CERAKOTE OFFERS A VARIETY OF COATINGS FOR NEARLY ANY APPLICATION

ELITE SERIES

Our Highest Performance Thin Film Coating

Oven Cure

9+ Colors

Common Uses: Firearms, knives, eyewear, consumer electronics, salt water applications, valves, and more.

Attributes:

- Corrosion Resistance
- Chemical Resistance
- UV Stability
- Durability/Hardness
- Coefficient of Friction
- Temperature Stability

H SERIES

The World's Leading Thin Film Coating

Oven Cure

100+ Colors

Common Uses: Firearms, eyewear, consumer electronics, salt water applications, valves, and more.

Attributes:

- Corrosion Resistance
- Chemical Resistance
- UV Stability
- Durability/Hardness
- Temperature Stability

HIGH TEMP

The Thinnest, Most Durable High Temperature Ceramic Coatings in the World

Air & Oven Cure

12+ Colors

Common Uses: Barrels, suppressors, exhaust, heat exchangers, industrial, automotive components, and more.

Attributes:

- Corrosion Resistance
- Chemical Resistance
- UV Stability
- Durability/Hardness
- Temperature Stability

PERFORMANCE CLEARS

Next generation of performance based hybrid clear coatings

Air Cure

Common Uses: Metals, Plastics and Composites where aesthetics and performance are critical.

Attributes:

- Corrosion Resistance
- Chemical Resistance
- UV Stability
- Durability/Hardness
- Temperature Stability

Learn more and see what we offer for Specialty Coatings at Cerakote.com!

NIC

CERAKOTE.COM | 1-866-774-7628

CERAKOTE

THE UNRIVALED LEADER IN THIN-FILM PROTECTIVE COATINGS

Cerakote is a ceramic polymer based proprietary formulation that offers industry leading durability, hardness, scratch resistance, corrosion resistance, flexibility, heat and chemical resistance. Cerakote can be applied to most substrates including metals, plastics, polymers, composites, hydrographics and PVD.

CERAKOTE.COM

FINISH STRONG

ELITE SERIES

We've Taken H-Series To The Next Level.

WHY CHOOSE ELITE?

- **Increased** Abrasion, Corrosion and Chemical Resistance
- **Very Low** Coefficient of Friction, Rivaling Teflon
- **Engineered** For A Distinctive High-End Look and Feel

Cerakote Elite Series is available in 8 modern, earth tone colors that can be mixed or patterned to create custom, high-performance finishes.

Technical & Performance Data

• Theoretical Solids by Weight	42.5 +/- 2%
• Theoretical Coverage per Gallon at 1.0 mil	680 ft2
• Viscosity (Brookfield Viscometer)	~45 cP
• Recommended Film Thickness	0.5-1.0 mil (Max up to 2 mils)
• Adhesion Cross-Cut Tape (ASTM D3359)	5B
• Impact (ASTM 2794)	160/160 inch/lbs
• Mandrel Bend (ASTM D522)	0mm loss @ 180° Rotation
• Liquid Density (g/mL)	1.40
• Gloss Level	Matte, 7-10 Gloss Units

- **ASTM D3363**
  Exceeds 9h scratch and gouge hardness
- **ASTM D4060**
  Taber abrasion greater than 6000 wear cycles per mil
- **ASTM B117**
  Corrosion resistance more than 3000 hours
- **ASTM D522**
  0mm coating loss at 180° mandrel bend
- **Coefficient of Friction** (Steady State Dynamic CoF Under Load)
  Equaling Teflon® at 0.11

HIGH TEMP

The Thinnest, Most Durable High Temperature Ceramic Coatings In The World.

Unsurpassed. No other word can adequately describe the Cerakote line of high temperature ceramic coatings. Formulated to withstand temperatures up to 2,000 degrees Fahrenheit, Cerakote outperforms all other high temperature coatings in the most extreme environments.

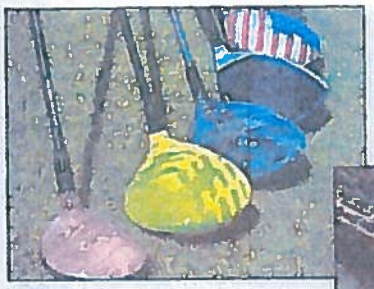
CERAKOTE.COM | 1-866-774-7628

H-SERIES

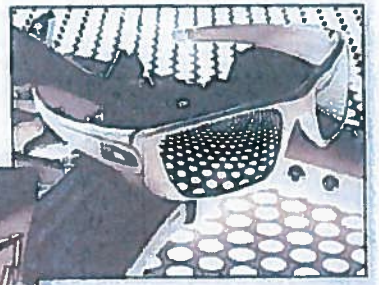
The Unrivaled Leader In Thin Film Protective Coatings.

WHY CHOOSE H-SERIES?

- **Superior** Corrosion, Wear, Impact, Scratch and Chemical Resistance
- **Maximum** Hardness, Durability, Flexibility and Adhesion
- **Excellent** Sprayability, Coverage and Consistency



THE INDUSTRY LEADER



OVER 100 COLORS

Looking for a specific color? Order Cerakote color swatches online at Cerakote.com!

Technical & Performance Data

• Theoretical Solids by Weight	30 - 60%
• Theoretical Coverage per Gallon at 1.0 mil	480 - 960 ft2
• Viscosity (Brookfield Viscometer)	60 - 120 cP
• Recommended Film Thickness	1.0 mil
• Adhesion Cross-Cut Tape (ASTM D3359)	5B
• Impact (ASTM 2794)	160/160 inch/lbs
• Mandrel Bend (ASTM D522)	0mm loss @ 180° Rotation
• Liquid Density (g/mL)	1.36 - 1.45

Recommended for any application requiring a tough, thin and durable finish including but not limited to:

- Firearms
- Knives
- Tools
- Valves
- Consumer electronics
- Salt water applications
- Eyewear
- Wearables
- Travel cups/mugs
- And more

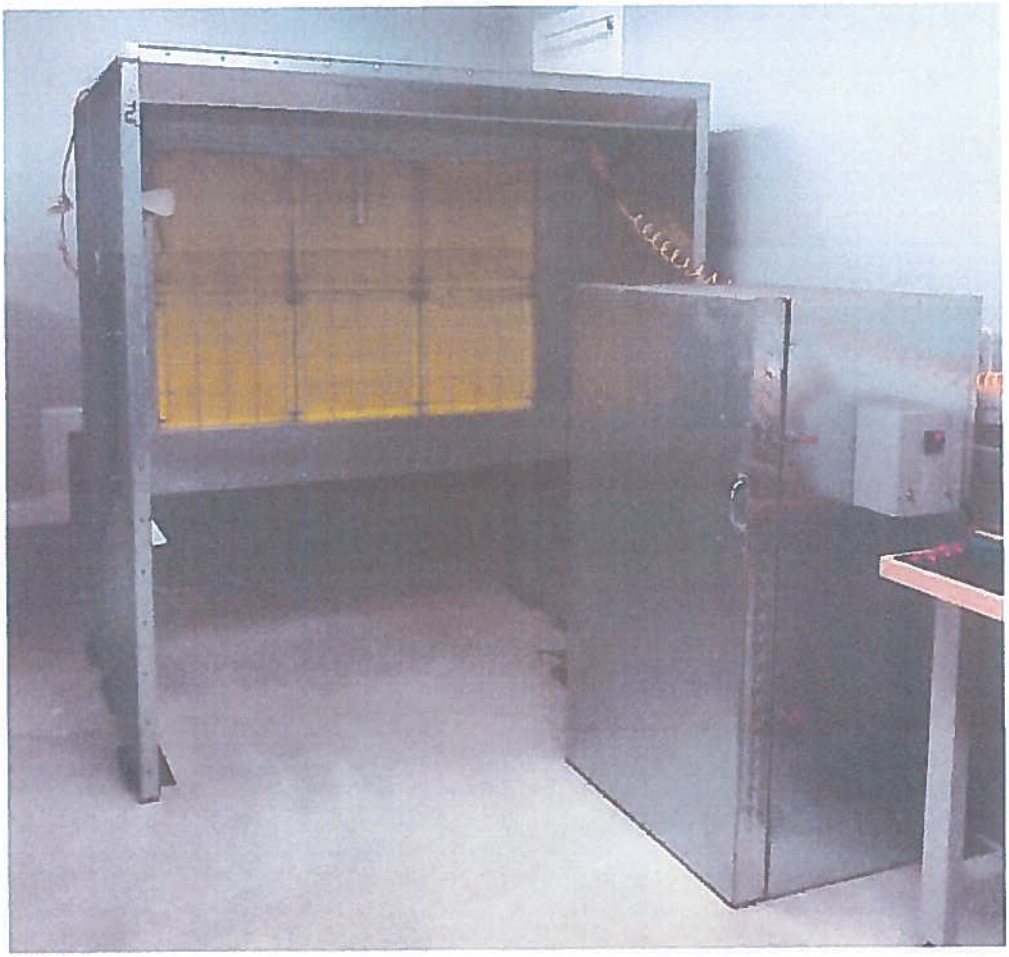
The World's Strongest Clear Coat®

All Cerakote Ceramic Clears have industry leading durability, hardness, scratch resistance, flexibility and chemical resistance. Cerakote Clears are designed specifically to be applied to a variety of substrates, from Hydrographics and Composites to Metals and Plastics.

CLEAR COATINGS

CERAKOTE.COM | 1-866-774-7628

THE COATING PROCESS



Process of Coating:

- DISASEMBLY of the product
- DEGREASE parts utilizing Simple Green or Acetone
- SAND BLASTING
- RACKING or MASKING - hooking parts to hang for painting
- BAKING products in oven - 350 degrees
- COATING preparation (shake paint, mix paint with catalyst 18:1)
- SPRAYING using HVLP with metal cup and compressor
- CURING - move all parts into the oven 300 degrees 1 hour (depending on product)
- ALLOW PARTS TO COOL before handling and reassembling

Our business does NOT intend to limit our coating process to only firearms. See the following examples of products that can be coated...

SUNGLASSES

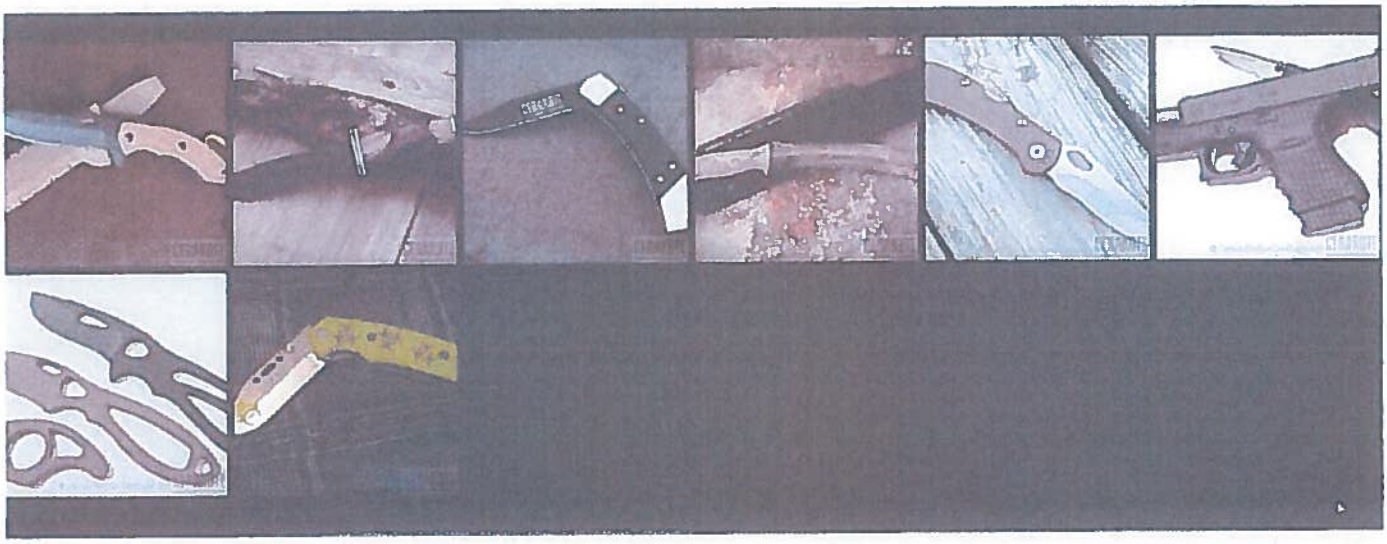
GOLF CLUBS

CUPS

CAR PARTS/ENGINES

CELL PHONE CASES

KNIVES



NIC INDUSTRIES, INC.

APPLICATION GUIDE
CERAKOTE ™
P-109 MICROSLICK
CERAMIC DRY FILM LUBRICANT

CERAKOTE ™ · A division of NIC Industries, Inc. 7050 Sixth Street, White City, OR 97503
Phone: 541-826-1922 / Fax: 541-826-6372 / www.nicindustries.com

Preparation of substrate is crucial for maximum adhesion and performance of this material

1) Remove all coatings, oils, and contaminants from substrate with either a de-greasing chemical and/or by heating substrate to temperatures high enough to remove coatings or contaminants.

2) A lightly blasted profile (~40 psi) must be applied to the substrate to remove any rust, scale, or other coatings. This is also required to ensure maximum adhesion. For best results use a dry grit material such as aluminum oxide or garnet equivalent to a 100 - 120 mesh size. Glass beads are not recommended as they are not aggressive enough to produce a sufficient blast profile.

3) We recommend, but do not require, that the metal parts are placed in an oven at 450ºF for approximately 30 minutes to evaporate any last minute moisture, oils, or contaminates. **Only Cerakote™ approved solvents may be applied to the substrate after completing the blast profile.**

4) Hang parts to allow for best view and application access. This can be done by using support wires or hooks. Make sure to place parts in such a way that they will not bump into each other. **Do not touch parts with bare skin.**

5) Shake the product until the coating is completely mixed and no solids remain in the bottom of the container. Failure to completely disperse the product will result in poor chemical ratios and product failure.

6) Blow off substrate with a high-pressure air nozzle to remove any blasting dust left on the surface. Wear safety goggles or face shield for your protection. Work in a well-ventilated area. If ventilation is not available, wear a respirator-see MSDS for additional information.

7) Recommended spray equipment is a siphon-fed detail gun with a fine to medium tip. The use of a small spray tip pattern will aid in coating hard to reach areas without excessive build up in surrounding areas. Electrostatic application may also be an option. **Material does not need to be thinned. Use as received.**

8) One light application of product is recommended for a 0.25 - 0.5 mil film thickness. Work from the most difficult surface out to the easiest. This will aid in reducing runs or excessive build up.

9) Cure the coating by placing the parts in a 300°F oven for 1 hour.

10) Finished goods may be shipped after 24 hours when the coating is partially cured.

11) Clean tools and equipment with acetone or Cerakote™ cleaning solvent.

Please contact a Cerakote™ technician with questions on proper use and/or application. Onsite or offsite training courses are available for further instruction. ***Consult your MSDS for proper handling, disposal, and precautions while using this product.***

Cerakote C Series Coatings

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier:	Cerakote C Series Coatings
Common Name:	Ambient-Cure Ceramic-Based Coatings
Revision Date:	8/16/2018
Version:	6.8
Chemical Family:	HS Code: 3208900000
Supplier Details:	NIC Industries, Inc 7050 6th Street White City, OR 97503
Phone:	541.826.1922
Email:	johnw@nicindustries.com
Web:	www.nicindustries.com

EMERGENCY CONTACT: Call PERS: 1-800-633-8253 (USA & Canada) or 001-1-801-629-0667 (International).

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 waranties, 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.

2 HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Physical, Flammable Liquids, 3
Health, Acute toxicity, 4 Oral
Health, Specific target organ toxicity - Single exposure, 3
Environmental, Hazards to the aquatic environment - Acute, 3
Health, Acute toxicity, 4 Dermal

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: WARNING

GHS Hazard Pictograms:

GHS Hazard Statements:

H226 - Flammable liquid and vapour
H302 - Harmful if swallowed
H335 - May cause respiratory irritation
H402 - Harmful to aquatic life
H312 - Harmful in contact with skin

GHS Precautionary Statements:

P102 - Keep out of reach of children.
P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
P211 - Do not spray on an open flame or other ignition source.

P232 - Protect from moisture.
P240 - Ground/bond container and receiving equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P262 - Do not get in eyes, on skin, or on clothing.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P284 - Wear respiratory protection.
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+352 - IF ON SKIN: Wash with soap and water.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P314 - Get Medical advice/attention if you feel unwell.
P332+313 - If skin irritation occurs: Get medical advice/attention.
P337 - If eye irritation persists: Seek medical attention.
P342 - If experiencing respiratory symptoms: Seek medical attention.
P370+378 - In case of fire: Use dry chemical powder, foam, for extinction.
P374 - Fight fire with normal precautions from a reasonable distance.
P402+404 - Store in a dry place. Store in a closed container.
P403+233 - Store in a well ventilated place. Keep container tightly closed.
P403+235 - Keep cool.
P410+403 - Protect from sunlight.
P501 - Dispose of contents/container to licensed waste facility.

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

Route of Entry: Inhalation, Ingestion, Skin Absorption, Eye Contact

Target Organs: Respiratory System, Integumentary System, Digestive System and Nervous System.

Inhalation: May cause moderate irritation of the upper respiratory tract. May produce symptoms of CNS depression (headaches, dizziness, nausea, loss of balance, drowsiness) and CNS stimulation (shaking, tremors). Severe overexposure may cause severe CNS depression symptoms such as fatigue or loss of concentration.

Skin Contact: May cause moderate skin irritation.

Eye Contact: May cause irritation and pain.

Ingestion: Harmful by ingestion. May be irritating to the gastrointestinal tract, cause gastric distress and stomach pains.

3 COMPOSITION/INFORMATION OF INGREDIENTS

Chemical Ingredients

CAS#	%	Chemical Name
13463-67-7	0-10%	Titanium dioxide
1333-86-4	0-2%	Carbon black
1226999-07-0	20-50%	Ambient Temperature-curable refractory resin(s)
66402-68-4	15-30%	Ceramic and/or metallic pigments and colorants
31900-57-9	0-1%	Silicone-based rheology modifiers
98-56-6	20-65%	p-chlorobenzotrifluoride

Prop. 65: Contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm:
13463-67-7 Titanium Dioxide
1333-86-4 Carbon Black

There are no additional ingredients present which, within the current knowledge of the supplier, and in the concentrations applicable, are classified as significantly hazardous to health or the environment and hence require reporting in this section.

4 FIRST AID MEASURES

Inhalation: Remove to fresh air. If breathing is difficult, have trained person administer oxygen. Maintain an open airway. Loosen tight clothing. If symptoms develop, seek medical attention.

Skin Contact: Remove all contaminated clothing and shoes. Wash thoroughly with soap and water for at least 15 minutes. Wash all clothing before re-use. If symptoms develop, seek medical attention.

Eye Contact: Remove contact lenses. Immediately flush with water for at least 15 minutes, gently holding eyelids apart. If symptoms develop, seek medical attention.

