

Cerakote FX

Version number: 1.1

Date of compilation: 12/29/2022

SECTION 1: Identification

1.1 Product identifier

Trade name **Cerakote FX**

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

Relevant identified uses **General 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.6	Carcinogenicity	2	Carc. 2	H351

For full text of abbreviations: see SECTION 16.

2.2 Label elements

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

- Signal word **WARNING**

- Pictograms

GHS08



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- Hazard statements
 H351 Suspected of causing cancer.
- Precautionary statements
 P201 Obtain special instructions before use.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P308+P313 If exposed or concerned: Get medical advice/attention.
 P405 Store locked up.
 P501 Dispose of contents/container to industrial combustion plant.
- Hazardous ingredients for labelling Synthetic Pigment

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%
Synthetic Pigment	CAS No Trade Secret	25 – < 50
Ceramic Additive	CAS No Trade Secret	1 – < 5

** 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. Provide fresh air.

Following skin contact

Brush off loose particles from skin. Rinse skin with water/shower.

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.

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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

Water, Foam, Dry extinguishing powder, ABC-powder

5.2 Special hazards arising from the substance or mixture

Deposited combustible dust has considerable explosion potential.

Hazardous combustion products

Nitrogen oxides (NOx), 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. Take up mechanically.

Advice on how to clean up a spill

Take up mechanically. Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder.

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.

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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. Take precautionary measures against static discharge. Use only in well-ventilated areas. Ground/bond container and receiving equipment.

- Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room. The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

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

Removal of dust deposits.

- Ventilation requirements

Use local and general ventilation.

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)

Country	Name of substance	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Notation	Source
US	Fluorphlogopite (Mg ₃ K[AlF ₂ O(SiO ₃) ₃]) Ceramic Additive Synthetic Pigment Pigment C.I. Pigment Red 254	REL							appx-D	NIOSH REL
US	Fluorphlogopite (Mg ₃ K[AlF ₂ O(SiO ₃) ₃]) Ceramic Additive Synthetic Pigment Pigment C.I. Pigment Red 254	PEL	1,766	15					partml, i, dust	29 CFR 1910.100 0

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Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of substance	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Notation	Source
US	Fluorophlogopite (Mg ₃ K[AlF ₂ O(SiO ₃) ₃]) Ceramic Additive Synthetic Pigment Pigment C.I. Pigment Red 254	PEL	529.5	5					partml, r, dust	29 CFR 1910.1000
US	Fluorophlogopite (Mg ₃ K[AlF ₂ O(SiO ₃) ₃]) Ceramic Additive Synthetic Pigment Pigment C.I. Pigment Red 254	PEL (CA)		10					dust	Cal/OSHA PEL
US	Fluorophlogopite (Mg ₃ K[AlF ₂ O(SiO ₃) ₃]) Ceramic Additive Synthetic Pigment Pigment C.I. Pigment Red 254	PEL (CA)		5					r	Cal/OSHA PEL
US	Pigment	TLV®		5					r	ACGIH® 2022
US	Pigment	PEL (CA)		5					fume	Cal/OSHA PEL
US	Pigment	PEL		10					fume	29 CFR 1910.1000
US	Pigment	REL		5 (10 h)					df, Fe	NIOSH REL
US	Pigment	REL							appx-D	NIOSH REL
US	Pigment	PEL		15					i, dust	29 CFR 1910.1000
US	Pigment	PEL		5					r, dust	29 CFR 1910.1000
US	Synthetic Pigment	PEL		15					i, dust	29 CFR 1910.1000
US	Synthetic Pigment	REL							lowest, appx-A	NIOSH REL
US	Synthetic Pigment	TLV®		2.5					r	ACGIH® 2022
US	Synthetic Pigment	TLV®		0.2					r	ACGIH® 2022
US	Ceramic Additive	REL		2 (10 h)					Sn	NIOSH REL

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<u>Notation</u>	
appx-A	NIOSH Potential Occupational Carcinogen (Appendix A)
appx-D	see Appendix D - Substances with No Established RELs
Ceiling-C	ceiling value is a limit value above which exposure should not occur
df	as dust and fumes
dust	as dust
Fe	calculated as Fe (iron)
fume	as fume
i	inhalable fraction
lowest	exposure by all routes should be carefully controlled to levels as low as possible
part/ml	particles/ml
r	respirable fraction
Sn	calculated as Sn (tin)
STEL	short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

8.2 Exposure controls

Appropriate engineering controls

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

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

Particulate filter device (EN 143).

