

Cerakote F-104 Black Shadow

Version number: 1.0

Date of compilation: 01/14/2025

SECTION 1: Identification

1.1 Product identifier

Trade name **Cerakote F-104 Black Shadow**

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

Relevant identified uses Professional use

1.3 Details of the supplier of the safety data sheet

NIC Industries, Inc
7050 6th St.
White City Oregon 97503
United States

Telephone: 866-774-7628
e-mail: sds@nicindustries.com
Website: www.nicindustries.com

1.4 Emergency telephone number

Emergency information service 1-800-633-8253 (USA & Canada)

The information contained in this Safety Data Sheet (SDS) is, to the best of our knowledge, true and accurate and presented in good faith. NIC Industries, Inc. makes no warranties, expressed or implied, as to the accuracy and adequacy of this information. Because many factors may affect processing or application/use of this product, this data is offered solely for the user's consideration, investigation and verification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or process. Regulatory requirements are subject to change and may differ from one location to another. It is the responsibility of the buyer/user to ensure its activities comply with all local, state and federal regulations.

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Hazard class and category code(s)

| Classification acc. to GHS | | | | |
|----------------------------|-----------------------------------|----------|---------------------------|------------------|
| Section | Hazard class | Category | Hazard class and category | Hazard statement |
| A.2 | Skin corrosion/irritation | 2 | Skin Irrit. 2 | H315 |
| A.3 | Serious eye damage/eye irritation | 2A | Eye Irrit. 2A | H319 |
| A.4S | Skin sensitization | 1 | Skin Sens. 1 | H317 |
| A.6 | Carcinogenicity | 2 | Carc. 2 | H351 |
| B.6 | Flammable liquid | 4 | Flam. Liq. 4 | H227 |

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources.

Cerakote F-104 Black Shadow

Version number: 1.0

Date of compilation: 01/14/2025

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word

WARNING

- Pictograms

GHS07, GHS08



- Hazard statements

| | |
|------|--------------------------------------|
| H227 | Combustible liquid. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H351 | Suspected of causing cancer. |

- Precautionary statements

| | |
|----------------|--|
| P201 | Obtain special instructions before use. |
| P210 | Keep away from heat/sparks/open flames/hot surfaces. No smoking. |
| P261 | Avoid breathing dust/fume/gas/mist/vapors/spray. |
| P272 | Contaminated work clothing must not be allowed out of the workplace. |
| P280 | Wear protective gloves/eye protection/face protection. |
| P302+P352 | If on skin: Wash with plenty of water. |
| P305+P351+P338 | If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P308+P313 | If exposed or concerned: Get medical advice/attention. |
| P321 | Specific treatment (see on this label). |
| P333+P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P362 | Take off contaminated clothing and wash before reuse. |
| P363 | Wash contaminated clothing before reuse. |
| P370+P378 | In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish. |
| P403+P235 | Store in a well-ventilated place. Keep cool. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container to industrial combustion plant. |

- Hazardous ingredients for labelling

p-chlorobenzotrifluoride, Ambient Curable Refractory Resin

2.3 Other hazards

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of $\geq 0.1\%$.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of $\geq 0.1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

Cerakote F-104 Black Shadow

Version number: 1.0

Date of compilation: 01/14/2025

3.2 Mixtures

Description of the mixture

| Name of substance | Identifier | Wt% |
|----------------------------------|------------------------|-----------|
| p-chlorobenzotrifluoride | CAS No 98-56-6 | 50 - < 75 |
| Ambient Curable Refractory Resin | CAS No Trade Secret | 10 - < 25 |
| Pigment #2 | CAS No Trade Secret | 10 - < 25 |
| Performance Ceramic #3 | CAS No Trade Secret | 5 - < 10 |

Remarks

** Trade Secret: In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200(i) and in accordance with the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS), the specific identity and/or exact percentage (concentration) of the composition has been withheld as a "Trade Secret"

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Dry extinguishing powder, BC-powder, Carbon dioxide (CO2)

Cerakote F-104 Black Shadow

Version number: 1.0

Date of compilation: 01/14/2025

5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapor-air mixture. Solvent vapors are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder.

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.

- Specific notes/details

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapors are heavier than air, spread along floors and form explosive mixtures with air. Vapors may form explosive mixtures with air.

Cerakote F-104 Black Shadow

Version number: 1.0

Date of compilation: 01/14/2025

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Explosive atmospheres

Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.

- Flammability hazards

Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.

- Ventilation requirements

Use local and general ventilation. Ground/bond container and receiving equipment.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)
this information is not available

8.2 Exposure controls

Appropriate engineering controls

Exhaust ventilation. General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear protective gloves.

