

**TESLA NANO COATINGS, INC.  
SAFETY DATA SHEET**

This Safety Data Sheet has been prepared to comply with the EU Regulation and the OSHA Hazard Communication Standard.

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION  
AND THE COMPANY/UNDERTAKING**

**1.1 Product Identifier:**

**Trade Name:** TESLAN® 3102 Low VOC Epoxy CNT Topcoat – Part A

**1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against:**

**Product Use:** Topcoat Coating  
**Uses Advised Against:** None

**1.3 Details of the Supplier of the Safety Data Sheet:**

**Manufacturer:** Tesla NanoCoatings, Inc.  
50 North Avenue NW  
Massillon, OH 44647 USA  
**Information Phone Number:** +1-330-417-3550  
**Contact:** Todd Hawkins  
**Email:** todd@teslanano.com  
**Only Representative (REACH)/Nominated EU Importer:**

nEMCEL LTD.  
Myllarintie 1  
40640 JYVASKYLA, Finland  
Tel: +040-171-3894

**1.4 Emergency Telephone Number:** +1-330-417-3550 or +040-171-3894

**SECTION 2: HAZARDS IDENTIFICATION**

**2.1 Classification of the Substance or Mixture:**

**GHS Classification:**

Flammable Liquid Category 2 (H225)  
Eye Irritant Category 2 (H319)  
Skin Irritant Category 2 (H315)  
Skin Sensitizer Category 1 (H317)  
Aquatic Chronic Toxicity Category 2 (H411)

**EU Classification:**

Highly Flammable (F), Irritant (Xi), Dangerous for the Environment (N) R11, R36/38, R43, R51/53

**2.2 Label Elements:**

Danger!



Contains: Epoxy Resin, Tert-Butyl Acetate

**Hazard Phrases**

|                      |   |
|----------------------|---|
| H225                 | Highly flammable liquid and vapour.             |
| Trade Name:          | TESLAN® 3102 Low VOC Epoxy CNT Topcoat – Part A |
| Product Code:        | P3102AABV                                       |
| Date of Preparation: | 12/14/16  |

|      |  |
|------|--|
| H315 | Causes skin irritation.                          |
| H317 | May cause an allergic skin reaction.             |
| H319 | Causes serious eye irritation.                   |
| H411 | Toxic to aquatic life with long lasting effects. |

**Precautionary Phrases**

|                          |  |
|--------------------------|--|
| P210                     | Keep away from heat, sparks, open flames, and hot surfaces. –No smoking.   |
| P233                     | Keep container tightly closed.   |
| P240                     | Ground or bond container and receiving equipment.  |
| P241                     | Use explosion-proof electrical, ventilating, or lighting equipment.  |
| P242                     | Use only non-sparking tools.   |
| P243                     | Take precautionary measures against static discharge.  |
| P261                     | Avoid breathing mist, vapours, or spray.   |
| P264                     | Wash thoroughly after handling.  |
| P272                     | Contaminated work clothing should not be allowed out of the work place.  |
| P273                     | Avoid release to the environment.  |
| P280                     | Wear protective gloves, eye protection and face protection.  |
| P305 +<br>P351 +<br>P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P337 +<br>P313           | If eye irritation persists: Get medical advice or attention.   |
| P303 +<br>P361 +<br>P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.                           |
| P333 +<br>P313           | If skin irritation or rash occurs: Get medical advice or attention.  |
| P362 +<br>P364           | Take off contaminated clothing and wash it before reuse.   |
| P391                     | Collect spillage.  |
| P370 +<br>P378           | In case of fire: Use water fog or spray, universal foam, carbon dioxide or dry chemical to extinguish.                           |
| P403 +<br>P235           | Store in a well-ventilated place. Keep cool.   |
| P501                     | Dispose of contents and container in accordance with local and national regulations.   |

**2.3 Other Hazards:** None known.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.2 Mixture:**

| Chemical Name      | CAS#       | EINECS#   | EU Classification (67/548/EEC)   | CLP Annex VI Classification  | %     |
|--------------------|------------|-----------|----------------------------------|--|-------|
| Epoxy Resin        | 25068-38-6 | 500-033-5 | Xi, N R36/38, R43, R51/53        | Skin Irrit. Cat 2 (H315), Eye Irrit. Cat 2 (H319), Skin Sens. Cat 1 (H317), Aq. Chronic Cat 2 (H411) | 35-45 |
| Talc               | 14807-96-6 | 238-877-9 | No EU Classification or R phrase | No GHS Classification  | 25-35 |
| Tert-Butyl Acetate | 540-88-5   | 208-760-7 | F R11, R66                       | Flam. Liq. Cat 2 (H225) EUH066   | 10-20 |
| Trimethylbenzene   | 25551-13-7 | 247-099-9 | Xi, Xn R10, R21/22, R36/38       | Flam. Liq. Cat 3 (H226), Acute Tox. Cat 4 (H302,   | <5    |

