1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT CODE: NS 200
PRODUCT TRADE NAME: NanoSlic NS 200
COMMON NAMES/SYNONYMS: NanoSlic Coatings
CATEGORY: NanoSlic Coatings
RECOMMENDED USE: NanoSlic Coatings are hydrophobic/oleophobic protective coatings

MANUFACTURER: Florida CirTech
1309 North 17th Ave., Greeley, CO 80631, Phone 970-346-8002

Emergency Contact: INFO TRAC
E-Mail: customerservice@floridacirtech.com
Emergency Phone: 800-535-5053
Alternate Emergency Phone: 800-686-6504

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Clear

IMMEDIATE CONCERNS: Warning: Flammable liquid and vapor. May cause drowsiness or dizzines. May cause damage to organs through prolonged or repeated exposure.
Keep away from heat/sparks/open flames/hot surfaces. Keep container tightly closed.

POTENTIAL HEALTH EFFECTS

EYES: May cause irritation and pain.
SKIN: May cause moderate skin irritation.
INGESTION: Harmful by ingestion. May be irritating to the gastrointestinal tract, cause gastric distress and stomach pains.
INHALATION: 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.

UNCLASSIFIED HAZARDS: Use good industrial practices when handling. Avoid eye, skin, and clothing contact.

SIGNAL WORD: Warning

Potential Carcinogens as listed by OSHA, IARC, or NTP: NONE

OSHA HCS Status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS Pictogram:

<table>
<thead>
<tr>
<th>Hazard Statement(s)</th>
<th>GHS Chapter</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>H226 Flammable liquid and vapour</td>
<td>Flammable liquids (chapter 2.6)</td>
<td>3</td>
</tr>
<tr>
<td>H302 Harmful if swallowed</td>
<td>Acute toxicity, oral (chapter 3.1)</td>
<td>4</td>
</tr>
<tr>
<td>H312 Harmful in contact with skin</td>
<td>Acute toxicity, dermal (chapter 3.1)</td>
<td>4</td>
</tr>
</tbody>
</table>
H335 May cause respiratory irritation

Specific target organ toxicity, single exposure; 3
Respiratory tract irritation (chapter 3.8)

H402 Harmful to aquatic life

Hazardous to the aquatic environment, acute 3
toxicity (chapter 4.1)

Precautionary Statement(s)

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 skin thoroughly after handling.
P270 Do no 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+P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+ P352 IF ON SKIN: Wash with plenty of soap and water.
P304+ P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+ P351 + P338 IF IN EYES: Rinse cautiously 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+ P313 If skin irritation occurs: Get medical advice/attention.
P337 If eye irritation persists:
P342 If experiencing respiratory symptoms:
P370+ P378 In case of fire: Use ... for extinction.
P374 Fight fire with normal precautions from a reasonable distance.
P402+ P404 Store in a dry place. Store in a closed container.
P403+ P233 Store in a well-ventilated place. Keep container tightly closed.
P403+ P235 Store in a well-ventilated place. Keep cool.
P410+ P403 Protect from sunlight. Store in a well-ventilated place.
P501 Dispose of contents/ container to an approved waste disposal plant.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Common Names</th>
<th>CAS</th>
<th>Weight %age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene,1-Chloro-4 (Trifluoromethyl)</td>
<td>Parachlorobenzotri-fluoride</td>
<td>98-56-6</td>
<td>20.00 % - 40.00 %</td>
</tr>
<tr>
<td>Acetic acid, 1,1-dimethylethyl ester</td>
<td>Tert-butyl acetate</td>
<td>540-88-5</td>
<td>20.00 % - 40.00 %</td>
</tr>
<tr>
<td>Ambient-Temperature Curable Resin</td>
<td>Trade Secret</td>
<td>--</td>
<td>20.00 % - 40.00 %</td>
</tr>
<tr>
<td>Flow Agent</td>
<td>Trade Secret</td>
<td>--</td>
<td>3.00 % - 6.00 %</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

COMMON SYMPTOMS OF OVEREXPOSURE: No Applicable data available

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

SKIN: 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.

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.

**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.

**NOTES TO PHYSICIAN:** Follow usual and customary procedures

**ADDITIONAL INFORMATION:** Vapors may contain ammonia

**COMMENTS:** Use proper breathing apparatus, especially in confined spaces, in order to limit inhalation.

---

### 5. FIRE FIGHTING MEASURES

**FLASH POINT AND METHOD:** 72F (22C) Pensky-Martens Closed Cup ASTM D93

**FLAMMABLE LIMITS:**
- LEL : No applicable data available
- UEL: No applicable data available

**GENERAL HAZARD:** Contains possibly combustible materials. As with any chemical fire, combustion products of unknown toxicity are always possible.