Ingestion: Rinse mouth out and then drink plenty of water. Only induce vomiting at the instruction of medical personnel. Vomiting may be dangerous. Keep head low so vomit does not enter the lungs. Never induce vomiting or give anything by mouth to an unconscious or convulsing person. Keep patient at rest. Seek immediate medical attention.

5 FIRE FIGHTING MEASURES

Flammability: Class B: Flammable Liquid

Extinguishing Media:
Carbon dioxide, dry chemical powder, foam or alcohol foam.

Fire Fighting Procedures:
Evacuate all unnecessary personnel. Shut down motors, pumps, electrical service, and eliminate sources of ignition if safe to do so. Use water spray to cool containers and avoid pressure build-up (do not allow water to mix with product). If fire occurs, isolate area, contain and eliminate fire, then dispose of debris in accordance with official regulations. Stay upwind of material at all times. Wear self-contained breathing apparatus and full protective clothing. May release dense black smoke containing hazardous products of combustion.

Fire and Explosion Hazard:
Contains possibly combustible materials. Over-heated containers may rupture. Fumes may be flammable/explosive in air when in the presence of an ignition source. Vapors may travel a significant distance to a source of ignition and flash back.

Sensitivity of Static Charge:
Electrostatic charge may build up during handling. Grounding of equipment is required.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions:
Evacuate all unnecessary personnel and surrounding areas, and eliminate all sources of ignition if safe to do so. Wear proper personal protective equipment, especially a self-contained breathing apparatus. Do not touch or walk through spilled material. Provide adequate ventilation and avoid breathing vapors. Ground all equipment used.

Environmental Precautions:
Contain liquids and prevent discharge into streams, soil, waterways, drains and sewers. Control or stop the loss of volatile material to the atmosphere. Do not apply water to the spill. Spills should be reported, if required, to the appropriate local, state, or federal agencies, especially if environmental pollution has occurred. In case of major release or road spill notify PERS: 1-800-633-8253 (USA & Canada) or 001-1-801-629-0667.

Remove all sparking devices or ignition sources. Product is flammable. Stop leak if without risk. Move containers from spill area. Approach spill from upwind. Cover with an inorganic absorbent, such as vermiculite, perlite, ground clay, or sand; sweep up, and dispose according to local, state and federal regulations. Contaminated absorbent may pose the same hazard as spilled material does. Use spark proof tools and explosion proof equipment. Dispose of via a licensed waste disposal contractor.

7 HANDLING AND STORAGE

Handling Precautions:
This material is rated as flammable.
Avoid vapor formations and use with adequate ventilation.
Avoid breathing fumes.
Vapors are heavier than air and will tend to collect in low areas. Avoid use in confined spaces.
Avoid bodily contact with material.
Wear appropriate personal protective equipment.
Wash thoroughly after handling, avoid contact with eyes.
No eating, drinking or smoking near areas where substance is handled, processed or stored.
Flammable vapours may form explosive mixtures in the air.
Ground coating equipment and containers at all times.
Use non sparking tools.
Isolate, vent, drain, wash and purge systems or equipment before maintenance or repair.
Clean spills immediately.

Storage Requirements:
Keep away from heat, static electricity discharges and all sources of ignition.
Avoid moisture and extreme temperatures.
Avoid shock and friction.
Store in a cool, dry area away from direct sunlight (do not store in temperatures below 50 oF or above 77 oF). Avoid Freezing.
Do not allow cross-contamination, and keep away from incompatible materials.
Keep tightly closed when not being used, but vent carefully before using.
Label all containers appropriately.
Do not reuse containers.
Do not store near food or drinks.
Avoid excessive aging.

Store in accordance with local regulations.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Adequate room ventilation plus local exhaust at points of emission to maintain levels of airborne contaminates below exposure limits. Assure ACGIH TWA and OSHA PEL limits (varies by product) are maintained. Use of fume hoods or closed booths required when product is used in a manner that may generate mist or aerosol.

Personal Protective Equipment: HMIS PP, F | Goggles, Chemical Resistant Gloves, Apron (protective industrial clothing recommended along with apron).

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times. Solvent resistant (neoprene, nitrile or other nonporous) recommended.

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Chemical splash goggles should be worn at a minimum.

Skin: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Apron and protective industrial coating recommended.

Emergency shower and eyewash facility should be in close proximity. Employ proper hygenic measures after working with material and before eating, smoking or using the lavatory. Fully wash any contaminated clothing.

Emissions from ventilation or work process equipment should be checked to ensure they comply with the regulations of environmental protection legislation.

Completely isolate and thoroughly clean all equipment, piping or vessels with a solvent before beginning maintenance or repairs.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colored or clear liquid paint/coating		
Physical State:	Liquid	**Odor:**	Solvenet-Like
Odor Threshold:	Not available	**Solubility:**	Not determined
Spec Grav./Density:	1.0 - 1.5	**Freezing/Melting Pt.:**	Not determined
Viscosity:	5-500 Cp	**Flash Point:**	4-degrees C-43-degrees C
Boiling Point:	97-degrees C - 138-degrees C	**Vapor Density:**	4.6-6.2 (Air=1)
Flammability:	Flammable Flammable	**VOC:**	Exempt
Partition Coefficient:	Not determined	**Auto-Ignition Temp:**	>500-degrees C
Vapor Pressure:	Not determined	**UFL/LFL:**	0.9v/v% - 10.5v/v%
pH:	NA, non-aqueous		
Evap. Rate:	Not determined		
Decomp Temp:	~124-degrees C		

10 STABILITY AND REACTIVITY

Chemical Stability: Stable.

Conditions to Avoid: Extreme temperatures, moisture, vapor formation and sources of ignition.

Materials to Avoid: Strong oxidizing agents, strong acids, water and alkalines.

Hazardous Decomposition: Chlorine-containing gases, fluorine-containing gases may be preserved in products containing p-chlorobenzotrifluoride. Carbon dioxide and silicon oxides may be produced from all coating formulations.

Hazardous Polymerization: Will not occur.

11 TOXICOLOGICAL INFORMATION

NTP Carcinogen: No IARC Monographs: No OSHA Regulated: No

Not known to contain any ingredients recognized as carcinogens by the National Toxicology Program (NTP), the International Agency for Cancer Research (IARC) or the Occupational Safety and Health Administration (OSHA).

Reported Human Effects:
No human studies have been conducted with this material. The use of recommended protective equipment should minimize any adverse effects.

Reported Animal Effects from various individual chemical components:
Oral LD50, rat: >300-2000 mg/kg
Vapor LC50, rat 20 g/m3
Skin irritation, rabbit; corrosive.
Vapor LC50, rat 4211 ppm

Toxicological information may change depending on individual product.

C SERIES COATINGS SUPPLEMENTAL INFORMATION:

Contains < 16 wt% Cr(III) oxide-based pigments.

Toxicity information for chromium (III) oxide-based pigments:

Acute Toxicity (Oral LD50) > 5,000 mg/kg.

Acute Toxicity (Inhalation LC50) >/- 5.41 mg/l (dust/mist).

Carcinogenic Effects:
NTP: Not Listed
ACGIH: A4 - Not classifiable for human or animal.
IARC: 3 - Not classifiable for human.
OSHA: Not Listed.

NOTE: NTP, IARC and ACGIH found that "there is sufficient evidence for the carcinogenicity of chromium and certain chromium compounds both in humans and experimental animals." The chromium compounds that are considered carcinogenic are hexavalent chromium compounds [Cr(VI)]. The chromium oxide based pigments present in the NIC products listed above are all trivalent, refractory chromium compounds [Cr(III)], each containing 1ppm or less of leachable hexavalent chromiujm (</-0.0001%). The toxicity information stated above are for Cr(III) oxide-based C.I. Pigments as stated in SDS's provided by the pigment suppliers.

Mutagenic Effects:
Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. May cause damage to the following organs: upper respiratory tract, skin.

12 ECOLOGICAL INFORMATION

Water hazard Category 2: Contains materials toxic to fish. Avoid disposal in landfills and sewage systems. Avoid release into water sources.

13 DISPOSAL CONSIDERATIONS

This product is not regulated by the EPA. It is the waste generator's responsibility to determine how disposal must occur. Disposal should be made in accordance to federal, state, and local regulations. Minimize or avoid the generation of waste whenever possible. Dispose of waste, unused material and empty containers in a licensed facility. Do not discharge into drains, surface waters or groundwater.

Do not mix this product with aqueous or other protic waste streams. Incineration of combustible waste material in a permitted facility in accordance with the local, state and federal regulations is the recommended disposal method.

14 TRANSPORT INFORMATION

UN1263, 3, Paint or Paint Related Materials.
US DOT:
Proper Shipping Name: Paint or Paint Related Materials
Hazard Class: 3
UN Number: 1263
Packing Group: III

IATA:
Proper Shipping Name: Paint or Paint Related Materials
Hazard Class: 3
UN Number: 1263
Packing Group: III

15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

Titanium dioxide (13463-67-7) [0-10%] MASS, OSHAWAC, PA, TSCA, TXAIR, CA Prop. 65

Carbon black (1333-86-4) [0-2%] MASS, OSHAWAC, PA, TSCA, TXAIR, CA Prop. 65

Ambient Temperature-curable refractory resin(s) (1226999-07-0) [20-50%]

Ceramic and/or metallic pigments and colorants (66402-68-4) [15-30%] TSCA

Silicone-based rheology modifiers (31900-57-9) [0-1%]

p-chlorobenzotrifluoride (98-56-6) [20-65%] TSCA

Regulatory CODE Descriptions

MASS = MA Massachusetts Hazardous Substances List
OSHAWAC = OSHA Workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
CA Prop. 65 = Safe Drinking Water and Toxic Enforcement Act
TSCA = Toxic Substances Control Act
TXAIR = TX Air Contaminants with Health Effects Screening Level

NIC Industries, Inc. coatings meet all air quality and regulatory requirements with respect to manufacturing and application. Specifically, the hardened finished product does not release any "volatile organic compounds" (VOC) under any ambient conditions.

U.S. TOXIC SUBSTANCES CONTROL ACT: All components of this product are on the TSCA Inventory or are exempt from the TSCA Inventory requirements under 40 CFR 720.30.

RoHS-2: NIC Industries, Inc. products comply with the EU RoHS-2 Directive and Ammendments, including 2006/122/EC.

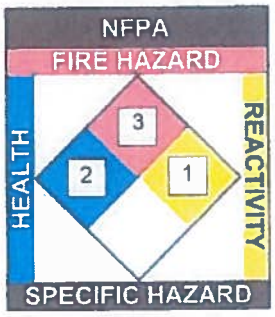
REACH: NIC Industries, Inc. products comply with EU REACH Regulation EC No. 1907/2006.

TSE/BSE: NIC Industries, Inc. products comply with European Parliament and Council Regulation (EC) No. 999/2001.

Conflict Minerals: No NIC Industries, Inc. products contain any "conflict minerals" as defined in Section 1502 of the Dodd-Frank Act.

16 OTHER INFORMATION

NFPA: Health = 2, Fire = 3, Reactivity = 1, Specific Hazard = n/a
HMIS III: Health = 2(Chronic), Fire = 3, Physical Hazard = 1
HMIS PPE: G - Safety Glasses, Gloves, Vapor Respirator



U.S. Federal Regulations:

OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you (as it is your legal duty to) make all information in this Safety Data Sheet available to all your employees.

NON-WARRANTY: The information presented in this publication is based upon the research and experience of NIC Industries, Inc. and on supplier information provided to NIC Industries, Inc. No representation or warranty is made, however, concerning the accuracy or completeness of express or implied, including without limitation any warranty of merchantability or fitness for any particular purposes, and

no warranty or representation shall be implied by law or otherwise. Any products sold by NIC Industries, Inc. are not warranted as suitable for any particular purpose to the buyer. The suitability of any products for any purpose particular to the buyer is for the buyer to determine. NIC Industries, Inc. assumes no responsibility for the section of products suitable to the particular purposes of any particular buyer. NIC Industries, Inc shall in no way be liable for any special, incidental, or consequential damages.

SDS GHS Safety Data Sheet

NIC Industries, Inc

NIC INDUSTRIES, INC.

Elite Series Coatings

SDS Number:

Revision Date: 12/21/2016

1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

NIC Industries, Inc
7050 6th Street
White City, OR 97503

Phone: 541.826.1922
Fax: 541.830.6522
Email: johnw@nicindustries.com
Web: www.nicindustries.com

Product Name: Elite Series Coatings
Revision Date: 12/21/2016
Version: 1.0
Common Name: Heat Curable Polymer-Ceramic Composite Coating
CAS Number: 98-56-6
Chemical Family: HS Code: 3208900000

EMERGENCY CONTACT: CALL PERS: 1-800-633-8253 (USA & Canada) or 001-1-801-629-0667 (International).

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 waranties, 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.

2 HAZARDS IDENTIFICATION

Route of Entry: Eyes, Ingestion, Inhalation, Skin

Target Organs: Central Nervous System, Kidneys, Liver.

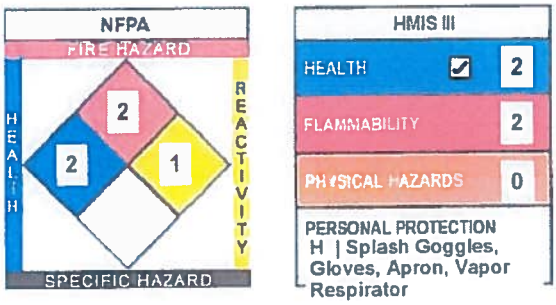
Inhalation: Not expected to be a relevant route of exposure, however under conditions where exposure to vapors or mists is possible, could cause respiratory tract infection.

Skin Contact: May be mildly irritating to the skin. May cause skin sensitization, rashes, exzema, and redness. Prolonged or repeated exposure may aggravate existing conditions.

Eye Contact: May be irritating to the eyes.

Ingestion: Not likely to be a relevant route of exposure, however, ingestion may cause damage to the lining of the gastrointestinal tract.

NFPA: Health = 2, Fire = 2, Reactivity = 1
HMIS III: H*2/F2/PH0



GHS Signal Word:
WARNING

GHS Hazard Pictograms:

GHS Classifications:
Health, Acute toxicity, 5 Oral
Health, Acute toxicity, 5 Inhalation
Health, Respiratory or skin sensitization, 1 Skin
Health, Skin corrosion/irritation, 3
Health, Serious Eye Damage/Eye Irritation, 2 B
Health, Specific target organ toxicity - Repeated exposure, 2

GHS Phrases:
H303 - May be harmful if swallowed
H333 - May be harmful if inhaled
H317 - May cause an allergic skin reaction
H316 - Causes mild skin irritation
H320 - Causes eye irritation
H373 - May cause damage to organs through prolonged or repeated exposure

GHS Precautionary Statements:
P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P201 - Obtain special instructions before use.
P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
P233 - Keep container tightly closed.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P262 - Do not get in eyes, on skin, or on clothing.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+350 - IF ON SKIN: Gently wash with soap and water.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P335 - Brush off loose particles from skin.
P360 - Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P402 - Store in a dry place.
P403+233 - Store in a well ventilated place. Keep container tightly closed.
P211 - Do not spray on an open flame or other igntion source.
P404 - Store in a closed container.

Store between 50F-100F

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Cas #	Percentage	Chemical Name
98-56-6	60-80%	p-chlorobenzotrifluoride
*Trade Secret	7-18%	Proprietary Thermoset Terpolymer
*Trade Secret	10-20%	High Purity Performance Ceramic(s)
*Trade Secret	0.8-3.5%	Proprietary Interfacial Coupling Agent(s)

*In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200(i), the specific chemical identity and/or exact percentage of composition has been withheld as a *Trade Secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as significantly hazardous to health or the environment and hence require reporting in this section.

4 FIRST AID MEASURES

Inhalation: Remove to fresh air. If breathing is difficult, have trained person administer oxygen.
Skin Contact: Wash thoroughly with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash all clothing before re-use. If irritation persists, seek medical attention.
Eye Contact: Immediately flush with water for at least 15 minutes. If irritation persists, seek medical attention.
Ingestion: Do not induce vomiting. Seek medical attention immediately.

5 FIRE FIGHTING MEASURES

Flammability: Will burn under fire conditions but will not sustain combustion.
Flash Point: CLOSED CUP: 42.8 C (109.04 F)
Flash Point Method: Tagliabue

Extinguishing Media:
Carbon dioxide, dry chemical powder, or appropriate foam.

Fire Fighting Procedures:
Evacuate all unnecessary personnel. Shut down motors, pumps, electrical service, and eliminate sources of ignition. Use water spray to cool containers and avoid pressure build-up. Wear self-contained breathing apparatus and full protective clothing.

Fire and Explosion Hazard:
Combustible Liquid. Over-heated containers may rupture.

Sensitivity of Static Charge:
Electrostatic charge may build up during handling. Grounding of equipment is recommended.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions:
Evacuate all unnecessary personnel and eliminate all sources of ignition.

Environmental Precautions:
Contain liquids and prevent discharge into streams and sewers, control or stop the loss of volatile material to the atmosphere. Do not apply water to the spill. Spills should be reported, if required, to the appropriate local, state, or federal agencies.

Small Spills:
Cover with an inorganic absorbent, such as vermiculite, perlite, ground clay, or sand; sweep up, and dispose of appropriately. Clean contaminated area with soap and water.

Large Spills:
Dike to contain and pump into drums for disposal. Add vermiculite absorbent to remaining material (as above).

7 HANDLING AND STORAGE

Handling Precautions:

Avoid breathing fumes.
Avoid bodily contact with material.
Wear appropriate personal protective equipment (PPE).
Wash thoroughly after handling.
Keep away from heat, sparks, pilot lights, welding operations, and open flames.
Flammable vapors may form explosive mixtures in air.
Do not eat, drink, or smoke in areas where this material is used.
Do not get in eyes, clothing, or on skin.
Do not eat, drink, or smoke in areas where this material is used.
This material is not rated as flammable; however, caution is recommended as solvents contained in certain H-Series formulations are considered flammable.
Ground all equipment and use non-sparking tools.

Isolate, vent, drain, wash and purge systems or euipment before maintenance or repair.
Clean spills immediately.

Avoid vapor formations and use with adequate ventilation. Vapors are heavier than air and will tend to collect in low areas. Avoid use in confined spaces. Areas of poor ventilation could contain concentrations high enough to cause unconsciousness and death. Use approved air respirator following manufacturer's recommendations where vapors may be generated.

Storage Requirements:

Keep container properly closed and properly labeled.
Store in a cool dry place away from direct sunlight, designated for combustible liquid storage (Do not store in temperatures below 50F or above 77F.). Avoid freezing.
Keep away from heat, sparks, and open flame.
Vent periodically, if needed, to release head pressure.
Avoid shock and friction.
Do not allow cross-contamination, and keep away from incompatible materials.
Do not store near food or drinks.
Avoid excessive aging.
Store in accordance with local regulations.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: General room ventilation plus local exhaust at points of emission to maintain levels of airborne contaminates below exposure limits.