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|----------------------|---|
| Trade Name:          | TESLAN® 3102 Low VOC Epoxy CNT Topcoat – Part A |
| Product Code:        | P3102AABV                                       |
| Date of Preparation: | 12/14/16  |

|                        |         |           |                                       |   |    |
|------------------------|---------|-----------|---------------------------------------|---|----|
|                        |         |           |                                       | H312), Skin Irrit. Cat 2 (H315), Eye Irrit. Cat 2 (H319)  |    |
| 1,2,4-Trimethylbenzene | 95-63-6 | 202-436-9 | Xi, Xn, N R10, R20, R36/37/38, R51/53 | Flam. Liq. Cat 3 (H226), Acute Tox. Cat 4 (H332), Skin Irrit. Cat 2 (H315), Eye Irrit. Cat 2 (H319), STOT SE Cat 3 (H335), Aq. Chronic Cat 2 (H411) | <5 |

See Section 16 for further information on EU and GHS Classification.

#### SECTION 4: FIRST AID MEASURES

##### 4.1 Description of First Aid Measures:

**Eye:** Immediately rinse thoroughly with water for at least 15 minutes, while holding the eye lids open to be sure the material is washed out. Get medical attention if irritation persists.

**Skin:** Remove contaminated clothing. Wash contact area thoroughly with soap and water. Get medical attention if irritation or rash occurs. Launder clothing before re-use.

**Inhalation:** Remove victim to fresh air. Give artificial respiration if needed. Get medical attention if you feel unwell.

**Ingestion:** If the victim is conscious, give 1-2 glasses of water to dilute. Do not induce vomiting unless directed to do so by medical personnel. If irritation or discomfort occurs, get medical attention.

**4.2 Most Important symptoms and effects, both acute and delayed:** May cause moderate eye and skin irritation. May cause respiratory irritation. May cause skin sensitization. Refer to Section 11 for detailed information.

**4.3 Indication of any immediate medical attention and special treatment needed:** Immediate medical attention should not be required.

#### SECTION 5: FIRE-FIGHTING MEASURES

**5.1 Extinguishing Media:** Use water fog or spray, universal foam, carbon dioxide or dry chemical.

##### 5.2 Special Hazards Arising from the Substance or Mixture:

**Unusual Fire and Explosion Hazards:** Highly flammable liquid and vapor. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back. Vapors may form explosive mixtures with air in confined areas.

**Combustion Products:** Oxides of carbon, smoke and hydrocarbons.

##### 5.3 Advice for Fire-Fighters:

Wear an approved, positive pressure, self-contained breathing apparatus and full protective clothing. Cool fire exposed containers with water. Contain water used in firefighting from entering sewers or natural waterways.

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

##### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Evacuate spill area and keep unprotected personnel away. Remove all ignition sources such as open flames, spark producing equipment, pilot lights, etc. Use non-sparking tools and equipment. Wear appropriate protective clothing to prevent eye and skin contact including impervious gloves, safety goggles and respirator if needed. Ventilate area with explosion proof equipment.

##### 6.2 Environmental Precautions:

Avoid releases to the environment. Report spills and releases as required to appropriate authorities.

##### 6.3 Methods and Material for Containment and Cleaning Up:

|                      |   |
|----------------------|---|
| Trade Name:          | TESLAN® 3102 Low VOC Epoxy CNT Topcoat – Part A |
| Product Code:        | P3102AABV                                       |
| Date of Preparation: | 12/14/16  |

Cover with an inert absorbent material and collect into an appropriate container for disposal. Use only non-sparking tools. Dispose of any contaminated cleaning materials in a sealed container.

**6.4 Reference to Other Sections:**

Refer to Section 8 for Personal Protective Equipment and Section 13 for Disposal information.

**SECTION 7: HANDLING AND STORAGE**

**7.1 Precautions for Safe Handling:** Avoid breathing vapors, aerosols and mists. Use with adequate ventilation. Avoid contact with the eyes, skin and clothing. Always wear impervious gloves, chemical safety goggles and protective clothing when handling this material. Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.

**7.2 Conditions for Safe Storage, Including any Incompatibilities:** Store in a cool, dry, well-ventilated location away from oxidizing agents and other incompatible materials. Keep containers closed when not in use.