**EXTINGUISHING MEDIA:** Carbon dioxide, dry chemical powder, foam or alcohol foam.

**FIRE FIGHTING EQUIPMENT:**
- 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.

**SENSITIVE TO STATIC DISCHARGE:** Electrostatic charge may build up during handling. Grounding of equipment is required.

**COMMENTS:**
- Does not sustain combustion but will burn under fire conditions. Over-heated drums may rupture. Heavy vapors can travel to source of ignition and flash back. May produce ammonia when exposed to water.

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### 6. ACCIDENTAL RELEASE MEASURES

**SMALL SPILL:** Absorb spilled liquid in a suitable material. Transfer material into disposal containers.

**LARGE SPILL:** Contain liquids and prevent discharges to streams or sewers, control or stop the loss of volatile materials to the atmosphere. Large leaks may require environmental consideration and possible evacuation. Do not apply water to the leak. Spills or releases should be reported, if required, to the appropriate local, state and federal agencies

**EMERGENCY PROCEDURES:**
- Evacuate all unnecessary personnel and surrounding areas, and eliminate all sources of ignition if safe to do so. Wear proper personal 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. For hazardous waste regulations call 800-424-9346, the RCRA Hotline.

Personal precautions, protective equipment and emergency procedures: Evacuate area. Keep upwind of spill. Refer to section 7, Handling, for additional precautionary measures. Only trained and properly protected personnel must be involved in clean-up operations. Ventilate area of leak or spill. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and personal protection.

**GENERAL PROCEDURES:** If possible, stop further leakage of the material. Contain spilled material by diking with non-flammable diking materials.

**RELEASE NOTES:** Contain liquids and prevent discharge into streams, soil, waterways, drains and sewers. Control or stop the loss of volatile material to the. 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.

Collect as much as possible in a clean container for reuse (if not contaminated) or disposal (if contamintated). Prevent from
entering into soil, ditches, sewers, waterways and/or ground water. See section 12 Ecological information.

**SPECIAL PROTECTIVE EQUIPMENT:** 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.

**COMMENTS:** 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.

See also section 13 for disposal information.

### 7. HANDLING AND STORAGE

**HANDLING:** Do not eat, drink, or smoke in areas where this material is used. Do not get in eyes, clothing, or on skin. Extremely flammable - Keep away from all sources of ignition. Ground all equipment and use only non-sparking tools. Use personal protective equipment. 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.

**STORAGE:** Store in a cool dry place designated for combustible liquid storage.

Keep away from heat, sparks, and open flame. Vent periodically, if needed, to release head pressure. Containers must be properly grounded before beginning transfer.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>OSHA PEL</th>
<th>OSHA STEL</th>
<th>ACGIH TWA</th>
<th>ACGIH STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene, 1-Chloro-4 (Trifluoromethyl)</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
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<td>NE</td>
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<tr>
<td>Flow Agent</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
</tbody>
</table>

**ENGINEERING CONTROLS:** Work in well ventilated areas. Do not breathe vapors or mist. Ensure that existing ventilation is sufficient to prevent the circulation and/or accumulation of vapors in the air.

**PERSONAL PROTECTIVE EQUIPMENT:**

**EYES AND FACE:** Eye protection such as chemical splash goggles and/or face shield must be worn when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapor.

HMIS PP, C | Goggles, Gloves (chemical resistant), Apron, Face Mask

**SKIN:** Chemical resistant Gloves, Apron (protective industrial clothing recommended along with apron)

**RESPIRATORY:** Wear an appropriate, properly fitted respirator (NIOSH/MSHA approved)

**WORK HYGIENIC PRACTICES:** General room ventilation plus local exhaust at points of emission to maintain levels of airborne contaminants below ACGIH-TWA and OSHA-PEL limits. Use of fume hoods or closed booths recommended in case of mist or aerosol generation.