Personal Protective Equip: HMIS PP, H | Splash Goggles, Gloves, Long Sleeves & Pants.

Appropriate Hygienic Practices:
Avoid contact with eyes, skin, and clothing. Avoid breathing vapors, fumes, and mists. Avoid prolonged or repeated exposure. Wash thoroughly after handling, and before eating, drinking or smoking.
If mists or aerosols are generated during handling wear a respirator equipped with an organic vapor cartridge.
Other:
Emergency shower and eyewash facility should be in close proximity.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Color varies with product number.		
Physical State:	Viscous Liquid	**Odor:**	Slight (less than 1ppm)
Spec Grav./Density:	Varies with color: 1.34 - 1.353 (Water = 1)	**Solubility:**	Solubility in Water: Negligible
Viscosity:	Varies with product number.	**Percent Volatile:**	100% (w/w)
Flammability:	Flammable (Will burn under fire conditions t	**Flash Point:**	42.8 C (109.04 F)
		VOC:	Exempt
		Auto-Ignition Temp:	500 C (932 F)

Exposure Limits:
OSHA: None Established
PEL (Permissable Exposure Limit): No exposure standard allocated.
ACGIH TLV (Threshold Limit Value): None established.

10 STABILITY AND REACTIVITY

Stability:	Stable
Conditions to Avoid:	Extreme temperatures, moisture, vapor formation and sources of ignition.
Materials to Avoid:	Strong oxidizing agents, strong acids, water and alkalines.
Hazardous Decomposition:	Chlorine-containing gases, fluorine-containing gases may be preserved in products containing p-chlorobenzotrifluoride, Carbon dioxide and silicon oxides may be produced from all coating formulations.
Hazardous Polymerization:	Will not occur.

11 TOXICOLOGICAL INFORMATION

GENERAL INFORMATION:
Acute oral toxicity: Low toxicity, LD50 > 2000 mg/kg
Acute dermal toxicity: Low toxicity, LD50 > 2000 mg/kg

COMPONENTS:
H-Series (Part A) Resin; Trade Secret: Heat-Curable, High-Temperature resin(s)

H-SERIES SUPPLEMENTAL INFORMATION:

Contains < 11 wt% Cr(III) oxide-based pigments.

Toxicity information for chromium (III) oxide-based pigments:

Acute toxicity (Oral LD50) >/- 5.41 mg/l (dust/mist).

Carcinogenic Effects:
NTP: Not Listed
ACGIH: A4 - Not classifiable for human or animal.
IARC: 3 - Not classifiable for human.
OSHA: Not Listed.

NOTE: NTP, IARC and ACGIH found that "there is sufficient evidence for the carcinogenicity of chromium and certain chromium compounds both in humans and experimental animals." The chromium compounds that are considered carcinogenic are hexavalent chromium compounds [Cr(VI]. The chromium oxide-based pigments present in the NIC products listed above are all trivalent, refractory chromium compounds [Cr)III), each containing 1ppm or less of leachable hexavalent chromium (</- 0.0001%). The toxicity information stated above are for Cr(III) oxide-based C.I. Pigments as stated in SDS's provided by the pigment suppliers.

Mutagenic Effects:
Mutabenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. May cause damage to the following organs: upper-respiratory tract, skin.

REGULATION: US, IARC Monographs on
Occupational Exposures to
Chemical Agents.

REMARKS:
U.S. IARC Monographs on Occupational Exposures to Chemical Agents: Not classified by the International Agency for Research on Cancer (IARC).

SENSITIZATION: May cause skin sensitization.

CARCINOGENICITY: Recent 2-year bioassays in rats and mice exposed by
the dermal route to H-Series (Part A) Resin type compositions yielded NO EVIDENCE of carcinogenicity to the skin
or any other organs.

MUTAGENICITY: Inactive when tested by vivo mutagenicity assays.

POTENTIAL HEALTH EFFECTS:

Inhalation: Not expected to be a relevant route of exposure; however, under conditions where exposure to vapors or mists is possible, could cause respiratory tract irritation.

Skin: May be mildly irritating to the skin.
May cause skin sensitization.

Eyes: May be mildly irritating to the eyes.

Ingestion: Not likely to be a relevant route of exposure.

COMPONENTS:

TRADE SECRET: Ceramic and/or metallic pigments and colorants.

REGULATIONS:
NTP Carcinogen: No
IARC Monographs: No
OSHA Regulated: No
Not known to contain any ingredients recognized as carcinogens by the National Toxicology Program (NTP), the International Agency for Cancer Research or the Occupational Safety and Health Administration (OSHA).

SENSITIZATION: May cause an alergic skin reaction.

CARCINOGENICITY: Not listed as a carcinogen by NTP.

POTENTIAL HEALTH EFFECTS: No human studies have been conducted with this material. The use of recommended protective equipment should prevent any adverse effects.

Inhalation: May cause irritation of the respiratory tract. Prolonged or repeated exposure may cause lung damage.

Skin: May be mildly irritating to the skin.

Eyes: Dust may cause irritation and inflammation.

Ingestion: Not likely to be a relevant form of exposure.

12 ECOLOGICAL INFORMATION

Ecotoxicity Effects:
Toxicity to fish: Acute LC 50 1.3 mg/l Fish 96h
203 Fish, Acute Tixicity Test.
Acute LC 50 > 11 mg/l Aquatic plants/Algae 72h

Ceramic and/or metallic pigments and colorants:
Oral LD50, rat: 200-2000 mg/kg
Skin irritation, rabbit; severe erythema with sighns of necrosis after 1-hour exposue.

13 DISPOSAL CONSIDERATIONS

Do not mix this product with aqueous or other protic waste streams. Incineration of combustible waste material in a permitted facility in accordance with the local, state and federal regulations is the recommended disposal method.

This product is not regulated by the EPA. It is the waste generator's responsibiltiy to determine how disposal must occur. Disposal should be made in accordance with federal, state and local regulations. Minimize or avoid the generation of waste whenever possible. Dispose of waste, unused material and empty containers in a licensed facility.

DO NOT DISCHARGE INTO DRAINS, SURFACE WATERS OR GROUNDWATER.

14 TRANSPORT INFORMATION

DOT Class: Not regulated

US DOT: Not Regulated for Transport
IATA: Not Regulated for Transport
ICAO: Not Regulated for Transport

(p-chlorobenzotrifluoride does not sustain combustion as determined by ASTM D 4206. It is therefore excepted from classification as a flammable liqid (see 49 CFR 173.20(a)(3))

15 REGULATORY INFORMATION

NIC Industries, Inc. coatings meet all air quality and regulatory requirements with respect to manufacturing and application. Specifically the hardened finished product does not release any "volatile organic compounds" (VOC) under any ambient conditions.

TSCA: All components of this product that are required to be on the TSCA Inventory are listed on the Inventory.

SARA/TITLE III HAZARD CATEGORIES:
Immediate (Acute) Health: YES
Delayed (Chronic) Health: YES
Sudden Release of Pressure: NO
Fire Hazard: YES
Reactive Hazard: NO

CERCLA: Hazardous Substances: tert-Butyl acetate: 5000 lbs. (2268 kg):
Parachlorobenzotrifluoride was designated by the Interagency Testing Committee for action by the EPA under Section 4(e) of the Toxic Substance Control Act. As a result of data submitted unde a negotiated testing program, the EPA subsequently concluded that the information provided adequately characterized the Health, Environmental and Chemical fate effects of parachlorobenzotrifluoride and issued a decision not to require further testing.

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 20-2 681-1).

STATE REGULATIONS: Consult local laws for applicabiltiy:

California Proposition 65 Warnings:
California prop. 65. This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.

California prop. 65: This prodcut contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

INTERNATIONAL REGULATIONS: Consult the regulations of the importing country.

Canada: WHMIS Hazard Class: B3
Australia: Listed on AICS
Philippines: Listed on National Inventory (PICCS).
China: Listed on National Inventory.
Japan: Listed on National Inventory (ENCS).
Korea: Listed on National Inventory (PICCS).

DSCL (EEC):
R37/38-Irritating to respiratory system and skin.
R41-Risk of serious damage to eyes.

COMPONENT / (CAS/PERC) / CODES
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*Chromium (III) oxide (1308309 n/a/%) MASS, TSCA.
Parachlorobenzotrifluoride (98-56-6 70-85%)
REGULATORY KEY DESCRIPTIONS

TSCA = Toxic Substances Control Act
CERCLA = Superfund clean up substance
CSWHS = Clean Water Act Hazardous substances
MASS = MA Massachusetts Hazardous Substances List
OSHAWAC = OSHA Workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
TXAIR = TX Air Contaminants with Health Effects Screening Level

U.S. TOXIC SUBSTANCES CONTROL ACT: All components of this product are on the TSCA Inventory or are exempt from the TSCA Inventory requirements uinder 40 CFR 720.30.

16 OTHER INFORMATION

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

U.S. Federal Regulations:

OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Material Safety Data Sheet available to all your employees.

NON-WARRANTY: The information presented in this publication is based upon the research and experience of NIC Industries, Inc. No representation or warranty is made, however, concerning the accuracy or completeness of express or

implied, including without limitation any warranty of merchantability or fitness for any particular purposes, and no warranty or representation shall be implied by law or otherwise. Any products sold by NIC Industries, Inc. are not warranted as suitable for any particular purpose to the buyer. The suitability of any products for any purpose particular to the buyer is for the buyer to determine. NIC Industries, Inc. assumes no responsibility for the section of products suitable to the particular purposes of any particular buyer. NIC Industries, Inc shall in no way be liable for any special, incidental, or consequential damages.

Cerakote H Series Coatings (Part A)

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Cerakote H Series Coatings (Part A)
Common Name: Heat Curable Polymer-Ceramic Composite Coating
Revision Date: 8/16/2018
Version: 1.0

Supplier Details: NIC Industries, Inc.
7050 6th Street
White City , OR 97503

Phone: 541.826.1922
Fax: 541.830.6522
Email: johnw@nicindustries.com
Web: www.nicindustries.com

EMERGENCY CONTACT: CALL PERS: 1-800-633-8253 (USA & Canada) or 001-1-801-629-0667 (International).

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2 HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Health, Acute toxicity, 5 Oral
Health, Acute toxicity, 5 Inhalation
Health, Respiratory or skin sensitization, 1 Skin
Health, Skin corrosion/irritation, 3
Health, Serious Eye Damage/Eye Irritation, 2 B
Health, Specific target organ toxicity - Repeated exposure, 2

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: WARNING

GHS Hazard Pictograms:

GHS Hazard Statements:

H303 - May be harmful if swallowed
H333 - May be harmful if inhaled
H317 - May cause an allergic skin reaction
H316 - Causes mild skin irritation
H320 - Causes eye irritation
H373 - May cause damage to organs through prolonged or repeated exposure

GHS Precautionary Statements:

P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P201 - Obtain special instructions before use.
P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
P233 - Keep container tightly closed.

P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P262 - Do not get in eyes, on skin, or on clothing.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+350 - IF ON SKIN: Gently wash with soap and water.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P335 - Brush off loose particles from skin.
P360 - Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P402 - Store in a dry place.
P403+233 - Store in a well ventilated place. Keep container tightly closed.
P404 - Store in a closed container.

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

Route of Entry: Eyes, Ingestion, Inhalation, Skin

Target Organs: Central Nervous System, Kidneys, Liver.

Inhalation: Not expected to be a relevant route of exposure, however under conditions where exposure to vapors or mists is possible, could cause respiratory tract infection.

Skin Contact: May be mildly irritating to the skin. May cause skin sensitization, rashes, exzema, and redness. Prolonged or repeated exposure may aggravate existing conditions.

Eye Contact: May be irritating to the eyes.

Ingestion: Not likely to be a relevant route of exposure, however, ingestion may cause damage to the lining of the gastrointestinal tract.

Store between 50F-100F

3 COMPOSITION/INFORMATION OF INGREDIENTS

Chemical Ingredients

CAS#	%	Chemical Name
98-56-6	70-85%	p-chlorobenzotrifluoride
64741-71-5	10-40%	Polymers Viscous
66402-68-4	10-40%	Ceramic and/or metallic pigments and colorants
1333-86-4	0-2%	Carbon black
13463-67-7	0-10%	Titanium dioxide

CA Proposition 65: Contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm:
13467-67-7 Titanium Dioxide
1333-86-4 Carbon Black

There are no additional ingredients present which, within the current knowledge of the supplier, and in the concentrations applicable, are classified as significantly hazardous to health or the environment and hence require reporting in this section.

The above products are REACH compliant; Registration number(s) may not be provided because substance(s) are exempted, not yet registered under REACH or are registered under another regulatory process.

4 FIRST AID MEASURES

Inhalation: Remove to fresh air. If breathing is difficult, have trained person administer oxygen.

Skin Contact: Wash thoroughly with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash all clothing before re-use. If irritation persists, seek medical attention.

Eye Contact: Immediately flush with water for at least 15 minutes. If irritation persists, seek medical attention.

Ingestion: Do not induce vomiting. Seek medical attention immediately.

5 FIRE FIGHTING MEASURES

Flammability: Combustible liquid formulation. Will burn under fire conditions but will not sustain combustion.

Flash Point: 43-degrees C

Autoignition Temp: >500-degrees C

Extinguishing Media:
Carbon dioxide, dry chemical powder, or appropriate foam.

Fire Fighting Procedures:
Evacuate all unnecessary personnel. Shut down motors, pumps, electrical service, and eliminate sources of ignition. Use water spray to cool containers and avoid pressure build-up. Wear self-contained breathing apparatus and full protective clothing.

Fire and Explosion Hazard:
Combustible Liquid. Over-heated containers may rupture.

Sensitivity of Static Charge:
Electrostatic charge may build up during handling. Grounding of equipment is recommended.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions:
Evacuate all unnecessary personnel and eliminate all sources of ignition.

Environmental Precautions:
Contain liquids and prevent discharge into streams and sewers, control or stop the loss of volatile material to the atmosphere. Do not apply water to the spill. Spills should be reported, if required, to the appropriate local, state, or federal agencies.

Small Spills:
Cover with an inorganic absorbent, such as vermiculite, perlite, ground clay, or sand; sweep up, and dispose of appropriately. Clean contaminated area with soap and water.

Large Spills:
Dike to contain and pump into drums for disposal. Add vermiculite absorbent to remaining material (as above).

7 HANDLING AND STORAGE

Handling Precautions:

Avoid breathing fumes.
Avoid bodily contact with material.
Wear appropriate personal protective equipment (PPE).
Wash thoroughly after handling.
Keep away from heat, sparks, pilot lights, welding operations, and open flames.
Flammable vapors may form explosive mixtures in air.
Do not eat, drink, or smoke in areas where this material is used.
Do not get in eyes, clothing, or on skin.
Do not eat, drink, or smoke in areas where this material is used.
This material is not rated as flammable.
Ground all equipment and use non-sparking tools.

Isolate, vent, drain, wash and purge systems or equipment before maintenance or repair.
Clean spills immediately.

Avoid vapor formations and use with adequate ventilation. Vapors are heavier than air and will tend to collect in low areas. Avoid use in confined spaces. Areas of poor ventilation could contain concentrations high enough to cause unconsciousness and death. Use approved air respirator following manufacturer's recommendations where vapors may be generated.

Storage Requirements:

Keep container properly closed and properly labeled.
Store in a cool dry place away from direct sunlight, designated for combustible liquid storage (Do not store in temperatures below 50F or above 77F.). Avoid freezing.
Keep away from heat, sparks, and open flame.
Vent periodically, if needed, to release head pressure.
Avoid shock and friction.
Do not allow cross-contamination, and keep away from incompatible materials.
Do not store near food or drinks.
Avoid excessive aging.
Store in accordance with local regulations.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

General room ventilation plus local exhaust at points of emission to maintain levels of airborne contaminates below exposure limits.

Personal Protective Equipment:

HMIS PP, H | Splash Goggles, Gloves, Long Sleeves & Pants.

Appropriate Hygienic Practices:
Avoid contact with eyes, skin, and clothing. Avoid breathing vapors, fumes, and mists. Avoid prolonged or repeated exposure. Wash thoroughly after handling, and before eating, drinking or smoking.
If mists or aerosols are generated during handling wear a respirator equipped with an organic vapor cartridge.
Other:
Emergency shower and eyewash facility should be in close proximity.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colored or clear liquid paint/coating		
Physical State:	Viscous Liquid	**Odor:**	Solvent-like
Odor Threshold:	Not determined	**Molecular Formula:**	Not determined
Particle Size:	Not determined	**Solubility:**	Not determined
Spec Grav./Density:	Varies with color: ~1.4	**Softening Point:**	Not determined
Viscosity:	5-500 Cp	**Percent Volatile:**	Not determined
Saturated Vapor Concentration:	Not determined	**Heat Value:**	Not determined
Boiling Point:	138.6-degrees C	**Freezing/Melting Pt.:**	Not determined
Flammability:	Will burn under fire conditions but will not sustain combustion.	**Flash Point:**	43-degrees C
Partition Coefficient:	Not determined	**Octanol:**	Not determined
Vapor Pressure:	Not determined	**Vapor Density:**	4.6 - 6.2 (Air=1)
pH:	NA, Non-aqueous	**VOC:**	Exempt
Evap. Rate:	Not determined	**Bulk Density:**	Not determined
Molecular weight:	Not determined	**Auto-ignition Temp:**	>500-degrees C
Decomp Temp:	~124-degrees C	**UFL/LFL:**	0.9v/v% - 10.5v/v%

Parachlorobenzotrifluoride does not sustain combustion as determined by ASTM D4206. It is therefore exempted from classification as a "Flammable Liquid." (See 49 CFR 173.20(a)(3)).

10 STABILITY AND REACTIVITY

Chemical Stability:	Stable
Conditions to Avoid:	Extreme temperatures, moisture, vapor formation and sources of ignition.
Materials to Avoid:	Strong oxidizing agents, strong acids, water and alkalines.
Hazardous Decomposition:	Chlorine-containing gases, fluorine-containing gases may be preserved in products containing parachlorobenzotrifluoride, Carbon dioxide and silicon oxides may be produced from all coating formulations.
Hazardous Polymerization:	Will not occur.

11 TOXICOLOGICAL INFORMATION

GENERAL INFORMATION:
Acute oral toxicity: Low toxicity, LD50 > 2000 mg/kg
Acute dermal toxicity: Low toxicity, LD50 > 2000 mg/kg

COMPONENTS:
H-Series (Part A) Heat-Curable, High-Temperature resin(s)

H-SERIES SUPPLEMENTAL INFORMATION:

Contains < 11 wt% Cr(III) oxide-based pigments.

Acute toxicity (Oral LD50) >/- 5.41 mg/l (dust/mist).

Carcinogenic Effects:
NTP: Not Listed
ACGIH: A4 - Not classifiable for human or animal.
IARC: 3 - Not classifiable for human.
OSHA: Not Listed.

Mutagenic Effects:
Mutabenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. May cause damage to the following organs: upper-respiratory tract, skin.

REGULATION: US, IARC Monographs on
Occupational Exposures to
Chemical Agents.