**7.3 Specific end use(s):** Industrial use only

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control Parameters:**

| Chemical Name  | Exposure Limits  |
|--|--|
| Epoxy Resin  | None Established   |
| Talc (containing no asbestos fibers)                       | 2 mg/m <sup>3</sup> (Respirable) TWA ACGIH TLV<br>20 mppcf TWA OSHA PEL (containing <1% quartz)<br>1 mg/m <sup>3</sup> (Respirable aerosol) TWA UK WEL |
| Tert-Butyl Acetate   | 200 ppm TWA ACGIH TLV<br>200 ppm TWA OSHA PEL<br>50 ppm TWA, 200 ppm STEL DFG MAK<br>200 ppm TWA, 250 ppm STEL UK WEL                                  |
| Trimethylbenzene<br>(As Trimethyl benzene, all isomers)    | 25 ppm TWA ACGIH TLV<br>20 ppm TWA, 40 ppm STEL DFG MAK<br>20 ppm TWA EU OEL<br>25 ppm TWA UK WEL  |
| 1,2,4-Trimethylbenzene (As Trimethyl benzene, all isomers) | 25 ppm TWA ACGIH TLV<br>20 ppm TWA, 40 ppm STEL DFG MAK<br>20 ppm TWA EU OEL<br>25 ppm TWA UK WEL  |

**8.2 Exposure Controls:**

**Ventilation:** Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits. Use explosion proof electrical equipment and wiring where required.

**Personal Protective Equipment:**

**Respiratory Protection:** In operations where the occupational exposure limits are exceeded, an approved respirator with applicable cartridges or supplied air respirator should be used. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

**Skin Protection:** Impervious gloves such as nitrile rubber are recommended to prevent skin contact. Contact your glove supplier for selection assistance.

**Eye Protection:** Chemical safety goggles are recommended.

**Other Protective Equipment:** Impervious clothing as needed to avoid skin contact and contamination of personal clothing. An eye wash facility and safety shower should be available in the work area.

|                      |   |
|----------------------|---|
| Trade Name:          | TESLAN® 3102 Low VOC Epoxy CNT Topcoat – Part A |
| Product Code:        | P3102AABV                                       |
| Date of Preparation: | 12/14/16  |

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic Physical and Chemical Properties:**

|   |   |
|---|---|
| <b>Appearance:</b> Black liquid                             | <b>Vapor Density:</b> No data available                       |
| <b>Odor:</b> Mild odor                                      | <b>Specific Gravity:</b> 1.295                                |
| <b>Odor Threshold:</b> No data available                    | <b>Solubility:</b> No data available                          |
| <b>pH:</b> Not available                                    | <b>Octanol/Water Partition Coefficient:</b> No data available |
| <b>Melting Point/Freezing Point:</b> No data available      | <b>Autoignition Temperature:</b> No data available            |
| <b>Boiling Point:</b> 208.0°F (97.8°C) (Tert-Butyl Acetate) | <b>Decomposition Temperature:</b> No data available           |
| <b>Flash Point:</b> 40°F (4.4°C) (Tert-Butyl Acetate)       | <b>Viscosity:</b> No data available                           |
| <b>Evaporation Rate:</b> Faster than n-Butyl Acetate        | <b>Explosive Properties:</b> Not explosive                    |
| <b>Flammable Limits:</b> LEL: 1.0%<br>UEL: 7.0%             | <b>Oxidizing Properties:</b> Not an oxidizer                  |
| <b>Vapor Pressure:</b> No data available                    | <b>Relative Density:</b> No data available                    |
| <b>Molecular Formula:</b> Mixture                           | <b>Flammability (solid, gas):</b> Not applicable              |
| <b>Molecular Weight:</b> Mixture                            |   |

**9.2 Other Information:** VOC: 0.51 lbs/gal / 61.2 g/L (calculated on non-exempt (US EPA) solvent basis), % Volatile weight: 24.8%, % Volatile volume: 37.1%

**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity:** Not reactive.

**10.2 Chemical Stability:** Stable under normal storage and handling conditions.

**10.3 Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**10.4 Conditions to Avoid:** Keep away from heat, sparks, flames and other sources of ignition.

**10.5 Incompatible Materials:** Strong oxidizing, acids, and alkalis.

**10.6 Hazardous Decomposition Products:** Combustion will produce oxides of carbon, smoke and hydrocarbons.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1 Information on Toxicological Effects:**

**Potential Health Effects:**

**Eye:** May cause moderate eye irritation. Corneal injury is unlikely.

**Skin:** Product may cause moderate irritation, defatting and dermatitis. May cause allergic skin reaction (sensitization).

**Inhalation:** Inhalation of vapors or mists may cause mucous membrane and respiratory tract irritation, dizziness, weakness, fatigue nausea and headache.