**COMMENTS:** Eye wash station and safety shower should be available in immediate work area. To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment, in accordance with the OSHA PPE Standard (29 CFR 1910.132), be conducted before using this product.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance Form:** Liquid
- **Appearance Color:** Yellow
Odor: Slight
Odor Threshold: Not Determined
pH-value @ 68 °F: Not applicable
Melting point: Not Determined
Boiling Point: 73 C
Flash Point: 22 C
Flammability: Will burn under fire conditions but will not sustain combustion (see section 14(a))
Ignition temperature: No data available
Auto Igniting: > 500 C
Danger of explosion: no data available
Explosion Lower Limit: Not Established
Explosion Upper Limit: 0.9/10.5 % in air
Vapor pressure @ 68 °F: Not Established
Relative Density: 1.02-1.03
Vapor Density: >1
Evaporation Rate: Not Determined
Solubility in Water: Insoluble
Partition coefficient: no data available
Dynamic viscosity: 4-6 cps.
Kinematic viscosity: No data available
Organic Content %age: no data available
Water %age: no data available
Solids Content %age: 20-23
Other Information: Insoluble in water, will reach with water, alcohols, protic solvents and releases ammonia

10. STABILITY AND REACTIVITY

STABILITY: Stable
REACTIVITY: See sub-sections below.
High temperatures and any source of ignition.

POLYMERIZATION: Hazardous polymerization is not expected to occur under normal temperatures and pressures.
CONDITIONS TO AVOID: Heat, sparks, open flames.
POSSIBILITY OF HAZARDOUS REACTIONS: None expected.
INCOMPATIBLE MATERIALS: Strong Oxidizers.
Reacts vigorously and exothermically with isocyanates. May react with acids, oxidizers, alkalies, nitrates and some plastics. Caution should be taken when mixing this product with any of these materials. Material will react slowly with water and other protic solvents and release ammonia.
HAZARDOUS DECOMPOSITION MATERIALS: Carbon monoxide, carbon dioxide and silicon dioxide. Under hot, acidic conditions isobutylene and acetic acid could form. Chlorine and Fluorine could be produced."

11. TOXICOLOGICAL INFORMATION

SKIN: Skin Corrosion/Irritation: Mildly irritating., Skin Acute Toxicity: LD50(rabbit) = >2.7 g/kg
EYES: Irritating.
INHALATION: LC50(rat) = > 4479 ppm
INGESTION: LD50(rat) = >6.8 g/kg (rat)
CARCINOGENICITY
IARC: None of the components of this product are listed as a carcinogen by IARC, NTP, OSHA, or ACGIH.
NTP: None of the components of this product are listed as a carcinogen by IARC, NTP, OSHA, or ACGIH.

OSHA: None of the components of this product are listed as a carcinogen by IARC, NTP, OSHA, or ACGIH.

DERMAL TOXICITY: LD50(rabbit) = >2.7 g/kg

MUTAGENICITY: Not Determined

SENSITIZATION: Not Determined

TERATOGENICITY: Not Determined

REPRODUCTIVE EFFECTS: Not Determined

TARGET ORGAN EFFECTS: Not Determined

ADDITIONAL INFORMATION:
No human studies have been conducted with this material. The use of recommended equipment should prevent any adverse effects. No reports of adverse effects have been received from workers handling this material.

<table>
<thead>
<tr>
<th>12. ENVIRONMENTAL INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRODUCT</strong></td>
</tr>
<tr>
<td>same as sds name</td>
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</tbody>
</table>

ECOTOXICITY: No applicable data

BIOACCUMULATION: No applicable data

PERSISTENCE DEGRADABILITY: No applicable data

MOBILITY: Appreciable voltilization is expected from water to air.

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

<table>
<thead>
<tr>
<th>13. DISPOSAL CONSIDERATIONS</th>
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</thead>
</table>

DISPOSAL METHOD: Dispose of in accordance with national, state and local regulations. It is the waste generator's responsibility to determine if a particular waste is hazardous under RCRA.

EMPTY CONTAINER: Empty Container Warning (Where applicable). Empty Containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty containers should be taken for recycling, recovery or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations.

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

WASTE FROM RESIDUES / UNUSED PRODUCTS: For hazardous waste regulations call 800-424-9346, the RCRA Hotline.

CONTAMINATED PACKAGING: For hazardous waste regulations call 800-424-9346, the RCRA Hotline.