REMARKS:
U.S. IARC Monographs on Occupational Exposures to Chemical Agents: Not classified by the International Agency for Research on Cancer (IARC).

SENSITIZATION: May cause skin sensitization.

CARCINOGENICITY: Recent 2-year bioassays in rats and mice exposed by
the dermal route to H-Series (Part A) Resin type compositions yielded NO EVIDENCE of carcinogenicity to the skin or any other organs.

MUTAGENICITY: Inactive when tested by vivo mutagenicity assays.

POTENTIAL HEALTH EFFECTS:

Inhalation: Not expected to be a relevant route of exposure; however, under conditions where exposure to vapors or mists is possible, could cause respiratory tract irritation.

Skin: May be mildly irritating to the skin.
May cause skin sensitization.

Eyes: May be mildly irritating to the eyes.

Ingestion: Not likely to be a relevant route of exposure.

COMPONENTS:

TRADE SECRET: Ceramic and/or metallic pigments and colorants.

REGULATIONS:
NTP Carcinogen: No
IARC Monographs: No
OSHA Regulated: No
Not known to contain any ingredients recognized as carcinogens by the National Toxicology Program (NTP), the International Agency for Cancer Research or the Occupational Safety and Health Administration (OSHA).

SENSITIZATION: May cause an allergic skin reaction.

CARCINOGENICITY: Not listed as a carcinogen by NTP.

POTENTIAL HEALTH EFFECTS: No human studies have been conducted with this material. The use of recommended protective equipment should prevent any adverse effects.

Inhalation: May cause irritation of the respiratory tract. Prolonged or repeated exposure may cause lung damage.

Skin: May be mildly irritating to the skin.

Eyes: Dust may cause irritation and inflammation.

Ingestion: Not likely to be a relevant form of exposure.

12 ECOLOGICAL INFORMATION

Ecotoxicity Effects:
Toxicity to fish: Acute LC 50 1.3 mg/l Fish 96h
203 Fish, Acute Tioxicity Test.

Acute LC 50 > 11 mg/l Aquatic plants/Algae 72h

Ceramic and/or metallic pigments and colorants:
Oral LD50, rat: 200-2000 mg/kg
Skin irritation, rabbit; severe erythema with signs of necrosis after 1-hour exposure.

13 DISPOSAL CONSIDERATIONS

Do not mix this product with aqueous or other protic waste streams. Incineration of combustible waste material in a permitted facility in accordance with the local, state and federal regulations is the recommended disposal method.

This product is not regulated by the EPA. It is the waste generator's responsibility to determine how disposal must occur. Disposal should be made in accordance with federal, state and local regulations. Minimize or avoid the generation of waste whenever possible. Dispose of waste, unused material and empty containers in a licensed facility.

DO NOT DISCHARGE INTO DRAINS, SURFACE WATERS OR GROUNDWATER.

14 TRANSPORT INFORMATION

US DOT: Not Regulated for Transport
IATA: Not Regulated for Transport
ICAO: Not Regulated for Transport

15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

p-chlorobenzotrifluoride (98-56-6) [70-85%] TSCA

Polymers Viscous (64741-71-5) [10-40%] TSCA

Ceramic and/or metallic pigments and colorants (66402-68-4) [10-40%] TSCA

Carbon black (1333-86-4) [0-2%] MASS, OSHAWAC, PA, TSCA, TXAIR, CA Prop. 65

Titanium dioxide (13463-67-7) [0-10%] MASS, OSHAWAC, PA, TSCA, TXAIR, CA Prop. 65

Regulatory CODE Descriptions

TSCA = Toxic Substances Control Act
MASS = MA Massachusetts Hazardous Substances List
OSHAWAC = OSHA Workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
CA Prop. 65 = Safe Drinking Water and Toxic Enforcement Act
TXAIR = TX Air Contaminants with Health Effects Screening Level

U.S. TOXIC SUBSTANCES CONTROL ACT: All components of this product are on the TSCA Inventory or are exempt from the TSCA Inventory requirements under 40 CFR 720.30.

RoHS-2: NIC Industries, Inc. products comply with the EU RoHS-2 Directive and Ammendments, including 2006/122/EC.

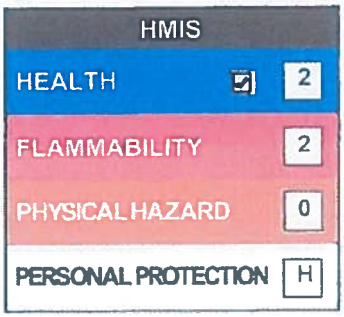
REACH: NIC Industries, Inc. products comply with EU REACH Regulation EC No. 1907/2006.

TSE/BSE: NIC Industries, Inc. products comply with European Parliament and Council Regulation (EC) No. 999/2001.

Conflict Minerals: No NIC Industries, Inc. products contain any "conflict materials" as defined in Section 1502 of the Dodd-Frank Act.

16 OTHER INFORMATION

NFPA: Health = 2, Fire = 2, Reactivity = 1, Specific Hazard = n/a
HMIS III: Health = 2(Chronic), Fire = 2, Physical Hazard = 0
HMIS PPE: H - Splash Goggles, Gloves, Apron, Vapor Respirator



These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.,

U.S. Federal Regulations:

OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Safety Data Sheet available to all your employees.

NON-WARRANTY: The information presented in this publication is based upon the research and experience of NIC Industries, Inc. No representation or warranty is made, however, concerning the accuracy or completeness of express or implied, including without limitation any warranty of merchantability or fitness for any particular purposes, and no warranty or representation shall be implied by law or otherwise. Any products sold by NIC Industries, Inc. are not warranted as suitable for any particular purpose to the buyer. The suitability of any products for any purpose particular to the buyer is for the buyer to determine. NIC Industries, Inc. assumes no responsibility for the section of products suitable to the particular purposes of any particular buyer. NIC Industries, Inc shall in no way be liable for any special, incidental, or consequential damages.

SDS GHS Safety Data Sheet

NIC Industries, Inc

NIC INDUSTRIES, INC.

H-Series & Elite-Series Coatings (Part B)

SDS Number: Revision Date: 5/22/2017

1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

NIC Industries, Inc
7050 6th Street
White City, OR 97503

Phone: 541.826.1922
Email: johnw@nicindustries.com
Web: www.nicindustries.com

Product Name: H-Series & Elite-Series Coatings (Part B)
Revision Date: 5/22/2017
Version: 1.0
Product Code: H-Series & Elite-Series Coating Catalyst
Chemical Family: HS Code: 3208900000

Emergency Contact: Call PERS: 1-800-633-8253 (USA and Canada) or 001-801-629-0667 (International).

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 waranties, 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 responsibilty of the buyer/user to ensure its activities comply with all local, state and federal regulations.

2 HAZARDS IDENTIFICATION

Route of Entry: Inhalation, Ingestion, Skin, Eyes.

Target Organs: Central Nervous System, Kidneys, Liver.

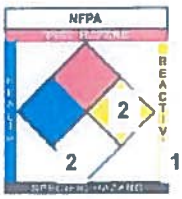
Inhalation: May cause irritation to the respiratory system and breathing difficulties.

Skin Contact: Causes moderate skin irritation. May cause severe skin burns, rashes, eczema and redness. Prolonged or repeated exposure may aggravate existing conditions.

Eye Contact: Causes severe eye irritation and severe eye damage.

Ingestion: Harmful if swallowed. Ingestion may cause damage to the lining of the gastrointestinal tract.

NFPA: Health = 2, Fire = 2, Reactivity = 1
HMIS III: H*2/F2/PH1



H | Splash Goggles, Gloves, Apron, Vapor Respirator

GHS Signal Word:
WARNING

GHS Hazard Pictograms:

GHS Classifications:
- Health, Specific target organ toxicity - Single exposure, 2
- Health, Specific target organ toxicity - Repeated exposure, 2
- Health, Serious Eye Damage/Eye Irritation, 2 B
- Health, Specific target organ toxicity - Single exposure, 3
- Health, Acute toxicity, 5 Dermal
- Health, Respiratory or skin sensitization, 1 Skin
- Health, Acute toxicity, 5 Oral

GHS Phrases:
- H371 - May cause damage to organs
- H373 - May cause damage to organs through prolonged or repeated exposure
- H320 - Causes eye irritation
- H335 - May cause respiratory irritation
- H313 - May be harmful in contact with skin
- H317 - May cause an allergic skin reaction
- H303 - May be harmful if swallowed

GHS Precautionary Statements:
- P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
- P211 - Do not spray on an open flame or other ignition source.
- P232 - Protect from moisture.
- P240 - Ground/bond container and receiving equipment.
- P242 - Use only non-sparking tools.
- P243 - Take precautionary measures against static discharge.
- P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
- P262 - Do not get in eyes, on skin, or on clothing.
- P264 - Wash hands thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P281 - Use personal protective equipment as required.
P284 - Wear respiratory protection.
P301+310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+352 - IF ON SKIN: Wash with soap and water.
P303+361+353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 - IF INHALED: Seek immediate medical attention.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 - IF IN EYES: Seek immediate medical attention.
P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P306+360 - IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P313 - Get medical advice/attention.
P332+313 - If skin irritation occurs: Get medical advice/attention.
P362 - Take off contaminated clothing and wash before reuse.
P370+376 - In case of fire: Stop leak if safe to do so.
P370+378 - In case of fire: Use CO2, dry chemical powder, foam, alcohol foam or water spray for extinction.
P370+380 - In case of fire: Evacuate area.
P374 - Fight fire with normal precautions from a reasonable distance.
P381 - Eliminate all ignition sources if safe to do so.
P402+404 - Store in a dry place. Store in a closed container.
P403+233 - Store in a well ventilated place. Keep container tightly closed.
P403+235 - Store in a well ventilated place. Keep cool.
P410+403 - Protect from sunlight. Store in a well ventilated place.
P420 - Store away from other materials.
P501 - Dispose of contents/container to licensed waste facility.
P102 - Keep out of reach of children.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Cas #	Percentage	Chemical Name
*Trade Secret	100%	Metal-modified organic base

*In compliance with OSHA Hazard Communication Standard 29 CFR 1910.1200(i), the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a Trade Secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as significantly hazardous to health or the environment and hence require reporting in this section.

4 FIRST AID MEASURES

Inhalation: Remove to fresh air. If breathing is difficult, have trained person administer oxygen. If breathing stops, have trained person administer artificial respiration. Maintain an open airway. Loosen tight clothing. Seek immediate medical attention.

Skin Contact: Remove all contaminated clothing and shoes. Wash thoroughly with soap and water for at least 15 minutes. Wash all clothing before re-use. If symptoms develop, seek medical attention.

Eye Contact: Remove any contact lenses. Immediately flush with water for at least 15 minutes, forcibly holding eyelids apart. Seek immediate medical attention.

Ingestion: Rinse mouth out and then drink plenty of water. Moved exposed person to fresh air and keep at rest. Only induce vomiting at the instruction of medical personnel. Vomiting may be dangerous. Keep head low so vomit does not enter the lungs. Never induce vomiting or give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention.

5 FIRE FIGHTING MEASURES

Flammability: Combustible Liquid Formulation
Flash Point: Not Available

Extinguishing Media:
Carbon dioxide, dry chemical powder, foam or alcohol foam.

Fire Fighting Procedures:
Evacuate all unnecessary personnel. Shut down motors, pumps, electrical service, and eliminate sources of ignition if safe to do so. Use water spray to cool containers and avoid pressure build-up (do not allow water to mix with product). If fire occurs, isolate area, contain and eliminate fire, then dispose of debris in accordance with official regulations. Stay upwind of material at all times. Wear butyl rubber boots, gloves and body suit with SCBA. May generate toxic and irritating combustion products. Use DOT Response Guide #153.

Contains possibly combustible materials. Over-heated containers may rupture. Vapors may travel a significant distance to a source of ignition and flash back.

Sensitivity of Static Charge:
Electrostatic charge may build up during handling. Grounding of equipment is required.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions:
Evacuate all unnecessary personnel and surrounding areas, and eliminate all sources of ignition if safe to do so. Wear proper personal protective equipment, especially a self-contained breathing apparatus. Do not touch or walk through spilled material. Provide adequate ventilation and avoid breathing vapors.

Environmental Precautions:
Contain liquids and prevent discharge into streams, soil, waterways, drains and sewers. Control or stop the loss of volatile material to the atmosphere. Do not apply water to the spill. Spills should be reported to the appropriate local, state, or federal agencies. In case of major release or road spill notify PERS: 1-800-633-8253 (USA and Canada) or 001-1-801-629-0667 (International).

Remove all sparking devices or ignition sources. Stop leak if without risk. Move containers from spill area. Approach spill from upwind. Cover with an inorganic absorbent, such as vermiculite, perlite, ground clay, or sand; sweep up, and dispose according to local, state and federal regulations. Contaminated absorbent may pose the same hazard as spilled material does. Use spark proof tools and explosion proof equipment. Dispose of via a licensed waste disposal contractor.

7 HANDLING AND STORAGE

Handling Precautions:
This material is not rated as flammable.
Avoid vapor formations and use with adequate ventilation.
Avoid breathing fumes.
Vapors are heavier than air and will tend to collect in low areas. Avoid use in confined spaces.
Avoid bodily contact with material.
Wear appropriate personal protective equipment.
Wash thoroughly after handling, avoid contact with eyes.
No eating, drinking or smoking near areas where substance is handled, processed or stored.
Ground coating equipment and containers at all times.
Use non sparking tools.
Isolate, vent, drain, wash and purge systems or equipment before maintenance or repair.
Clean spills immediately.

Storage Requirements:
Keep away from heat and all sources of ignition.
Avoid moisture and extreme temperatures.

Avoid moisture and static electricity discharges.
Avoid shock and friction.
Store in a cool, dry area away from direct sunlight (do not store in temperatures below 50F or above 77F).Avoid freezing.
Do not allow cross-contamination, and keep away from incompatible materials.
Keep tightly closed when not being used.
Label all containers appropriately.
Do not reuse containers.
Do not store near food or drinks.
Avoid excessive aging.
Store in accordance with local regulations.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Adequate room ventilation plus local exhaust at points of emission to maintain levels of airborne contaminates below exposure limits. Assure ACGIH TWA and OSHA PEL limits (varies by product) are maintained. Use of fume hoods or closed booths required when product is used in a manner that may generate mist or aerosol.

Personal Protective Equip: HMIS PP, H | Splash Goggles, Gloves, Apron, Vapor Respirator.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times. Solvent resistant (neoprene, nitrile or other nonporous) recommended.

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Chemical splash safety glasses should be worn at a minimum.

Skin: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Impervious work clothing such as long sleeves, long pants, lab coat, chemical boots and chemical resistant (solvent resistant) apron recommended.

Emergency shower and eyewash facility should be in close proximity. Employ proper hygenic measures after working with material and before eating, smoking or using the lavatory. Fully wash any contaminated clothing.

Emissions from ventilation or work process equipment should be checked to ensure they comply with the regulations of environmental protection legislation.

Completely isolate and thoroughly clean all equipment, piping or vessels with a solvent before beginning maintenance or repairs.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid that varies in color from yellow-orange to dark orange		
Physical State:	Liquid	**Odor:**	Ammoniacal
Spec Grav./Density:	1.02/1.07 g/cm3	**VOC:**	Exempt

10 STABILITY AND REACTIVITY

Stability: Stable.
Conditions to Avoid: None known.
Materials to Avoid: Strong oxidizing agents, strong acids, strong alkaline materials, alcohols, amines, water, moisture and contact with other unpolymerized monomers or polymers.
Hazardous Decomposition: May contain carbon monoxide, carbon dioxide, nitrogen oxide(s), corrosive gases/vapours, hydrogen, ammonia and hydrocarbons.

Hazardous Polymerization: Will not occur.

11 TOXICOLOGICAL INFORMATION

NTP Carcinogen: No IARC Monographs: No OSHA Regulated: No

Not known to contain any ingredients recognized as carcinogens by the National Toxicology Program (NTP), the International Agency for Cancer Research (IARC) or the Occupational Safety and Health Administration (OSHA).

Contains materials that are believed to be possible skin sensitizers. Contains materials harmful to eyes and skin with an LD50 Oral rating of > 200-2,000 mg/kg.

12 ECOLOGICAL INFORMATION

Water hazard class 2: Avoid disposal in landfills and sewage systems. Avoid release into water sources. Product has not been tested for environmental effects.

13 DISPOSAL CONSIDERATIONS

This product is not regulated by the EPA. It is the waste generator's responsibility to determine how disposal must occur. Disposal should be made in accordance to federal, state, and local regulations. Minimize or avoid the generation of waste whenever possible. Dispose of waste, unused material and empty containers in a licensed facility. Do not discharge into drains, surface waters or groundwater.

14 TRANSPORT INFORMATION

DOT Class: Not regulated

US DOT: Not Regulated for Transport
IATA: Not Regulated for Transport
ICAO: Not Regulated for Transport

15 REGULATORY INFORMATION

HCS Classification: Not Regulated.
U.S. Federal Regulations: TSCA All components are listed or exempted.
SARA 302/304/311/312: No products found.

This product contains no toxic chemicals subject to the reporting requirements of SARA 313.

California Proposition 65:
This product contains no chemicals known to the state of California to cause cancer and birth defects, or other reproductive harm.

Canadian DSL Inventory Status: This product may contain materials not listed on the Canadian DSL but listed on the Canadian NDSL.

16 OTHER INFORMATION

U.S. Federal Regulations:

OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of

hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you (as it is your legal duty to) make all information in this Safety Data Sheet available to all your employees.

NON-WARRANTY: The information presented in this publication is based upon the research and experience of NIC Industries, Inc. and on supplier information provided to NIC Industries, Inc. No representation or warranty is made, however, concerning the accuracy or completeness of express or implied, including without limitation any warranty of merchantability or fitness for any particular purposes, and no warranty or representation shall be implied by law or otherwise. Any products sold by NIC Industries, Inc. are not warranted as suitable for any particular purpose to the buyer. The suitability of any products for any purpose particular to the buyer is for the buyer to determine. NIC Industries, Inc. assumes no responsibility for the section of products suitable to the particular purposes of any particular buyer. NIC Industries, Inc shall in no way be liable for any special, incidental, or consequential damages.

SDS GHS Safety Data Sheet

NIC Industries, Inc

NIC INDUSTRIES, INC.

MC Series Coatings

SDS Number: Revision Date: 8/11/2015

1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

NIC Industries, Inc
7050 6th Street
White City, OR 97503

Phone: 541.826.1922
Email: johnw@nicindustries.com
Web: www.nicindustries.com

Product Name: MC Series Coatings
Revision Date: 8/11/2015
Version: 5.5
Common Name: Ambient-Cure Ceramic-Based Clear Coatings

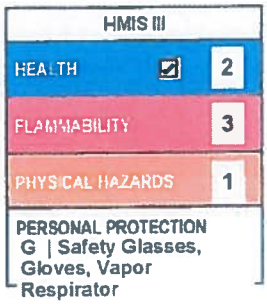
EMERGENCY CONTACT: Call PERS: 1-800-633-8253 (USA & Canada) or 001-1-801-629-0667 (International).

