

SAFETY DATA SHEET

FCT Companies

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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

24 HR. EMERGENCY TELEPHONE NUMBERS

800-535-5053

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 dizziness. 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:



Hazard Statement(s)

Code	Statement	GHS Chapter	Category
H226	Flammable liquid and vapour	Flammable liquids (chapter 2.6)	3
H302	Harmful if swallowed	Acute toxicity, oral (chapter 3.1)	4
H312	Harmful in contact with skin	Acute toxicity, dermal (chapter 3.1)	4

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 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+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

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

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) Pinsky-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.

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 contaminated). 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

Chemical Name	OSHA PEL	OSHA STEL	ACGIH TWA	ACGIH STEL
Benzene, 1-Chloro- 4 (Trifluoromethyl)	NE	NE	NE	NE
Acetic acid, 1,1-dimethylethyl ester	NE	NE	NE	NE
Ambient-Temperature Curable Resin	NE	NE	NE	NE
Flow Agent	NE	NE	NE	NE

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 Informartion: Insoluble in water, will react 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.

12. ENVIRONMENTAL INFORMATION

PRODUCT	TEST	DURATION	ORGANISM TYPE	TEST RESULTS
same as sds name	-	No applicable data available	No applicable data available	No applicable data available

ECOTOXICITY: No applicable data

BIOACCUMULATION: No applicable data

PERSISTENCE DEGRADABILITY: No applicable data

MOBILITY: Appreciable volatilization 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.

13. DISPOSAL CONSIDERATIONS

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.

14. TRANSPORT INFORMATION

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

NAERG: N/A

LABEL: 3

EMS NO: F-E, S-D

ADDITIONAL INFO: none

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

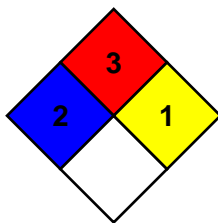
TITLE: EHS Management

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.

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%		