<table>
<thead>
<tr>
<th>14. TRANSPORT INFORMATION</th>
</tr>
</thead>
</table>

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: FLAMMABLE LIQUIDS, N.O.S. (TERT-BUTYL ACETATE, PARACHLOROBENZOTRIFLUORIDE),

TECHNICAL NAME: no applicable data available

PRIMARY HAZARD CLASS/DIVISION: 3

UN/NA NUMBER: UN1993,

PACKING GROUP: PGIII
15. REGULATORY INFORMATION

UNITED STATES

TSCA (TOXIC SUBSTANCE CONTROL ACT)
TSCA STATUS: On the inventory, or in compliance with the inventory

US federal regulations
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) no applicable data available
CERCLA Hazardous Substance List (40 CFR 302.4): NO
Superfund amendments and reauthorization act of 1986 (SARA)
SARA 302 Extremely hazardous substance NO
SARA 304 Emergency release notification No
SARA 311/312 Hazardous chemical NO
SARA 313 (TRI reporting) NO
Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3) no applicable data available
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): no applicable data available

US state regulations
US. California Proposition 65: NO
US. New Jersey Worker and Community Right-to-Know Act: no applicable data available
US. Massachusetts RTK - Substance List: no applicable data available
US. Pennsylvania RTK - Hazardous Substances: no applicable data available
US. Rhode Island RTK: no applicable data available

Inventory Status:
Europe REACH: On the inventory, or in compliance with the inventory
USA TSCA: On the inventory, or in compliance with the inventory
Canada DSL: All components of this product are listed on the Canadian DSL Inventory List, with the exception of the proprietary formulation which is listed on the NDSL.
Australia AICS: On the inventory, or in compliance with the inventory
New Zealand NZIOC: On the inventory, or in compliance with the inventory
Japan ENCS: On the inventory, or in compliance with the inventory
Korea KECI: On the inventory, or in compliance with the inventory
Philippines PICCS: On the inventory, or in compliance with the inventory
China IECSC: On the inventory, or in compliance with the inventory

16. OTHER INFORMATION

TITLE: EHS Management
PREPARED BY: FCT EHS and Compliance Dept.
HEALTH: 2
FIRE: 3
REACTIVITY: 1
MANUFACTURER SUPPLEMENTAL NOTES: 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.

MANUFACTURER DISCLAIMER: The information contained herein is based on data believed to be accurate and is offered at no charge. No warranty is expressed or implied regarding the accuracy of this data. Liability is expressly disclaimed for loss or injury arising out of use of this information or the use of any materials designated. It is the user's responsibility for determining whether the product is suitable for its intended conditions of use.

<table>
<thead>
<tr>
<th>Key or legend to abbreviations and acronyms used in the safety data sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
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<td>AICS</td>
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<td>LC50</td>
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**Key or legend to abbreviations and acronyms used in the safety data sheet**

| ACGIH | American Conference of Government Industrial Hygienists | LD50 | Lethal Dose 50% |
| AICS | Australia, Inventory of Chemical Substances | LOAEL | Lowest Observed Adverse Effect Level |
| DSL | Canada, Domestic Substances List | NFPA | National Fire Protection Agency |
| NDSL | Canada, Non-Domestic Substances List | NIOSH | National Institute for Occupational Safety & Health |
| CNS | Central Nervous System | NTP | National Toxicology Program |
| CAS | Chemical Abstract Service | NZIoC | New Zealand Inventory of Chemicals |
| EC50 | Effective Concentration | NOAEL | No Observable Adverse Effect |
| EC | Effective Concentration | NOAEL | No Observable Adverse Effect Level |
| EC50 | Effective Concentration 50% | NOEC | No Observed Effect Concentration |
| EGEST | EOSCA Generic Exposure Scenario Tool | OSHA | Occupational Safety & Health Administration |
| EOSCA | European Oilfield Specialty Chemicals Association | PEL | Permissible Exposure Limit |
| EINECS | European Inventory of Existing Chemical Substances | PICCS | Philippines Inventory of Commercial Chemical Substances |
| MAK | Germany Maximum Concentration Values | PRNT | Presumed Not Toxic |
| GHS | Globally Harmonized System | RCRA | Resource Conservation Recovery Act |
| >= | Greater Than or Equal To | STEL | Short-term Exposure Limit |
| IC50 | Inhibition Concentration 50% | SARA | Superfund Amendments and Reauthorization Act. |
| IARC | International Agency for Research on Cancer | TLV | Threshold Limit Value |
| IECSC | Inventory of Existing Chemical Substances in China | TWA | Time Weighted Average |
| ENCS | Japan, Inventory of Existing and New Chemical Substances | TSCA | Toxic Substance Control Act |
| KECI | Korea, Existing Chemical Inventory | UVCB | Unknown or Variable Composition, Complex Reaction Products, and Biological Materials |
| <= | Less Than or Equal To | WHMIS | Workplace Hazardous Materials Information System |
| LC50 | Lethal Concentration 50% | |