The information contained in this Safety Data Sheet is, to the best of our knowledge, true and accurate and presented in good faith. NIC Industries, Inc. makes no waranties, 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 solesly 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.

2 HAZARDS IDENTIFICATION

Route of Entry:	Inhalation, Ingestion, Skin Absorption, Eye Contact
Target Organs:	Respiratory System, Integumentary System, Digestive System and Nervous System.
Inhalation:	May cause moderate irritation of the upper respiratory tract. May produce symptoms of CNS depression (headaches, dizziness, nausea, loss of balance, drowsiness) and CNS stimulation (shaking, tremors). Severe overexposure may cause severe CNS depression symptoms such as fatigue or loss of concentration.
Skin Contact:	May cause moderate skin irritation.
Eye Contact:	May cause irritation and pain.
Ingestion:	Harmful by ingestion. May be irritating to the gastrointestinal tract, cause gastric distress and stomach pains.

NFPA: Health = 2, Fire = 3, Reactivity = 1
HMIS III: H*2/F3/PH1



GHS Signal Word:
WARNING

GHS Hazard Pictograms:

GHS Classifications:
Physical, Flammable Liquids, 3
Health, Acute toxicity, 4 Oral
Health, Specific target organ toxicity - Single exposure, 3
Environmental, Hazards to the aquatic environment - Acute, 3
Health, Acute toxicity, 4 Dermal

GHS Phrases:
H226 - Flammable liquid and vapour
H302 - Harmful if swallowed
H335 - May cause respiratory irritation
H402 - Harmful to aquatic life
H312 - Harmful in contact with skin

GHS Precautionary Statements:
P102 - Keep out of reach of children.
P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
P211 - Do not spray on an open flame or other ignition source.
P232 - Protect from moisture.
P240 - Ground/bond container and receiving equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P262 - Do not get in eyes, on skin, or on clothing.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P284 - Wear respiratory protection.
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+352 - IF ON SKIN: Wash with soap and water.

P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P314 - Get Medical advice/attention if you feel unwell.
P332+313 - If skin irritation occurs: Get medical advice/attention.
P337 - If eye irritation persists: Seek medical attention.
P342 - If experiencing respiratory symptoms: Seek medical attention.
P370+378 - In case of fire: Use dry chemical powder, foam, for extinction.
P374 - Fight fire with normal precautions from a reasonable distance.
P402+404 - Store in a dry place. Store in a closed container.
P403+233 - Store in a well ventilated place. Keep container tightly closed.
P403+235 - Keep cool.
P410+403 - Protect from sunlight.
P501 - Dispose of contents/container to licensed waste facility.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Cas #	Percentage	Chemical Name
	15-40%	Ambient temperature-curable refractory resin(s)
	1-5%	Matting agents
	0-10%	Rheology modifiers
98-56-6/ 540-88-5	55-75%	p-chlorobenzotrifluoride and/or tert-Butyl acetate

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as significantly hazardous to health or the environment and hence require reporting in this section.

4 FIRST AID MEASURES

Inhalation: Remove to fresh air. If breathing is difficult, have trained person administer oxygen. If breathing stops, have trained person administer artificial respiration. Maintain an open airway. Loosen tight clothing. If symptoms develop, seek medical attention.

Skin Contact: Remove all contaminated clothing and shoes. Wash thoroughly with soap and water for at least 15 minutes. Wash all clothing before re-use. If symptoms develop, seek medical attention.

Eye Contact: Remove contact lenses. Immediately flush with water for at least 15 minutes, forcibly holding eyelids apart. If symptoms develop, seek medical attention.

Ingestion: Rinse mouth out and then drink plenty of water. Only induce vomiting at the instruction of medical personnel. Vomiting may be dangerous. Keep head low so vomit does not enter the lungs. Never induce vomiting or give anything by mouth to an unconscious or convulsing person. Keep patient at rest. Seek immediate medical attention.

5 FIRE FIGHTING MEASURES

Flammability: Class B: Flammable Liquid

Extinguishing Media:
Carbon dioxide, dry chemical powder, foam or alcohol foam.

Fire Fighting Procedures:
Evacuate all unnecessary personnel. Shut down motors, pumps, electrical service, and eliminate sources of ignition if safe to do so. Use water spray to cool containers and avoid pressure build-up (do not allow water to mix with product). If fire occurs, isolate area, contain and eliminate fire, then dispose of debris in accordance with official regulations. Stay upwind of material at all times. Wear self-contained

breathing apparatus and full protective clothing. May release dense black smoke containing hazardous products of combustion.

Fire and Explosion Hazard:
Contains possibly combustible materials. Over-heated containers may rupture. Fumes may be flammable/explosive in air when in the presence of an ignition source. Vapors may travel a significant distance to a source of ignition and flash back.

Sensitivity of Static Charge:
Electrostatic charge may build up during handling. Grounding of equipment is required.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions:
Evacuate all unnecessary personnel and surrounding areas, and eliminate all sources of ignition if safe to do so. Wear proper personal protective equipment, especially a self-contained breathing apparatus. Do not touch or walk through spilled material. Provide adequate ventilation and avoid breathing vapors. Ground all equipment used.

Environmental Precautions:
Contain liquids and prevent discharge into streams, soil, waterways, drains and sewers. Control or stop the loss of volatile material to the atmosphere. Do not apply water to the spill. Spills should be reported, if required, to the appropriate local, state, or federal agencies, especially if environmental pollution has occurred. In case of major release or road spill notify PERS: 1-800-633-8253 (USA & Canada) or 001-1-801-629-0667.

Remove all sparking devices or ignition sources. Product is flammable. Stop leak if without risk. Move containers from spill area. Approach spill from upwind. Cover with an inorganic absorbent, such as vermiculite, perlite, ground clay, or sand; sweep up, and dispose according to local, state and federal regulations. Contaminated absorbent may pose the same hazard as spilled material does. Use spark proof tools and explosion proof equipment. Dispose of via a licensed waste disposal contractor.

7 HANDLING AND STORAGE

Handling Precautions:
This material is rated as flammable.
Avoid vapor formations and use with adequate ventilation.
Avoid breathing fumes.
Vapors are heavier than air and will tend to collect in low areas. Avoid use in confined spaces.
Avoid bodily contact with material.
Wear appropriate personal protective equipment.
Wash thoroughly after handling, avoid contact with eyes.
No eating, drinking or smoking near areas where substance is handled, processed or stored.
Flammable vapours may form explosive mixtures in the air.
Ground coating equipment and containers at all times.
Use non sparking tools.
Isolate, vent, drain, wash and purge systems or equipment before maintenance or repair.
Clean spills immediately.

Storage Requirements:
Keep away from heat, static electricity discharges and all sources of ignition.
Avoid moisture and extreme temperatures.
Avoid shock and friction.
Store in a cool, dry area away from direct sunlight (do not store in temperatures below 50 oF or above 77 oF). Avoid freezing.
Do not allow cross-contamination, and keep away from incompatible materials.
Keep tightly closed when not being used, but vent carefully before using.
Label all containers appropriately.
Do not reuse containers.
Do not store near food or drinks.
Avoid excessive aging.
Store in accordance with local regulations.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Adequate room ventilation plus local exhaust at points of emission to maintain levels of airborne contaminates below exposure limits. Assure ACGIH TWA and OSHA PEL limits (varies by product) are maintained. Use of fume hoods or closed booths required when product is used in a manner that may generate mist or aerosol.

Personal Protective Equip: HMIS PP, F | Goggles, Chemical Resistant Gloves, Apron (protective industrial clothing recommended along with apron).

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times. Solvent resistant (neoprene, nitrile or other nonporous) recommended.

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Chemical splash goggles should be worn at a minimum.

Skin: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Apron and protective industrial coating recommended.

Emergency shower and eyewash facility should be in close proximity. Employ proper hygenic measures after working with material and before eating, smoking or using the lavatory. Fully wash any contaminated clothing.

Emissions from ventilation or work process equipment should be checked to ensure they comply with the regulations of environmental protection legislation.

Completely isolate and thoroughly clean all equipment, piping or vessels with a solvent before beginning maintenance or repairs.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Color varies by product		
Physical State:	Liquid	**Odor:**	Ammoniacal
Spec Grav./Density:	0.8 - 1.0	**Solubility:**	Reacts with water
Viscosity:	Varies by product number	**VOC:**	Exempt

10 STABILITY AND REACTIVITY

Stability: Stable.
Conditions to Avoid: Extreme temperatures, moisture, vapor formation and sources of ignition.
Materials to Avoid: Strong oxidizing agents, strong acids, water and alkalines.
Hazardous Decomposition: Chlorine-containing gases, fluorine-containing gases may be preserved in products containing p-chlorobenzotrifluoride. Carbon dioxide and silicon oxides may be produced from all coating formulations.
Hazardous Polymerization: Will not occur.

11 TOXICOLOGICAL INFORMATION

NTP Carcinogen: No IARC Monographs: No OSHA Regulated: No

Not known to contain any ingredients recognized as carcinogens by the National Toxicology Program (NTP), the International Agency for Cancer Research (IARC) or the Occupational Safety and Health Administration (OSHA).

Reported Human Effects:

No human studies have been conducted with this material. The use of recommended protective equipment should minimize any adverse effects.

Reported Animal Effects from various individual chemical components:
Oral LD50, rat: >300-2000 mg/kg
Vapor LC50, rat 20 g/m3
Skin irritation, rabbit; corrosive.
Vapor LC50, rat 4211 ppm

Toxicological information may change depending on individual product.

12 ECOLOGICAL INFORMATION

Water hazard Category 2: Contains materials toxic to fish. Avoid disposal in landfills and sewage systems. Avoid release into water sources.

13 DISPOSAL CONSIDERATIONS

This product is not regulated by the EPA. It is the waste generator's responsibility to determine how disposal must occur. Disposal should be made in accordance to federal, state, and local regulations. Minimize or avoid the generation of waste whenever possible. Dispose of waste, unused material and empty containers in a licensed facility. Do not discharge into drains, surface waters or groundwater.

Do not mix this product with aqueous or other protic waste streams. Incineration of combustible waste material in a permitted facility in accordance with the local, state and federal regulations is the recommended disposal method.

14 TRANSPORT INFORMATION

DOT Class: Flammable Liquid (3) #3
UN #: UN 1263, Class: 3, Proper Shipping Name: Paint or Paint-Related materials

US DOT:
Proper Shipping Name: Paint or Paint Related Materials
Hazard Class: 3
UN Number: 1263
Packing Group: III

IATA:
Proper Shipping Name: Paint or Paint Related Materials
Hazard Class: 3
UN Number: 1263
Packing Group: III

15 REGULATORY INFORMATION

U.S. Federal Regulations: TSCA All components are listed or exempted.
SARA 302/304/311/312: Depends on individual product.

Individual products may or may not contain chemicals subject to the reporting requirements of SARA 313.

California Proposition 65:
Individual products may or may not contain chemicals known to the state of California to cause cancer and birth defects, or other reproductive harm.

Canadian DSL Inventory Status: This product contains materials not listed on the Canadian DSL but listed on the NDSL.

*tert-Butyl acetate (540885 40.0-60.0%) CERCLA, CSWHS, MASS, OSHAWAC, PA, TSCA, TXAIR

REGULATORY KEY DESCRIPTIONS

TSCA = Toxic Substances Control ActCERCLA = Superfund clean up substance
CSWHS = Clean Water Act Hazardous substances
MASS = MA Massachusetts Hazardous Substances List
OSHAWAC = OSHA Workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
TXAIR = TX Air Contaminants with Health Effects Screening Level

NIC Industries, Inc. coatings meet all air quality and regulatory requirements with respect to manufacturing and application. Specifically, the hardened finished product does not release any "volatile organic compounds" (VOC) under any ambient conditions.

16 OTHER INFORMATION

U.S. Federal Regulations:

OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you (as it is your legal duty to) make all information in this Safety Data Sheet available to all your employees.

NON-WARRANTY: The information presented in this publication is based upon the research and experience of NIC Industries, Inc. and on supplier information provided to NIC Industries, Inc. No representation or warranty is made, however, concerning the accuracy or completeness of express or implied, including without limitation any warranty of merchantability or fitness for any particular purposes, and no warranty or representation shall be implied by law or otherwise. Any products sold by NIC Industries, Inc. are not warranted as suitable for any particular purpose to the buyer. The suitability of any products for any purpose particular to the buyer is for the buyer to determine. NIC Industries, Inc. assumes no responsibility for the section of products suitable to the particular purposes of any particular buyer. NIC Industries, Inc shall in no way be liable for any special, incidental, or consequential damages.

SDS GHS Safety Data Sheet

NIC Industries, Inc

NIC INDUSTRIES, INC.

P Series Coatings

SDS Number:

Revision Date: 9/30/2015

1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

NIC Industries, Inc
7050 6th Street
White City, OR 97503

Phone: 541.826.1922
Fax: 541.830.6522
Email: johnw@nicindustries.com
Web: www.nicindustries.com

Product Name: P Series Coatings
Revision Date: 9/30/2015
Version: 1.0

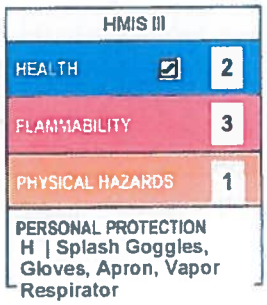
Emergency Contact: Call PERS: 1-800-633-8253 (USA & Canada) or 001-1-801-629-0667 (International).

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 waranties, 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 buy/user to ensure its activities comply with all local, state and federal regulations.

2 HAZARDS IDENTIFICATION

Route of Entry:	Eyes, Ingestion, Inhalation, Skin
Target Organs:	Central Nervous System, Kidneys, Liver, Gastrointestinal Tract
Inhalation:	May produce symptoms of central nervous system depression including headache, dizziness, nausea, loss of balance, and drowsiness
Skin Contact:	Irritating
Eye Contact:	Irritating
Ingestion:	Ingestion may cause damage to the lining of the gastrointestinal tract

NFPA: Health = 2, Fire = 3, Reactivity = 1
HMIS III: H*2/F3/PH1



GHS Signal Word:
WARNING

GHS Hazard Pictograms:

GHS Classifications:
Physical, Flammable Liquids, 3
Health, Acute toxicity, 4 Oral
Health, Acute toxicity, 5 Dermal
Health, Serious Eye Damage/Eye Irritation, 2 B
Health, Acute toxicity, 5 Inhalation
Health, Specific target organ toxicity - Single exposure, 3

GHS Phrases:
H226 - Flammable liquid and vapour
H302 - Harmful if swallowed
H313 - May be harmful in contact with skin
H320 - Causes eye irritation
H333 - May be harmful if inhaled
H335 - May cause respiratory irritation

GHS Precautionary Statements:
P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.
P202 - Do not handle until all safety precautions have been read and understood.
P211 - Do not spray on an open flame or other igntion source.
P221 - Take any precaution to avoid mixing with combustibles.
P232 - Protect from moisture.
P233 - Keep container tightly closed.
P235+410 - Keep cool. Protect from sunlight.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/light/equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P250 - Do not subject to grinding/shock/friction.

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P262 - Do not get in eyes, on skin, or on clothing.
P264 - Wash _ thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P281 - Use personal protective equipment as required.
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P308+313 - IF exposed or concerned: Get medical advice/attention.
P335 - Brush off loose particles from skin.
P341 - If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P370+376 - In case of fire: Stop leak if safe to do so.
P370+380 - In case of fire: Evacuate area.
P374 - Fight fire with normal precautions from a reasonable distance.
P381 - Eliminate all ignition sources if safe to do so.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Cas #	Perc.	Chemical Name
64175	5-10%	Ethanol
78933	30-40%	Methyl ethyl ketone (MEK)
	10-30%	Organic Thermosetting Resin
71363	30-35%	n-Butyl alcohol
9002-84-0	0-30%	Polytetrafluoroethylene
7782-42-5	0-30%	Graphite

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as significantly hazardous to health or the environment and hence require reporting in this section.

4 FIRST AID MEASURES

Inhalation: Remove to fresh air. If breathing stops, have trained person administer artificial respiration and seek medical attention immediately.

Skin Contact: Wash thoroughly with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash all clothing before re-use. If irritation persists, seek medical attention.

Eye Contact: Immediately flush with water for at least 15 minutes. If irritation persists, seek medical attention.

Ingestion: Do not induce vomiting. Seek medical attention immediately.

5 FIRE FIGHTING MEASURES

Flammability:	Flammable
Flash Point:	20 deg Fahrenheit
Flash Point Method:	Not Available
Burning Rate:	Not Established
Autoignition Temp:	Not Established
LEL:	1.8% MEK; 3.3% Ethanol
UEL:	11.4% MEK; 19.0% Ethanol

Extinguishing Media:
Carbon dioxide, dry chemical powder, or appropriate foam.

Fire Fighting Procedures:
Evacuate all unnecessary personnel. Shut down motors, pumps, electrical service, and eliminate sources of ignition. Use water spray to cool containers and avoid pressure build-up. Wear self-contained breathing apparatus and full protective clothing. Solvent vapors may be heavier than air. Stagnant air may caue vapors to build up and travel along the ground to an ignition source which may result in a flash back to the source of the vapors.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions:
Evacuate all unnecessary personnel and eliminate all sources of ignition.

Environmental Precautions:
Contain liquids and prevent discharge into streams and sewers, control or stop the loss of volatile material to the atmosphere. Do not apply water to the spill. Spills should be reported, if required, to the appropriate local, state, or federal agencies.

Small Spills:
Cover with an inorganic absorbent, such as vermiculite, perlite, ground clay, or sand; sweep up, and dispose of appropriately. Clean contaminated area with soap and water.

Large Spills:
Dike to contain and pump into drums for disposal. Add vermiculite absorbent to remaining material (as above).

Call PERS: 1-800-633-8253 (USA & Canada) or 001-1-801-629-0667 (International).

7 HANDLING AND STORAGE

Handling Precautions:	Do not get in eyes, clothing, or on skin. Wash thoroughly with soap and water after handling. Wear NIOSH approved respiratory is conditions exceed acceptable limits.
Storage Requirements:	Keep container properly closed and properly labeled. Do not store in temperatures below 50F or above 77F. keep from freezing. Empty containers may contain product residue. Do not cut, puncture, or weld containers. Store in a cool dry place designated for combustible liquid storage. Keep away from heat, sparks, and open flame.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Adequate room ventilation plus local exhaust at points of emission to maintain levels of airborne contaminates below exposure limits. Use of fume hoods or closed booths recommended when product is used in a manner that may generate mist or aerosol.

Personal Protective Equip: HMIS PP, H | Splash Goggles, Gloves, Apron, Vapor Respirator

Appropriate Hygienic Practices:
Avoid contact with eyes, skin, and clothing. Avoid breathing vapors, fumes, and mists. Avoid prolonged or repeated exposure. Wash thoroughly after handling, and before eating, drinking or smoking.

Other:
Emergency shower and eyewash facility should be in close proximity.
Completely isolate and thoroughly clean all equipment, piping or vessels with a high flash, non-polar solvent before beginning maintenance or repairs.