Environmental exposure controls

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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	Solid (powder)
Color	Various
Particle size	Not available
Odor	Characteristic

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Other safety parameters

pH (value)	Not applicable
Melting point/freezing point	Not determined
Initial boiling point and boiling range	3,000 °C
Flash point	Not applicable
Evaporation rate	Not determined
Flammability (solid, gas)	This material is combustible, but will not ignite readily
Explosion limits of dust clouds	Not determined
Vapor pressure	0 Pa at 25 °C
Density	Not determined
Vapor density	Not available
Relative density	Not available
Solubility(ies)	Not determined

Partition coefficient

- n-octanol/water (log KOW)	Not available
Auto-ignition temperature	≥400 °C (relative self-ignition temperature for solids)
Decomposition temperature	Not relevant

Viscosity Not relevant (solid matter)

- Kinematic viscosity	Not relevant
Explosive properties	None
Oxidizing properties	None

Hazard classes acc. to GHS (Physical hazards): Not relevant

9.2 Other information

Temperature class (USA, acc. to NEC 500)	T2 (maximum permissible surface temperature on the equipment: 300°C)
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SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

Oxidizers.

10.6 Hazardous decomposition products

Carbon dioxide, carbon monoxide, and silicon oxides may be produced from all coating formulations. 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.

Acute toxicity estimate (ATE) of components of the mixture

Name of substance	CAS No	Exposure route	ATE
Ceramic Additive	Trade Secret	Inhalation: dust/mist	>2.04 mg/l/4h

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

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Carcinogenicity

Suspected of causing cancer.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Name of substance	Classification	Number
Synthetic Pigment	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.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

None of the ingredients are listed.

12.7 Other adverse effects

Data are not available.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

- | | |
|--|---|
| 14.1 UN number | Not subject to transport regulations |
| 14.2 UN proper shipping name | Not assigned |
| 14.3 Transport hazard class(es) | Not assigned |
| 14.4 Packing group | Not assigned |
| 14.5 Environmental hazards | Non-environmentally hazardous acc. to the dangerous goods regulations |
| 14.6 Special precautions for user | There is no additional information. |
| 14.7 Transport in bulk according to IMO instruments | The cargo is not intended to be carried in bulk. |

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.

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)

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

None of the ingredients are listed.

- Specific Toxic Chemical Listings (EPCRA Section 313)

None of the ingredients are listed.

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

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

None of the ingredients are listed.

Clean Air Act

None of the ingredients are listed.

Right to Know Hazardous Substance List

- Hazardous Substances List (MN-ERTK)

Name of substance	References	Remarks
Ceramic Additive	A	
Synthetic Pigment	A	

Legend

A American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 1992-93", available from ACGIH

- Hazardous Substance List (NJ-RTK)

Name of substance	Remarks	Classifications
Ceramic Additive		
Synthetic Pigment		

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

Name of substance	Classification
Synthetic Pigment	

- Hazardous Substance List (RI-RTK)

Name of substance	References
Synthetic Pigment	T

Legend

T Toxicity (ACGIH®)

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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
Synthetic Pigment	airborne, unbound particles of respirable size	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.

Industry or sector specific available guidance(s)

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	2	Material that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur
Health	0	Material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	Material that is normally stable, even under fire conditions
Special hazard		

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	All ingredients are listed

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Country	Inventory	Status
TW	TCSI	All ingredients are listed
US	TSCA	All ingredients are listed

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
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
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR U.S. Department of Transportation
ACGIH®	American Conference of Governmental Industrial Hygienists
ACGIH® 2022	From ACGIH®, 2022 TLVs® and BEIs® Book. Copyright 2022. Reprinted with permission. Information on the proper use of the TLVs® and BEIs®: http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement
ATE	Acute Toxicity Estimate
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DGR	Dangerous Goods Regulations (see IATA/DGR)
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
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)

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Abbr.	Descriptions of used abbreviations
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)
NLP	No-Longer Polymer
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible exposure limit
ppm	Parts per million
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
STEL	Short-term exposure limit
TLV®	Threshold Limit Values
TWA	Time-weighted average
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).

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
H351	Suspected of causing cancer.