- Other protection measures

Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

Cerakote F-104 Black Shadow

Version number: 1.0

Date of compilation: 01/14/2025

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

| | |
|----------------|-----------------------|
| Physical state | Liquid |
| Color | Characteristic |
| Particle | Not relevant (liquid) |
| Particle size | Not available |
| Odor | Characteristic |

Other safety parameters

| | |
|---|----------------------|
| pH (value) | Not determined |
| Melting point/freezing point | Not determined |
| Initial boiling point and boiling range | >133.8 °C at 1 atm |
| Flash point | 39 °C |
| Evaporation rate | Not determined |
| Flammability (solid, gas) | Not relevant (fluid) |
| Explosive limits | Not determined |
| Vapor pressure | 0.018 Pa at 25 °C |
| Density | 1.51 g/ml |
| Vapor density | Not available |
| Relative density | Not available |
| Solubility(ies) | Not determined |

Partition coefficient

| | |
|-----------------------------|---------------|
| - n-octanol/water (log KOW) | Not available |
| Auto-ignition temperature | 600 °C |
| Decomposition temperature | Not relevant |

Viscosity

| | |
|-----------------------|----------------|
| - Kinematic viscosity | Not determined |
|-----------------------|----------------|

Cerakote F-104 Black Shadow

Version number: 1.0

Date of compilation: 01/14/2025

| | |
|----------------------|------|
| Explosive properties | None |
| Oxidizing properties | None |

There is no additional information

9.2 Other information

| | |
|--|--|
| Temperature class (USA, acc. to NEC 500) | T1 (maximum permissible surface temperature on the equipment: 450°C) |
|--|--|

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

If heated:

Risk of ignition.

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Moisture.

Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

10.5 Incompatible materials

Oxidizers. Alcohols.

10.6 Hazardous decomposition products

Carbon dioxide, carbon monoxide, and silicon oxides may be produced from all coating formulations. Chlorine-containing gases, fluorine-containing gases may be produced in products containing p-chlorobenzotrifluoride. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Shall not be classified as acutely toxic.

GHS of the United Nations, annex 4: May be harmful in contact with skin.

Cerakote F-104 Black Shadow

Version number: 1.0

Date of compilation: 01/14/2025

Acute toxicity estimate (ATE) of components

| Name of substance | CAS No | Exposure route | ATE |
|--------------------------|--------------|-----------------------|--------------|
| p-chlorobenzotrifluoride | 98-56-6 | Dermal | >3,300 mg/kg |
| Performance Ceramic #3 | Trade Secret | Inhalation: dust/mist | >1.5 mg/l/4h |

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

May cause an allergic skin reaction.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Suspected of causing cancer.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

| Name of substance | Classification | Number |
|--------------------------|----------------|--------|
| p-chlorobenzotrifluoride | 2B | |

Legend

2B Possibly carcinogenic to humans

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

Cerakote F-104 Black Shadow

Version number: 1.0

Date of compilation: 01/14/2025

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB. Does not contain a PBT-/vPvB-substance at a concentration of $\geq 0.1\%$.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of $\geq 0.1\%$.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product/packaging disposal

Do not empty into drains. Avoid release to the environment. Contact a licensed professional waste disposal service to dispose of this material and its packaging.

Waste treatment of containers/packages

Follow all local, state, and Federal disposal regulations.

Hazardous waste code(s)

The waste code(s) should be assigned in discussion between the user and the waste disposal company.

SECTION 14: Transport information

| | |
|--|---|
| 14.1 UN number | not subject to transport regulations |
| 14.2 UN proper shipping name | not relevant |
| 14.3 Transport hazard class(es) | none |
| 14.4 Packing group | not assigned |
| 14.5 Environmental hazards | non-environmentally hazardous acc. to the dangerous goods regulations |

14.6 Remarks

Cerakote F-104 Black Shadow product does not need to be regulated for purposes of transportation due to the fact that the p-chlorobenzotrifluoride (CAS# 98-56-6) contained in the mixture does not sustain combustion. Per 49 CFR § 173.120(a)(3) of the hazardous materials regulations, liquids with a flash point greater than 35°C that do not sustain combustion according to ASTM D 4206 do not meet the definition of a Class 3 Flammable Liquid. Additionally, International Air Transport Association (IATA) Dangerous Goods Regulations section 3.3.1.3(a) states that liquids which do not sustain combustion "need not be considered as flammable" if the liquid has "passed a suitable test for combustibility" as prescribed by the UN Manual of Tests and Criteria, Part III, subsection 32.5.2. ASTM D 4206 standards are identical to the UN Manual standards; it is thus considered to be a suitable test for combustibility. For the aforementioned reasons, Cerakote F-104 Black Shadow is not considered regulated for purposes of transportation.

14.7 Transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT) - Additional information

Not subject to transport regulations.

International Maritime Dangerous Goods Code (IMDG) - Additional information

Not subject to IMDG.