Respiratory:
If mists or aerosols are generated during handling wear a respirator equipped with an N99 filter and an organic vapor cartridge.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Specific to product		
Physical State:	Liquid	**Odor:**	Sweet Solvent
Spec Grav./Density:	Approximately 0.99	**Solubility:**	Insoluble
Boiling Point:	112 deg Fahrenheit	**Freezing/Melting Pt.:**	Not Established
Vapor Pressure:	Not Applicable	**VOC:**	63% by Weight
pH:	Not applicable		

10 STABILITY AND REACTIVITY

Stability:	Stable
Conditions to Avoid:	Moisture, Excessive Heat, Sources of Ignition
Materials to Avoid:	Avoid water, reactive materials
Hazardous Decomposition:	Carbon dioxide, carbon monoxide, metal oxides
Hazardous Polymerization:	Will not occur

11 TOXICOLOGICAL INFORMATION

No human studies have been conducted with this specific material. The use of recommended protective equipment should prevent any adverse effects. See section 15 for further information.

12 ECOLOGICAL INFORMATION

Avoid release to surface waters and waste treatment systems. This material may be hazardous to aquatic organisms.

13 DISPOSAL CONSIDERATIONS

Do not mix this product with aqueous or other protic waste streams. Disposal in a permitted facility in accordance with the local, state, and federal regulations is the recommended disposal method. Do not incinerate closed containers.

14 TRANSPORT INFORMATION

DOT Class: Flammable Liquid (3) #3
UN #: UN 1263, Class: 3, Proper Shipping Name: Paint or Paint-related materials

US DOT:
Proper Shipping Name: Paint or Paint Related Materials
Hazard Class: 3
UN Number: 1263
Packing Group: III

IATA:
Proper Shipping Name: Paint or Paint Related Materials
Hazard Class: 3
UN Number: 1263
Packing Group: III

15 REGULATORY INFORMATION

COMPONENT / (CAS/PERC) / CODES

*Ethanol (64175 7.5-8%) MASS, OSHAWAC, PA, TXAIR

*Methyl ethyl ketone (MEK) (78933 4.5-5%) CERCLA, HAP, HWRCRA, MASS, NJHS, OSHAWAC, PA, SARA313, TOXICRCRA, TXAIR, TXHWL

*n-Butyl alcohol (71363 1.5-1.6%) CERCLA, MASS, NJHS, OSHAWAC, PA, SARA313, TOXICRCRA, TXAIR, TXHWL

16 OTHER INFORMATION

U.S. Federal Regulations:

OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Material Safety Data Sheet available to all your employees.

NON-WARRANTY: The information presented in this publication is based upon the research and experience of NIC Industries, Inc. No representation or warranty is made, however, concerning the accuracy or completeness of express or implied, including without limitation any warranty of merchantability or fitness for any particular purposes, and no warranty or representation shall be implied by law or otherwise. Any products sold by NIC Industries, Inc. are not warranted as suitable for any particular purpose to the buyer. The suitability of any products for any purpose particular to the buyer is for the buyer to determine. NIC Industries, Inc. assumes no responsibility for the section of products suitable to the particular purposes of any particular buyer. NIC Industries, Inc shall in no way be liable for any special, incidental, or consequential damages.

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1

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PLEASE READ

Cerakote® Firearm Coatings are designed for professionals and should be applied by NIC-trained applicators and coating professionals with proper training and equipment. This training manual is intended to be used as a supplemental guide for certified and professional applicators **ONLY**. It is critical to follow all instructions in this manual. If for any reason you are not willing to, or cannot follow the steps in this manual, do not attempt to coat any product using Cerakote®, or any other NIC product. If you have any questions, please contact NIC Industries.

Thank You For Finishing Strong With Cerakote!

Cerakote Firearm Coatings
A Division of NIC Industries, INC.
866-774-7628 | CERAKOTE.COM

Popular Mix: 50/50 mix of H-148 Burnt Bronze with H-146 Graphite Black

Find more Custom Mixes at Cerakote.com!

Disassemble:

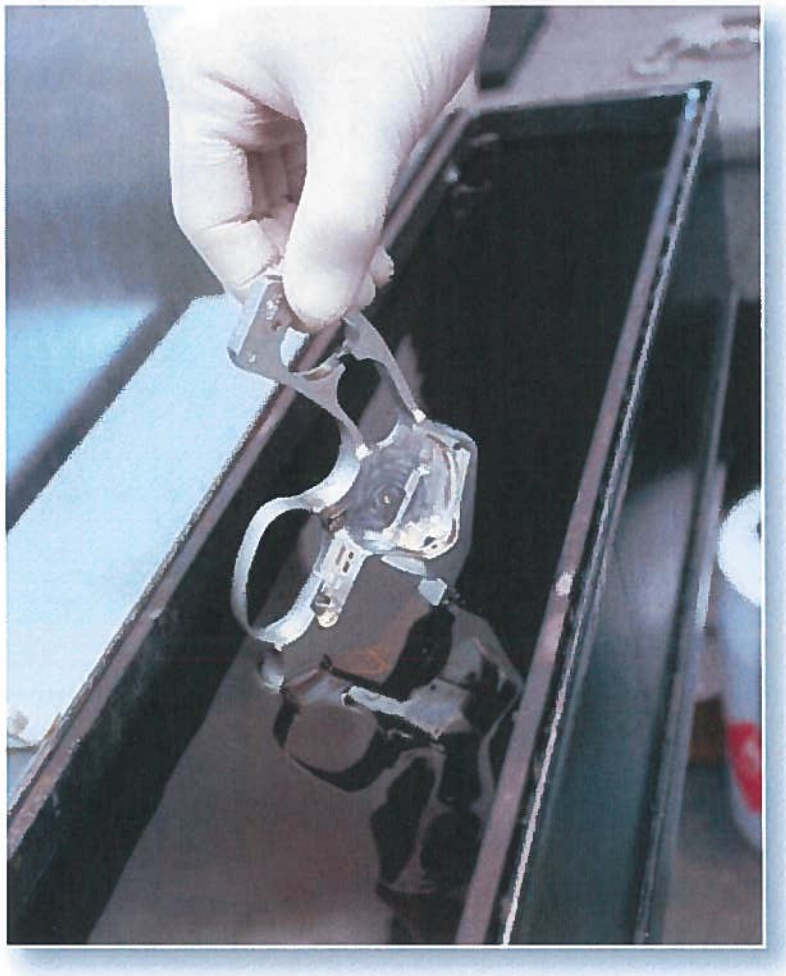
Completely disassemble the firearm.

Detail strip your firearm. If you are unfamiliar with this level of disassembly have a certified gunsmith perform the disassembly and reassembly.

Take a photograph of all the parts received. Make note of the substrate type on each piece (i.e: Steel, Aluminum, plastic, composite, polymer, etc.)

Degrease:

Soak each metal part for 20-30 minutes in a non-water based degreaser such as Brake-Kleen® (NIC Part # SE-174) or acetone. Spraying or wiping is not sufficient; soaking is required. Using a small tank with a wire basket makes degreasing quick and easy. Place the screws, pins and other small parts in a smaller container so they are not lost during the soaking process. Allow parts to air dry after soaking.



From this point on it is critical to avoid touching the parts with your bare hands. Use powder-free latex style gloves to handle the parts.

Tip:

- In most cases it is not necessary or recommended to soak plastic and polymer parts in a solvent based degreaser as to avoid damaging the part. Thoroughly wiping plastic and polymer parts with a compatible degreaser, such as Wax & Grease Remover, is sufficient.

Surface Prep:

Begin by plugging the bore at both the chamber and the muzzle end of the barrel prior to blasting. Grit blast the parts with #100 to #120 grit aluminum oxide or garnet sand at 80 to 100 psi. Lightly blast (30-40 psi) non-metal parts such as: wood, fiberglass, plastic or polymer. For anodized aluminum parts, set the blasting pressure to 30-40 psi. Strive for an even blast pattern over the surface of the part.

TIPS:

- If the part's surface is still shiny after blasting, you haven't blasted enough.
- If you use too coarse of grit, the microscopic valleys on the part's surface will be too deep for the 1.0 mil (.001") coating to completely fill while covering the corresponding "peaks" sufficiently to assure a satisfactory coating.
- Don't use sand that has been previously used to clean dirty, greasy or oily parts. Doing so will contaminate your parts.
- Anodized parts, such as AR-15 uppers and lowers, do require blasting, however, it is not necessary to completely remove the anodized finish. Anodized parts that have been sufficiently blasted should have a dull, matte appearance.

A sufficiently blasted anodized part.

CAUTION:

- If you use #120 grit, be sure the grit does not wear out as you are using it. #120 is pretty fine at the start, and will wear to an ineffective dust.

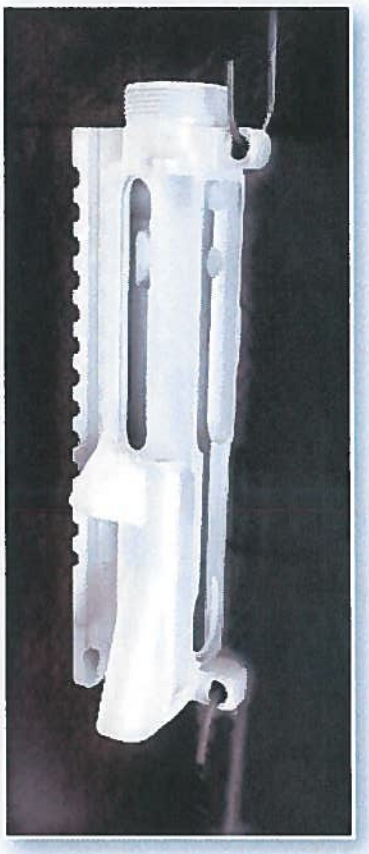
- **DO NOT** use any type of round blasting media such as glass beads or steel shot. Round media will dimple the surface rather than etching it, and will not yield a sufficient blast profile for optimum coating adhesion.
- **DO NOT** hand sand parts as this will not yield a sufficient profile for optimal coating adhesion.

Racking:

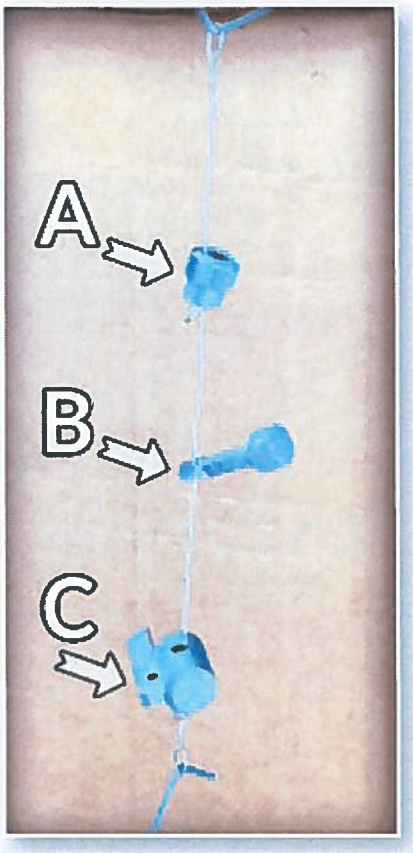
Hang or otherwise fixture your parts so that you can access all the surfaces of each part with your HVLP gun. A variety of metal hooks in multiple sizes are ideal for racking larger parts, while thin wire or alligator clips are ideal for fixturing screws, pins and other small parts.

**REMEMBER TO ALWAYS WEAR POWDER-FREE, LATEX-STYLE GLOVES.*

Correct Racking Techniques



Properly racked upper receiver



Properly racked small components.

TIPS FOR RACKING SMALL PARTS:

A) Pieces with a single hole are held in place by a loop in the wire.

B) Bolt heads are pointed up above the horizontal plane.

C) Heaviest pieces are at the bottom of the chain.

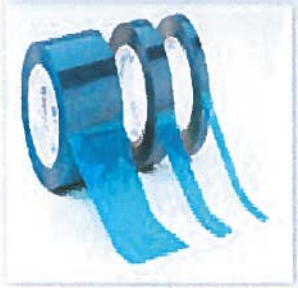
Recommended Masking & Racking Supplies:

The following products can be purchased at www.Cerakote.com

Cerakote Plug Kit:

High Quality Plug Set loaded with over 300 of the most common plug sizes.
NIC part # SE-220

Kit Features:
-Most complete starter kit on the market
- Plugs can withstand continuous temperatures of 600*F (315*C)
- Great for Cerakote masking



High Heat Tape:

Used for masking areas where coating is not desired.
Available in 1/4" to 4"
NIC part # SE-121 through SE-127

Cerakote Shake-N-Blast Canister:

Metal Shake-N-Blast Canister is perfect for blasting small parts without worry of losing any components.
NIC part # SE-221

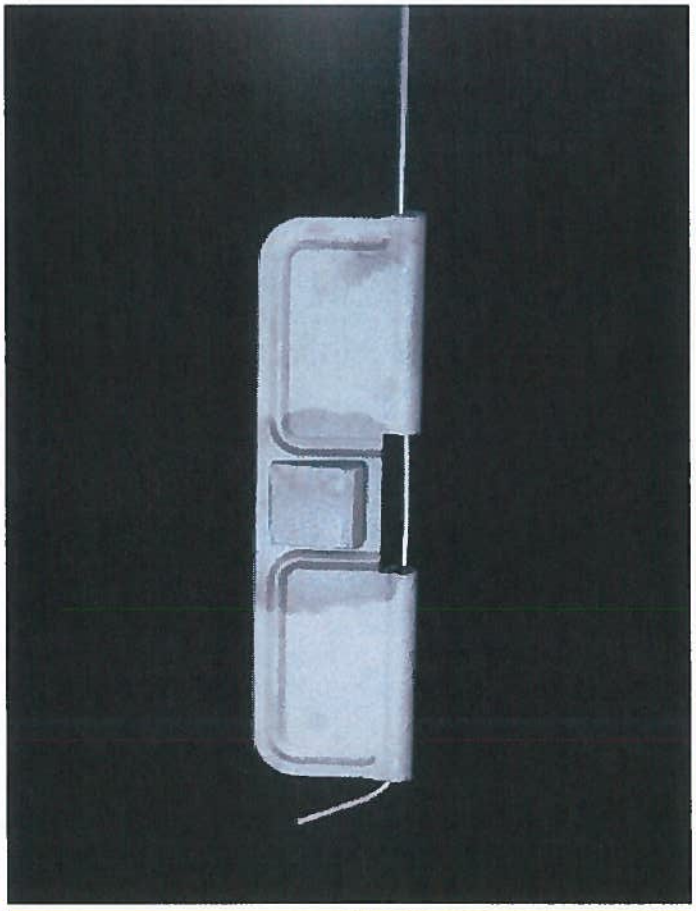
Cerakote Coating Hook Kit:

Exclusive Hook Kit loaded with the most common hook sizes.
NIC part # SE-175

Kit Features:
-Most complete firearm coating hook kit on the market
-Reusable Industrial Coating Hooks
-Multiple Styles, Lengths and Gauges for all coating scenarios
-Hand picked sizes from the Cerakote Instructors to work on all firearm types

Gas-Out:

After parts are racked, heat **metal** parts in the oven at 300 degrees Fahrenheit (F) for 60 minutes. Gassing out will evaporate any remaining moisture and solvents and bring any remaining oils to the surface.



An example of oil still on the part after gassing out. This part will have to be re-cleaned and reheated.

Remove the parts from the oven and allow them to cool. If no oil has been brought to the surface, proceed to Phase six.

See Oil?

If you see any oil residue or other indications that oil was brought to the surface of the part, re-clean the part by soaking it in the degrease tank and gassing out for an additional thirty minutes.

This step will need to be repeated until no oil residue is visible after gas out. When the parts are free of oil, re-blast to remove any residue from the surface and proceed to Phase 6.

CAUTION:

- **Plastic and polymer parts should be gassed-out at a lower temperature, generally between 150-180 degrees Fahrenheit (F).**

If you are unsure as to the temperature stability of your parts, contact the manufacturer prior to gassing-out and curing non-metallic parts.

- **Note;** there are alternative degreasing methods that may be more appropriate for your situation. Contact a Technical Advisor to discuss other suitable degreasing methods.

Selecting The Right Cerakote Series for the Application.

Cerakote® H-Series:

H-Series is the most durable of the standard Cerakote® product and provides the best performance in hardness, wear, scratch resistance, adhesion and corrosion resistance. Cerakote can withstand temperatures up to 500 degrees F and is available in over 90 colors. H-Series is a thermal cure finish and therefore should not be applied to items or substrates which cannot be cured at the required temperatures. (See cure schedule table, Page 18.)

Cerakote® C-Series:

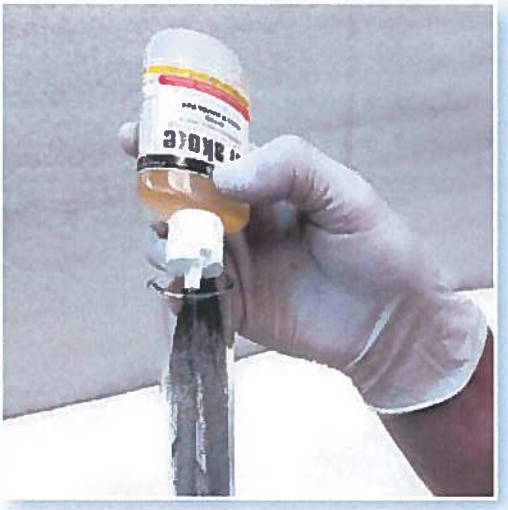
C-Series should **ONLY** be used for very high-temp applications up to 1200 degrees F, such as suppressors and machine gun barrels. C-Series should **NOT** be mixed with H-Series Catalyst or Coatings. C-Series is available in a wide range of colors to match the overall finish requirement of the firearm or weapons system. C-Series is used to coat scopes and other optics, as well as fiberglass, polymer and other substrates which cannot be thermally cured. (**See application guide on Page 25.**)

Please review product specific Technical Data Sheets found in the 'Downloads' section of Cerakote.com

Coating Preparation:

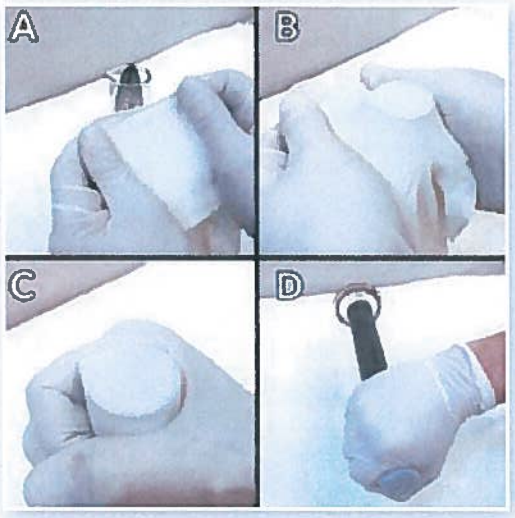
Prepare the Cerakote for application. Begin by vigorously shaking the bottle until the coating is completely mixed, *then shake some more for good measure*. Determine how much Cerakote you intend to use before mixing (see table 1 pg. 12) Pot life for mixed Cerakote is approximately **two hours** in an open or closed container. Consequently, mix only what you intend to use, to avoid wasted coating. (see usage chart pg. 12)

1.) Pour the desired quantity of Cerakote into a glass graduated cylinder.



