructions : In case of fire: Wear self-contained breathing apparatus. Wear proper protective equipment. Evacuate personnel to a safe area. Do not allow run-off from firefighting to enter drains or water courses. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire.
- Protective equipment for firefighters : Use self-contained breathing apparatus and chemically protective clothing. Do not attempt to take action without suitable protective equipment.
- Other information : On heating, there is a risk of bursting due to internal pressure build-up. Cool down the containers exposed to heat with a water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Stop leak if safe to do so. Ensure adequate air ventilation.

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing mist or vapor.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. Avoid breathing dust, mist or spray. Wear suitable protective clothing, gloves and eye/face protection. For further information refer to section 8: Exposure-controls/personal protection.
- Emergency procedures : Evacuate unnecessary personnel. Ventilate area.

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6.2. Environmental precautions

Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Collect in closed containers for disposal. Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- For containment : Stop leak, if possible without risk. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Collect spillage. Put into a labeled container and provide safe disposal.
- Methods for cleaning up : Take up liquid spill into inert absorbent material. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect all waste in suitable and labeled containers and dispose according to local legislation. Wear suitable protective clothing. Notify authorities if product enters sewers or public waters.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: Exposure-controls/personal protection. For disposal of residues refer to section 13: Disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing mist or vapor.
- Hygiene measures : Separate working clothes from town clothes. Launder separately. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in well ventilated area. Keep cool. Long-term storage in closed containers.
- Incompatible materials : Strong oxidizing agents. Strong acids.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Carbon black (1333-86-4)		
ACGIH	ACGIH TWA (mg/m ³)	3 mg/m ³
ACGIH	Remark (ACGIH)	Bronchitis
OSHA	OSHA PEL (TWA) (mg/m ³)	3.5 mg/m ³
IDLH	US IDLH (mg/m ³)	1750 mg/m ³
NIOSH	NIOSH REL (TWA) (mg/m ³)	3.5 mg/m ³ 0.1 mg/m ³ (Carbon black in presence of Polycyclic aromatic hydrocarbons)

8.2. Exposure controls

- Appropriate engineering controls : Provide local exhaust or general room ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure good ventilation of the work station.
- Personal protective equipment : Avoid all unnecessary exposure. Gloves. Protective goggles. Protective clothing. Personal protective equipment should be selected based upon the conditions under which this product is handled or used.



- Hand protection : Wear impermeable protective gloves.
- Eye protection : Chemical goggles or safety glasses.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : Wear respiratory protection.
- Environmental exposure controls : Avoid release to the environment.
- Other information : Do not eat, drink or smoke during use.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	: Viscous liquid.
Color	: Black
Odor	: Mild
Odor threshold	: No data available
pH	: 7 - 9
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 93.3 °C
Relative evaporation rate (butyl acetate=1)	: <= 1
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: 1 – 1.2
Relative vapor density at 20 °C	: > 1
Solubility	: Water: Dispersible
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable at normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Hazardous polymerization does not occur.

10.4. Conditions to avoid

High temperature. Incompatible materials.

10.5. Incompatible materials

Strong acids. Strong oxidizers.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. During a fire, carbon monoxide and dioxide, nitrogen oxides (NOx), and various hydrocarbon compounds, may be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure	: Ingestion; Oral; Skin and Eye contact
Acute toxicity	: Not classified (Based on available data, the classification criteria are not met)

Carbon black (1333-86-4)

LD50 oral rat	> 15400 mg/kg
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Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 7 - 9
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 7 - 9
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)

Carbon black (1333-86-4)	
IARC group	2B - Possibly carcinogenic to humans
In OSHA Hazard Communication Carcinogen list	Yes

Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
Specific target organ toxicity (single exposure)	: Not classified (Based on available data, the classification criteria are not met)
Specific target organ toxicity (repeated exposure)	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: Inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
Symptoms/injuries after skin contact	: May cause an allergic skin reaction.
Symptoms/injuries after eye contact	: May cause slight temporary irritation.
Symptoms/injuries after ingestion	: May cause irritation to the digestive tract.

SECTION 12: Ecological information

12.1. Toxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.2. Persistence and degradability

Metalon™ HPR-059 Carbon Screen Ink	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Metalon™ HPR-059 Carbon Screen Ink	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No additional information available

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container to comply with applicable local, national and international regulations.

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Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT
Not regulated for transport

TDG

Not regulated for transport

Transport by sea

Not regulated for transport

Air transport

Not regulated for transport

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Carbon black (1333-86-4)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
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EU-Regulations

Carbon black (1333-86-4)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Listed on ELINCS (European List of Notified Chemical Substances)

National regulations

Carbon black (1333-86-4)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on the Canadian IDL (Ingredient Disclosure List)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on CICR (Turkish Inventory and Control of Chemicals)

15.3. US State regulations

California Proposition 65 - This product does not contain any substance(s) known to the state of California to cause cancer, developmental and/or reproductive harm.

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SECTION 16: Other information

Date of Preparation : 01/06/2016

Abbreviations and acronyms : IARC (International Agency for Research on Cancer).
ACGIH (American Conference of Government Industrial Hygienists).
TWA- Time Weighted Average.
IDLH - Immediately Dangerous to Life or Health.
NIOSH (National Institute for Occupational Safety and Health).
REL - recommended exposure limit.
WHMIS - Workplace Hazardous Materials Information System.
OSHA - Occupational Safety and Health Administration.

H317	May cause an allergic skin reaction
H351	Suspected of causing cancer
Carc. 2	Carcinogenicity Category 2
Skin Sens. 1	Skin sensitization Category 1

SDS US (GHS HazCom 2012)

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.