Cerakote F-104 Black Shadow

Version number: 1.0

Date of compilation: 01/14/2025

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Toxic Substance Control Act (TSCA)

All ingredients are listed

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

Please contact sds@nicindustries.com for more information.

- Specific Toxic Chemical Listings (EPCRA Section 313)

Please contact sds@nicindustries.com for more information.

Toxics Release Inventory: Specific Toxic Chemical Listings

| Name of substance | Effective date |
|-------------------|----------------|
| Pigment #2 | 12/31/1986 |

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

Please contact sds@nicindustries.com for more information.

Clean Air Act

Please contact sds@nicindustries.com for more information.

Right to Know Hazardous Substance List

- Toxic or Hazardous Substance List (MA-TURA)

| Name of substance | PBT / HHS / LHS | De Minimis Concentration Threshold |
|-------------------|-----------------|------------------------------------|
| Pigment #2 | | 1.0 % |

- Hazardous Substances List (MN-ERTK)

None of the ingredients are listed.

- Hazardous Substance List (NJ-RTK)

| Name of substance | Classifications |
|-------------------|-----------------|
| Pigment #2 | |

- Hazardous Substance List (Chapter 323) (PA-RTK)

| Name of substance | Classification |
|-------------------|----------------|
| Pigment #2 | *, E |

Legend

* Any compound of this substance is also an environmental hazard

Cerakote F-104 Black Shadow

Version number: 1.0

Date of compilation: 01/14/2025

Legend

E Environmental hazard

- Hazardous Substance List (RI-RTK)

None of the ingredients are listed.

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

| Proposition 65 List of chemicals | | |
|----------------------------------|---------|----------------------|
| Name of substance | Remarks | Type of the toxicity |
| p-chlorobenzotrifluoride | | cancer |

VOC content

All Cerakote coatings are VOC compliant under the EPA and have low to no VOC content. To find out the VOC content of an individual coating please contact sds@nicindustries.com for more information.

National inventories

| Country | Inventory | Status |
|---------|------------|-------------------------------------|
| AU | AIIC | All ingredients are listed |
| CA | DSL | All ingredients are listed |
| CN | IECSC | All ingredients are listed |
| EU | ECSI | All ingredients are listed |
| EU | REACH Reg. | All ingredients are listed |
| JP | CSCL-ENCS | Not all ingredients are listed |
| JP | ISHA-ENCS | Not all ingredients are listed |
| KR | KECI | All ingredients are listed |
| MX | INSQ | Not all ingredients are listed |
| NZ | NZIoC | All ingredients are listed |
| PH | PICCS | All ingredients are listed |
| TR | CICR | Not all ingredients are listed |
| TW | TCSI | All ingredients are listed |
| US | TSCA | All ingredients are listed (ACTIVE) |

Legend

AIIC Australian Inventory of Industrial Chemicals
 CICR Chemical Inventory and Control Regulation
 CSCL-ENCS List of Existing and New Chemical Substances (CSCL-ENCS)
 DSL Domestic Substances List (DSL)
 ECSI EC Substance Inventory (EINECS, ELINCS, NLP)
 IECSC Inventory of Existing Chemical Substances Produced or Imported in China
 INSQ National Inventory of Chemical Substances
 ISHA-ENCS Inventory of Existing and New Chemical Substances (ISHA-ENCS)
 KECI Korea Existing Chemicals Inventory
 NZIoC New Zealand Inventory of Chemicals

Cerakote F-104 Black Shadow

Version number: 1.0

Date of compilation: 01/14/2025

Legend

- PICCS Philippine Inventory of Chemicals and Chemical Substances (PICCS)
- REACH Reg. REACH registered substances
- TCSI Taiwan Chemical Substance Inventory
- TSCA Toxic Substance Control Act

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information, including date of preparation or last revision

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|---------------|---|
| 49 CFR US DOT | 49 CFR U.S. Department of Transportation |
| ATE | Acute Toxicity Estimate |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| ED | Endocrine disruptor |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| HHS | Higher hazard substance |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Dangerous Goods Code |
| LHS | Lower hazard substance |
| NLP | No-Longer Polymer |
| OSHA | Occupational Safety and Health Administration (United States) |
| PBT | Persistent, Bioaccumulative and Toxic |
| RTECS | Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information) |
| VOC | Volatile Organic Compounds |
| vPvB | Very Persistent and very Bioaccumulative |

Key literature references and sources for data

- OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.
- Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG).
- Dangerous Goods Regulations (DGR) for the air transport (IATA).

Cerakote F-104 Black Shadow

Version number: 1.0

Date of compilation: 01/14/2025

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

| Code | Text |
|------|--------------------------------------|
| H227 | Combustible liquid. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H351 | Suspected of causing cancer. |