2.) Add the catalyst. Use table 1 pg. 12 to determine Cerakote to catalyst ratio for finish type.

IMPORTANT:
DO NOT mix Cerakote and catalyst in plastic containers as this will compromise the integrity of the coating.



3.) Stretch a clean, powder-free latex glove (A) and place over graduated cylinder (B). Tightly seal glove over graduated cylinder (C) and thoroughly mix coating by shaking (D).

4.) Pour mixed coating through a 100 mesh strainer for all H or C-Series products, as shown (NIC Part # SE-139).

TIPS:

- If you see specks, step up the straining size to no more than 145 mesh.
- If coating will not strain through 100 mesh (i.e. Gunmetal Grey, due to metallic content), step down to 80 mesh.

Coating Preparation Continued:

NOTE: If the proportions of Cerakote to Catalyst are incorrect, or the combination of Product and Catalyst are not thoroughly mixed, the quality and performance of the coating will be adversely affected.

Table 1

Cerakote / Catalyst Ratio	
Matte Finish	24:1
Satin Finish	18:1
Semi Gloss	12:1

DO NOT exceed the recommended Cerakote to Catalyst mix ratios.

Table 2 (18:1 Ratio)

Cerakote / Catalyst Ratio Usage Chart		
Firearm	**Cerakote mL/cc**	**Hardener mL/cc**
Pistol	36	2
Rifle	72	4

****Read and follow the instructions that come with the color(s) you are using. Some Product to Catalyst ratios are different depending on the color used.**

*****Please Note: Some H-Series coatings require a specific catalyst and mix ratio. Please refer to the product specific technical data sheets at Cerakote.com prior to coating preparation.**

Clean all containers and equipment with acetone. A squeeze bottle and bottle brush are helpful tools for cleaning.

Spraying

CAUTION:
Spray in a well-ventilated, well-lit spray booth, wear a respirator, protective gloves and safety glasses. Refer to the SDS for additional safety and handling information

Final Checklist Before Spraying:

- Plug or mask off all parts that are not to be coated. Remember Cerakote is applied at 0.0005" - 0.001" which is very thin, most areas do not require masking, however, if you are unsure, contact Cerakote for assistance.

- Ensure all parts to be coated are hung securely to avoid contact during the application process

- Do not coat springs as it is not recommended to heat springs during the curing process.

- Plug the bore to prevent overspray inside the bore.

- During the application process, ensure that the coating is properly agitated. Due to the high level of solids, Cerakote settles quickly and should be agitated frequently.

- Do not begin the spraying process unless you are able to complete the curing or flash process directly after spraying. Letting parts sit uncured or unflashed for extended periods of time will reduce the performance of the finished product.

PRACTICE:

Practice spraying on a piece of paper to adjust the spray pattern and to practice your spraying technique. Spray with the gun 3 to 5 inches away from the paper and adjust the spray pattern to between 2 and 3 inches wide.

A particularly good excercise is to spray and cure a few machine screws and matching nuts. You should be able to screw the nut onto the machine screw without difficulty. If you can't, you may be spraying too heavily.

Recommended Mixing & Spraying Supplies

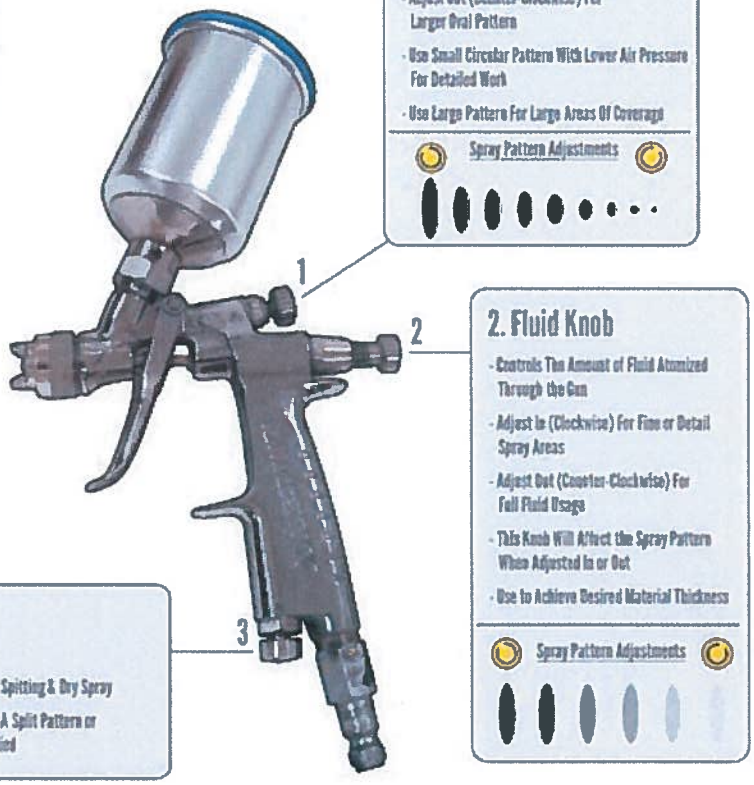
We recommend the following products for the best results during the coating prep and application process:

Graduated Cylinder:

NIC Part # SE-147A (100 ml)
or NIC Part # SE-147B (50 ml)
Depending on coating volume.

NIC suggests using a glass 100M/L graduated cylinder for accurate ratio measurements of Cerakote to catalyst.

IWATA LPH-80 HVLP GUN FEATURES



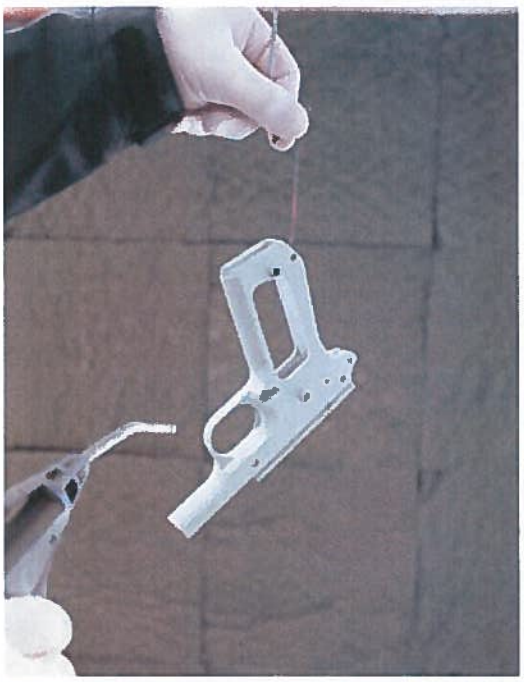
IWATA LPH-80:

NIC Part # SE-138

HVLP gun with spray characteristics:

- Features adjustable spray pattern from round to full fan shape.
- A stainless-steel nozzle, paint passage and heat tempered 0.8mm tip ensure long- lasting, peak performance spraying.
- Uses the reliable and easy-to-service cartridge-style "air-valve" set, which can be serviced outside the gun and easily placed back into the gun body.
- 4 oz. (110 ml) stainless-steel gravity cup is center-mounted and rotates, allowing for spraying.

Spraying Continued:



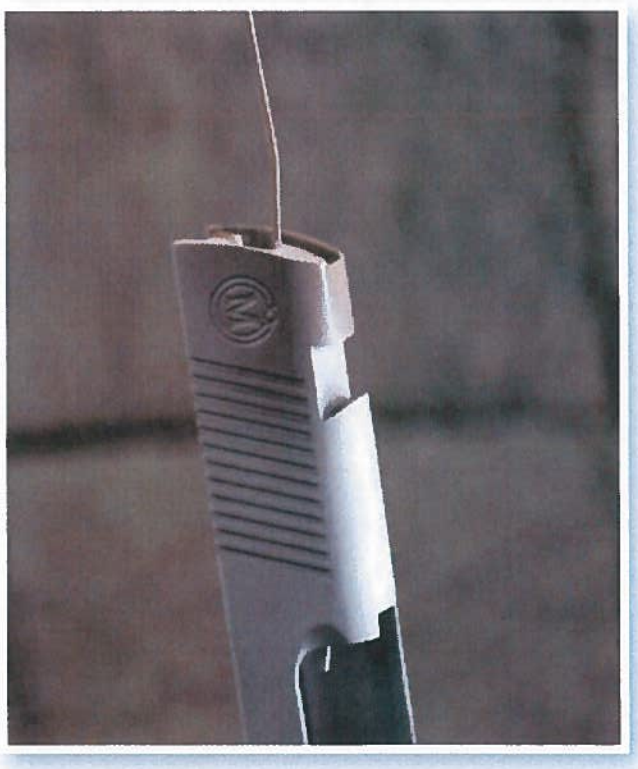
Blow off parts with dry compressed air to make sure there is no trapped media in holes or pockets. Sand left behind will cause surface defects.

Start spraying in the most difficult area of each part, then progress and finish to the easier areas. This should help avoid runs and thin spots. 20-25 psi is recommended for proper application.

CAUTION:

The most common application mistake is dry spray. Dry spray has a rough, sandpaper like appearance and is typically caused by spraying too far away from the part, too wide of a spray pattern, not enough material coming out of the gun or too much air pressure.

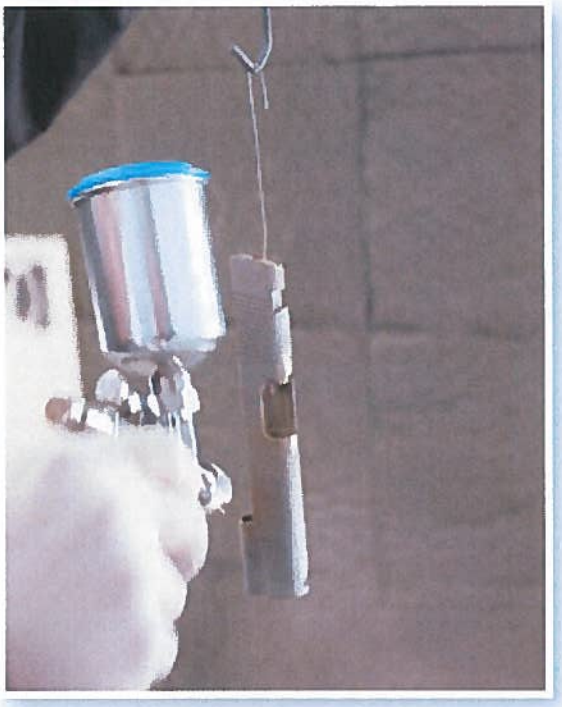
If you experience dry spray, ensure you are no further away than 3 to 5 inches away from the part, reduce your spray pattern to between 2 and 3 inches wide, check that your air pressure is no higher than 20 to 25 psi, and finally adjust your fluid control to ensure you have adequete coating material being applied to "wet out" the part in one pass.



Spraying Continued:

When spraying, strive for even coverage (you are seeking a half thousandth to 1 thousandth inch coating thickness). Spray with sufficient volume so that the Cerakote does not dry spray, which is when the coating dries in the air before reaching the part.

When spraying, the part should appear wet but not so wet that it wants to run. Cerakote will still be wet to the touch until it is oven cured. If you touch any coated parts before curing, the coating will be smudged and will need to be refinished. To achieve the recommended film thickness, one to two wet coats are recommended.

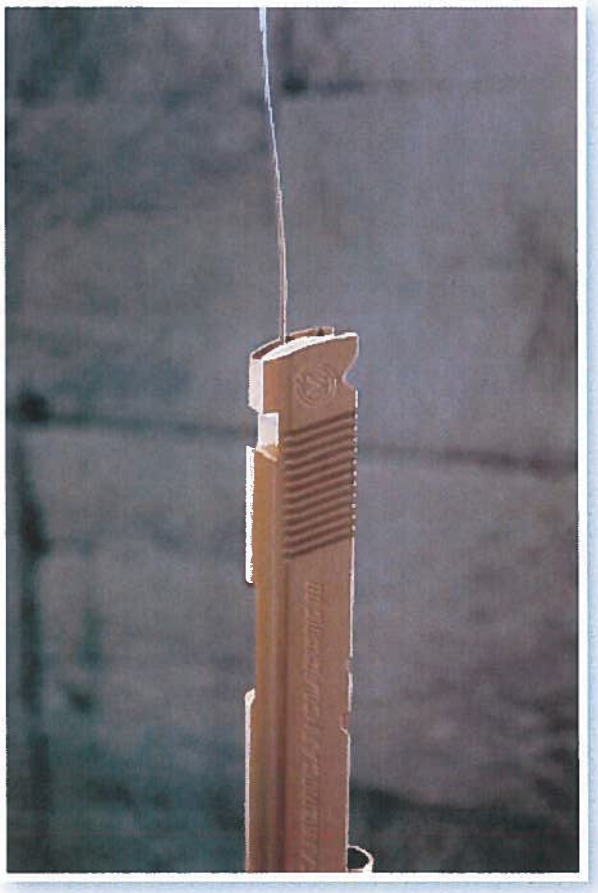


Example of "wetting out" the part

TIPS:

- Use an HVLP spray gun with 0.8mm tip (IWATA LPH-80 recommended - NIC Part #SE-138)
- Do not spray with a too wide pattern (i.e. 4-6" pattern). Doing so may cause dry spray or a rough finish.
- Spray with a 2-3" horizontal fan 3-5" away from the part.
- Insufficient volume of coating being applied with the 2" pattern will result in dry spray or a rough texture.

Spraying Continued:



After each part is coated, set it aside for about five to ten minutes. Cerakote will still be wet to the touch until it is oven cured.

If you touch any coated parts before curing, the coating will smudge and will have to be refinished.

"MISTAKES"

If a mistake is made during spraying (such as a run), do not attempt to wipe down the part and re-spray. Rather, remove the wet coating with Brake-Kleen® or acetone, allow to dry, then re-blast the part. Finally, blow off the part and re-spray.

Cleaning Up:

Clean your tools with acetone. Contact Cerakote with questions regarding cleaning solvent compatibility. Discard any unused "mixed" Cerakote according to local and state regulations.

DO NOT return any unused "mix" to the bottle.
Pouring catalyzed Cerakote back into the original bottle will render the remaining coating useless.

Oven Cure:

Carefully move each part into the oven and cure at 250 degrees (F) for two hours. If you must hurry the process, curing for 1 hour at 300 degrees (F) is an alternative cure schedule. If the part(s) being coated are heat sensitive, 150 to 180 degrees (F) for two hours will adequately cure plastic, polymer, wood and composite parts.

After curing is completed, remove the parts from the oven and allow the parts to cool. Once parts are cool enough to handle, the firearm can be reassembled.

CAUTION

If you are unsure as to the temperature stability of your parts, contact the manufacturer prior to oven cure.

Cure Schedule Table For MOST* H-Series Coatings

Material	Temperature	Time
Metal (Standard)	250 Degrees F	2 Hours
Metal* (Quick Cure)	300 Degrees F	1 Hour
Metal (Flash, when using stencils)**	150 Degrees F	5-15 Minutes
Plastic or Polymer	150-180 Degrees F	2 Hours
Wood	150 Degrees F	2 Hours

*Please refer to the individual Product Technical Data Sheets available at Cerakote.com for product specific cure temperatures.

TIP:

- "**Flashing**" parts allows for partial curing at 150 degrees (F) for 5-15 minutes. This technique is used when applying and removing stencils.

****Note:** When flashing parts for camouflage or stencils, all parts must be fully cured within 24 hours from the initial flash.

Cerakote® Firearm Coating Training Program

NIC Industries offers the only one-on-one training program for Cerakote® Firearm Coating. With individual training, our instructors speak with the customers prior to the training course to custom design each class to meet the specific needs of each customer. Customers can apply any of NIC's industry leading firearm coatings on their own parts, or parts supplied by NIC. Courses are taught at NIC's training facility in White City, Oregon, or onsite*. While every class is custom tailored to meet each customer's needs, below are topics typically covered in most courses.

Training Topics

- **Metal Prep**
- **Out-gassing**
- **Racking Techniques**
- **Coating selection for various applications**
- **Basic to advanced ceramic application**
- **Proper curing techniques and schedules**
- **Problem solving and troubleshooting defects**
- **Proper equipment and operation**
- **Re-works**
- **Cost analysis**
- **Marketing strategies**

*Contact NIC for further information about on-site training at 866-774-7628.

Class Location

NIC Industries, Inc. is located at 7050 Sixth Street, White City, OR, 97503. White City is located in Southern Oregon approximately 5 miles from Medford, Oregon, and approximately 280 miles from Portland, Oregon.

Transportation

Rogue Valley International Airport (MFR) is located 6 miles from NIC and provides daily flights from several major west coast airports. All major rental car companies are located at the Rogue Valley International Airport.

Lodging

NIC has negotiated discounted rates with several hotels in close proximity to our facility. Information can be found at **http://www.cerakoteguncoatings.com/resource/downloads/**

H-Series CERAKOTE® Firearm Coatings

The unique formulation used for Cerakote® firearm coating enhances a number of physical performance properties including: abrasion/wear resistance, corrosion resistance, chemical resistance, impact strength, and hardness. Each of these properties is rigorously tested to guarantee that Cerakote® products remain at the forefront of the firearm coatings market. For this study, the performance properties of Cerakote® H-146 Graphite Black were compared to the products of two firearm coatings competitors, denoted as C1 and C2. Each coating was evaluated on nine important aspects including performance and cost. These results are summarized in table 1, shown below, and a more extensive description is given in the following paragraphs.

Table 1. Performance comparison of Cerakote® H-146 to competitor firearm coatings, C1 and C2.

Specification	Cerakote®	C1	C2
Taber Abrasion Testing (ASTM D4060)	**Wear cycles per mil: 6000**	Wear cycles per mil: 597	Wear cycles per mil: 418
Corrosion Testing (ASTM B117)	**Corrosion-free at: 1000 hours**	Onset of Corrosion: 100 hours	Onset of Corrosion: 45 hours
Pencil Hardness (ASTM D3363)	**9h**	9h	7h
Adhesion Cross-Cut Tape (ASTM D3359)	**5b**	5b	5b
Mandrel Bend (ASTM D522) *(Lower # is Better Result)*	**0**	0	0
Impact (ASTM D2794)	**160 inch-lbs**	160 inch-lbs	140 inch-lbs
Chemical Resistance	**Excellent**	Excellent	Good
Theoretical Coverage (ft^2/gal at 1 mil thickness)	**478**	250*	321
Cost ($/$ft^2$)	**$0.62/ft^2**	$0.65/$ft^2$	$0.99/$ft^2$
VOC Compliance	**VOC compliant in all 50 states**	Non Compliant	Non Compliant

*Theoretical coverage if applied according to manufacturers specifications of 0.5 mil.

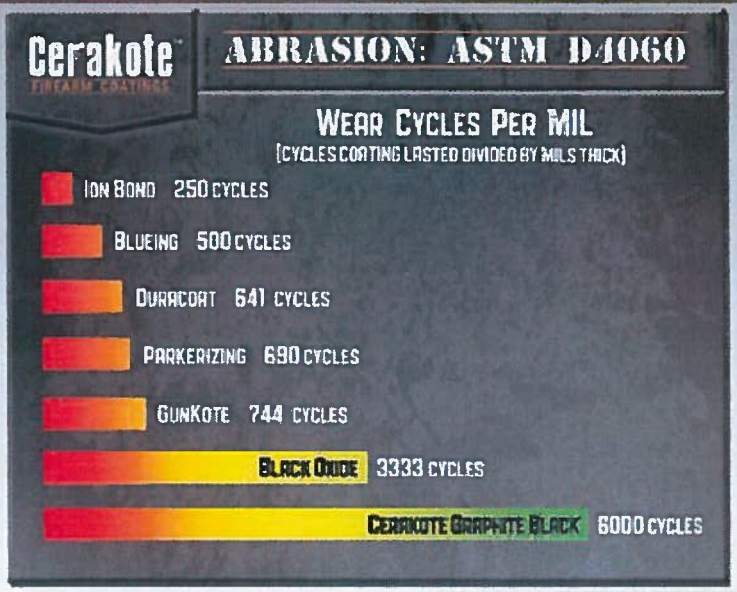
See all the test results at **http://www.cerakoteguncoatings.com/testing/**

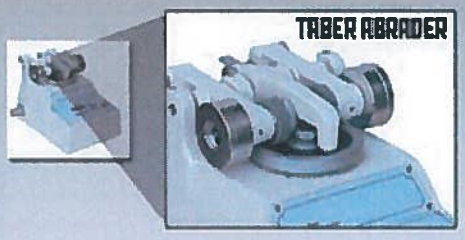
Cerakote
FIREARM COATINGS

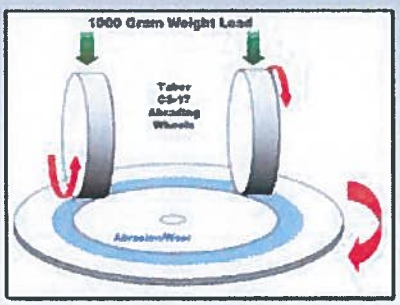
ASTM TEST DATA

ABRASION TEST: ASTM D4060

Taber Abrasion is a test using a weighted abrasive wheel that rotates at a constant speed to determine the resistance of finishes to abrasion and wear, as stated by test standard ASTM D4060. 7 competitive finishes including Cerakote® H-146 Graphite Black were tested in accordance with ASTM D4060. Each finish was tested three separate times in order to validate the test result. Panel weights and mil thickness were measured prior to the start of each test to determine a wear rating. A 1000 gram weight was placed on a CS-17 Taber Abrasion wheels as required by ASTM testing standards for testing finishes. Panels were cycled until the Taber wheel wore through the finish to the steel substrate. Finishes that required more than 500 cycles to wear through to the substrate were stopped every 500 cycles for the Taber abrasion wheels to be cleaned. Cleaning the Taber wheels every 500 cycles is a requirement to ensure accurate results. Once the Taber wheel has breached the finish, the Taber abrader is stopped and a final weight is taken to determine the wear rating for each finish. Wear ratings are calculated by taking the weight of the test panel before abrasion and subtracting the weight of the test panel after abrasion and multiplying that by 1,000. That number is then divided by the number of cycles completed before the finish was worn through. The resulting number is the specified wear rating for that finish. Based on ASTM testing standard D4060, Cerakote® Finished Strong by lasting nearly twice as long as the nearest competitive finish and 24 times as long as the furthest competitive finish.







DIVISIONS OF NIC INDUSTRIES:
PRISMATIC POWDERS® | CERAKOTE® FIREARM COATINGS | CERAKOTE® HIGH TEMPERATURE COATINGS

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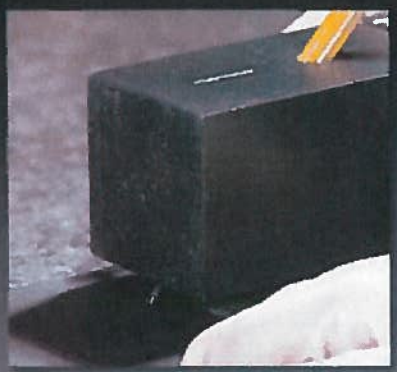
TEST: ASTM B117 CORROSION

Salt Spray (ASTM B117) Corrosion testing is used to evaluate the relative corrosion resistance of coated panels exposed to a salt spray or fog at an elevated temperature. Coated panels are placed in an enclosed salt spray chamber at a 15-30 degree angle and subjected to a continuous indirect spray of a neutral (ph 6.5-7.2) salt water solution. The chamber/cabinet is kept at an operating temperature of 95F and fogging a 5% salt solution at the required 12ml/hr. Cerakote® H-146 Graphite Black panels were checked for corrosion at specific intervals of 45, 160, 255, 385, 675, 850, 1000, 2000, 3000 and 3500 hours. At 3500 hours Cerakote® H-146 was not corroded. This study shows that Cerakote® preserves the life of a firearm in a corrosive environment longer than any competitive coatings.

HARDNESS TEST: ASTM D3363



Hardness, or Pencil Hardness (ASTM D3363), is measured by using different grades of pencil lead to cut through a coating surface. To conduct this test, a coated panel is placed on a flat, horizontal surface. A weighted trolley with the hardest pencil lead (9h) is placed on the panel and pushed away from the operator. The length of the stroke should be about 6.5 mm. This process is repeated until a lead is found that will not cut through the coating to the metal for a distance of at least 3 mm (this is the pencil hardness rating). This process is then repeated until a lead is found that will not cut nor scratch the coating (this is the scratch hardness rating). Cerakote® H-146 Graphite Black finished strong with a 9h hardness rating, the highest hardness rating that can be achieved.

CHEMICAL RESISTANCE

The ability of Cerakote® H-146 to resist chemical attack was tested by dipping coated panels into a series of solvents to which the coating may be exposed during regular use and extreme conditions. The panels were placed in the solution and allowed to sit for 24 hours. Afterward, the samples were removed, analyzed and assigned a rank depending on the resistance to each specific chemical. The results of this test are shown in the table below.

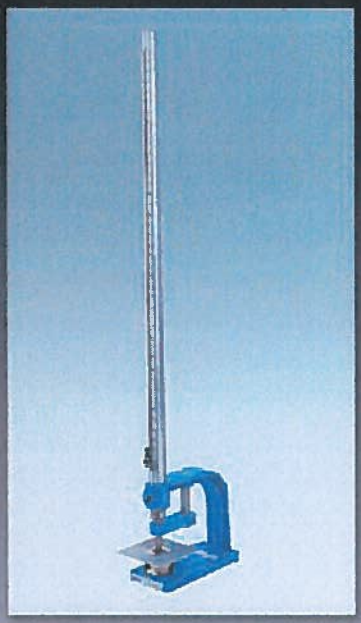
The performance of Cerakote® H-146 was classified as excellent for 14 of the solvent tests. This indicates that the coating was not affected following a 24-hour immersion in the solvents. The coating also showed good resistance to HCL and experienced only a slight change in texture after 24-hour immersion.

CHEMICAL	CERAKOTE™ H-146
• GUN CLEANER	★★★★★
• WD-40	★★★★★
• BRAKE CLEANER	★★★★★
• DENATURED ALCOHOL	★★★★★
• LACQUER THINNER	★★★★★
• METHYL ETHYL KETONE	★★★★★
• ACETONE	★★★★★
• GASOLINE	★★★★★
• MINERAL SPIRITS	★★★★★
• PAINT STRIPPER	★★★★★
• 5% HCL SOLUTION	★★★★

★★★★★ = EXCELLENT CHEMICAL RESISTANCE
★★★★ = GOOD CHEMICAL RESISTANCE
★★★ = FAIR CHEMICAL RESISTANCE
★★ = POOR CHEMICAL RESISTANCE
★ = NO CHEMICAL RESISTANCE

DURABILITY

TEST: ASTM D2794

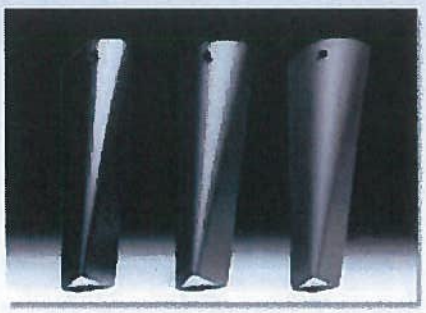


Impact Resistance (ASTM D2794) measures the resistance of organic coatings to the effects of rapid deformation (Impact). Impact resistance is measured by placing a coated panel in an universal impact tester. A standard weight is dropped a distance to strike an indenter that deforms the coating and the substrate. The indentation can be either an intrusion or an extrusion. By gradually increasing the distance the weight drops, (1 inch at a time) the point at which failure occurs can be determined by cracking or delamination of the coating. Cerakote® H-146 Graphite Black was tested to have an impact strength measuring 160 inch-lbs which is the maximum the impact tester can measure.

FLEXIBILITY

TEST: ASTM D522

Flexibility, or Mandrel Bend (ASTM D522), testing is measured by placing a coated panel in a conical mandrel apparatus and bending the coated test panel over a conical shaped mandrel in order to assess the elasticity or resistance of a coating to cracking, elongation and/or detachment from the metal test panel in accordance with ASTM D522. The conical shape of the bending area allows the deformation of the test panel and examination of the elasticity range of a coating over any diameter between 3.1 mm and 38 mm in one single test. Cerakote® H-146 Graphite Black was tested in accordance with ASTM D522 and exhibited excellent flexibility and no signs of cracking, elongation or detachment from the steel panel.



C-Series Ambient Cure Ceramic Firearm Coatings

Preparation of substrate is crucial for maximum adhesion and performance of this material

1.) Completely disassemble the firearm. Detail strip your firearm. If you are unfamiliar with this level of disassembly, have a certified gunsmith perform the disassembly and reassembly. If pins or parts are left in, they can produce runs and ruin the finish. Take a photograph of all the parts received. Make note of the substrate type on each piece (i.e. Steel, Aluminum, plastic, composite, polymer, etc.)

2.) Soak each part for 10-15 minutes in a non-water based degreaser such as Brake-Kleen® or acetone. Spraying is not sufficient; soaking is required. Allow parts to air dry after soaking. From this point on it is critical to avoid touching the parts with your bare hands. Use powder-free latex style gloves to handle the parts. In most cases it is not necessary or recommended to soak plastic and polymer parts in a solvent based degreaser as to avoid damaging the part. Thoroughly wiping plastic and polymer parts with a compatible degreasing solvent is sufficient.

3.) Begin surface preparation by plugging the bore at both the chamber and the muzzle end of the barrel prior to blasting. Grit blast the parts with #100 to #120 grit aluminum oxide or garnet sand at 80 to 100 psi. Strive for an even blast pattern over the surface of the parts. Lightly blast (30-40 psi) non-metal parts such as: wood, fiberglass, plastic and polymer. Hard anodizing does not need to be removed if it withstands 3-5 seconds of blasting at normal blast pressure (80-100 psi) in one location without coming off the part.

TIPS: If the part's surface is still shiny after blasting, you haven't blasted enough. If you use too coarse of grit, the microscopic valleys on the part's surface will be too deep for the 1.0 mil (.001") coating to completely fill while covering the corresponding "peaks" sufficiently to assure a satisfactory coating. Don't use sand that has been previously used to clean dirty, greasy, or oily parts. Doing so will contaminate your parts. When blasting hard anodizing or delicate substrates such as plastics, polymers, wood, fiberglass, be sure to be 8-10" away and lightly etch the part only to remove the sheen and to avoid an over aggressive blast profile. If you use #120 grit, be sure the grit does not wear out as you are using it. #120 is pretty fine at the start and will wear to an ineffective dust. **DO NOT** use any type of round blasting media such as glass beads or steel shot. Round media will dimple the surface rather than etching it, and will not yield a sufficient blast profile for optimum coating adhesion.

4.) Hang parts to allow for best view and application access. This can be done by using support wires or hooks. Make sure to place parts in such a way that they will not bump into each other. **Do not touch parts with bare skin.** Alligator clips or 30-gauge wire are recommended for small parts such as screws and springs.

5.) After parts are racked, heat metal parts in the oven at 300 degrees Fahrenheit (F) for 60 minutes to drive off any remaining solvents or contaminants. Remove the parts from the oven and allow them to cool. If you see any oil residue or other indication that oil was driven out of the part, re-clean by soaking in the degrease tank and reheat for an additional thirty minutes. Any contamination from this point onward will result in a less than satisfactory finish. Be careful, and take your time. If further degreasing is required, repeat as necessary until no oil residue is visible. **CAUTION**: Plastic and polymer parts should be gassed-out at a lower temperature. Gassing-out non-metallic parts can be done at the same temperature they are cured at. Refer to the cure schedule table on pg. 18 for these temperatures. If you are unsure as to the temperature stability of your parts, contact the manufacturer prior to gassing-out and curing non-metallic parts.

6.) Shake the **C-Series** product until the coating is completely mixed and no solids remain in the bottom of the container. Failure to completely disperse the product will result in poor chemical ratios and product failure. **C-SERIES COATINGS DO NOT REQUIRE A CATALYST. DO NOT MIX WITH H-SERIES CATALYST OR COATINGS**.

7.) Blow off the substrate with a high-pressure air nozzle to remove any blasting dust left on the surface. Wear safety goggles or face shield for your protection. Work in a well-ventilated area. If ventilation is not available, wear a respirator - see SDS for additional information.

8.) Recommended spray equipment is an HVLP gun with a metal cup and point-8 millimeter tip. The use of a small spray tip pattern will aid in coating hard to reach areas without excessive build up in surrounding areas. Electrostatic application may also be an option. **Material does not need to be thinned. Use as received.**

9.) A single application of product at 20 psi is recommended for a 0.5 to 1.0 mil film thickness. Work from the most difficult surface out to the easiest. This will aid in reducing runs or excessive build up.

10.) Allow to air-dry. Parts will be tack free after approximately 35 minutes. Until this point the coating is still wet, so take care to not bump or touch the parts. Parts will be partially cured after 24 hours and fully cured 5 days after application.

11.) Finished goods may be shipped after 24 hours when the coating is partially cured.

12.) Clean tools and equipment with acetone or Cerakote® cleaning solvent.

Please contact a Cerakote® technician with questions on proper use and/or application. Onsite or offsite training courses are available for further instruction. Consult your SDS for proper handling, disposal, and precautions while using this product.

CONTACT INFORMATION

Need Help?

At any point during the Cerakote application you have a question, please contact Cerakote Firearm Coatings at:

NIC Industries, Inc. | 7050 Sixth Street | White City, OR 97503

Phone: 541-826-1922 | Toll Free: 866-774-7628
Email: info@nicindustries.com | Web: www.Cerakote.com

You can also view training videos online at: www.YouTube.com/nictraining

Follow us on Social Media: www.Facebook.com/CerakoteFirearmCoatings
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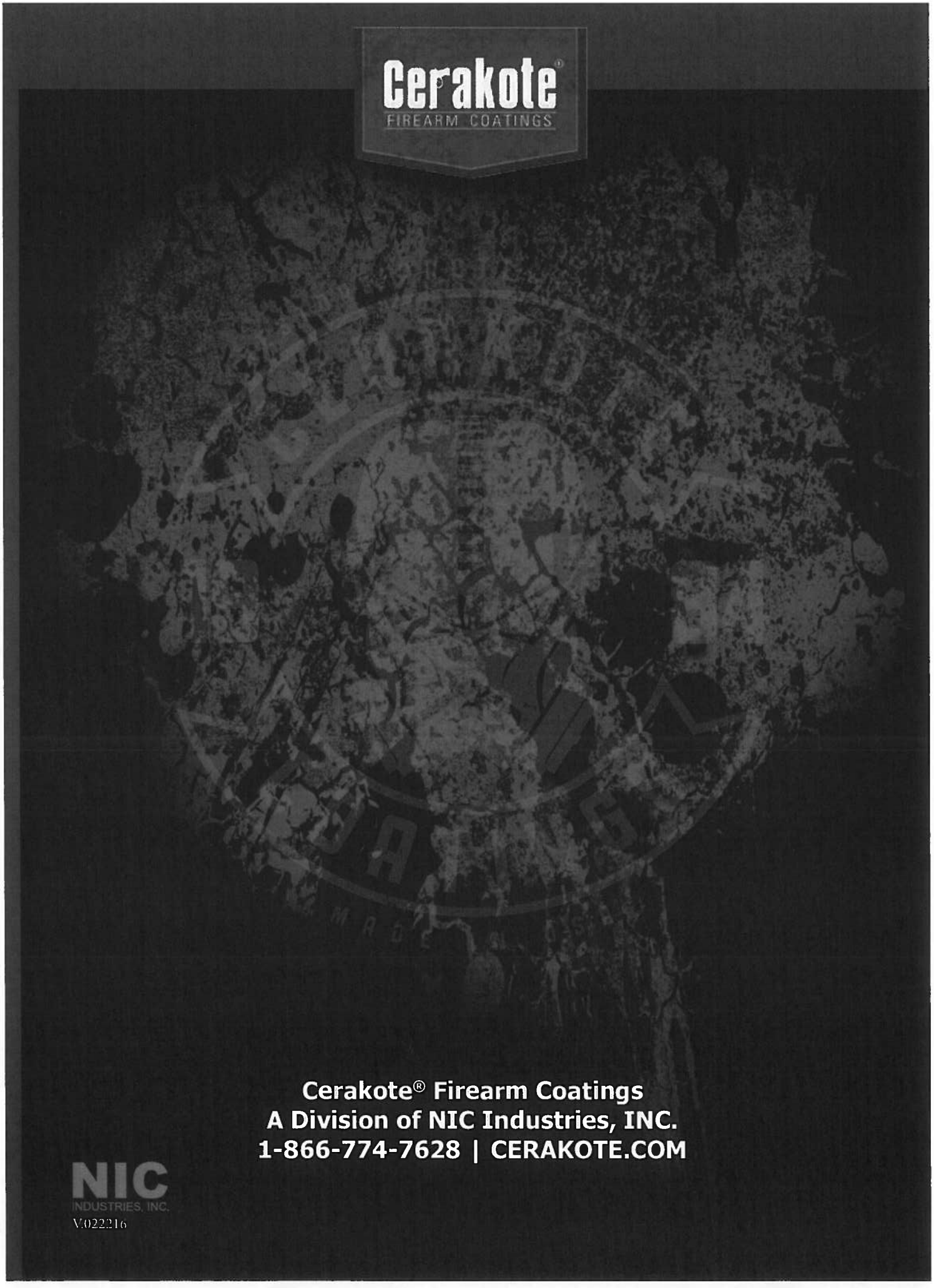
Visit the 'Downloads' section of Cerakote.com to get product specific Technical Data Sheets and Application Guides



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