**Ingestion:** Swallowing may cause gastrointestinal irritation.

**Chronic Hazards:** None known.

**Acute Toxicity Values:**

Epoxy Resin: Oral rat LD50->2000 mg/kg; Skin rat LD50- >2000 mg/kg

Talc: No toxicity data available

Tert-Butyl Acetate: Oral rat LD50-4500 mg/kg; Inhalation rat LC50-12.52 mg/L/4hr; Skin rabbit LD50->2000 mg/kg

Trimethylbenzene: Oral rat LD50-8970 mg/kg

1,2,4-Trimethylbenzene: Oral rat LD50-3280 mg/kg; Inhalation rat LC50- 10.2 mg/L/4hr; Skin rabbit LD50->2000 mg/kg

|                      |   |
|----------------------|---|
| Trade Name:          | TESLAN® 3102 Low VOC Epoxy CNT Topcoat – Part A |
| Product Code:        | P3102AABV                                       |
| Date of Preparation: | 12/14/16  |



**Skin corrosion/irritation:** No data available for the mixture. This product is classified as a skin irritant.

**Eye damage/irritation:** No data available for the mixture. This product is classified as an eye irritant.

**Respiratory Irritation:** No data available for the mixture.

**Respiratory Sensitization:** No data available.

**Skin Sensitization:** No data available for the mixture. This product is classified as a skin sensitizer.

**Germ Cell Mutagenicity:** No data available.

**Carcinogenicity:** None of the components of this product listed at greater than 0.1% are listed as carcinogens by OSHA, IARC, NTP, ACGIH and the EU CLP.

**Reproductive Toxicity:** No data available.

**Specific Target Organ Toxicity:**

Single Exposure: No data available

Repeat Exposure: No data available.

**SECTION 12: ECOLOGICAL INFORMATION**

**12.1 Toxicity:**

No data available for the mixture. The following information is for the components:

Epoxy Resin: 96 hr LC50 Rainbow trout-1.2 mg/L; 48 hr EC50 Daphna magna- 1.1-2.8 mg/L

Talc: 24 hr LC50 Zebra fish- >100 g/L

Tert-Butyl Acetate: 96 hr LC50 Rainbow trout- 240 mg/L; 48 hr EC50 Daphnia magna- 350 mg/L; 72 hr EC50 Green algae – 16 mg/L, 96 hr EC50 Green algae – 64 mg/L (NOEC- 2.3 mg/L)

Trimethylbenzene: 96 hr LC50 Bluegill sunfish- 5.0 mg/L

1,2,4-Trimethylbenzene: 96hr LC50 Fathead minnow – 7.72 mg/L; 48 hr EC50 Daphnia magna- 3.6 mg/L

**12.2 Persistence and Degradability:** No data available.

**12.3 Bioaccumulative Potential:** No data available

**12.4 Mobility in Soil:** No data available

**12.5 Results of PBT and vPvB Assessment:** No data available

**12.6 Other Adverse Effects:** Not applicable

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste Treatment Methods:**

Dispose in accordance with all local, state and federal regulations.

**SECTION 14: TRANSPORTATION INFORMATION**

|                      | 14.1 UN Number                                  | 14.2 UN Proper Shipping Name | 14.3 Hazard Class(s) | 14.4 Packing Group | 14.5 Environmental |
|----------------------|---|------------------------------|----------------------|--------------------|--------------------|
| Trade Name:          | TESLAN® 3102 Low VOC Epoxy CNT Topcoat – Part A |                              |                      |                    |                    |
| Product Code:        | P3102AABV                                       |                              |                      |                    |                    |
| Date of Preparation: | 12/14/16  |                              |                      |                    |                    |



|                     |        |        |   |       | <b>Hazards</b>   |
|---------------------|--------|--------|---|-------|------------------|
| <b>US DOT</b>       | UN1263 | Paint* | 3 | PG II | No               |
| <b>Canadian TDG</b> | UN1263 | Paint  | 3 | PG II | No               |
| <b>EU ADR/RID</b>   | UN1263 | Paint  | 3 | PG II | Marine Pollutant |
| <b>IMDG</b>         | UN1263 | Paint  | 3 | PG II | Marine Pollutant |
| <b>IATA/ICAO</b>    | UN1263 | Paint  | 3 | PG II | No               |

\* **Hazardous Substance (49CFR172.101):** Tert-Butyl Acetate (RQ 5,000 lbs) (25,000 lbs. product)

**14.6 Special Precautions for User:** Not applicable

**14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable

### SECTION 15: REGULATORY INFORMATION

**15.1 Safety, Health and Environment Regulations/Legislation Specific for the Substance or Mixture:**

**U.S. FEDERAL REGULATIONS:**

**CERCLA 103 Reportable Quantity:** This product has an RQ of 25,000 lbs (based on the RQ of Tert-Butyl Acetate of 5,000 lbs present at 10-20%). Some states have more stringent reporting requirements. Report all spills in accordance with local, state, and federal regulations.

**SARA TITLE III:**

**Hazard Category for Section 311/312:** Acute Health, Fire Hazard

**Section 313 Toxic Chemicals:** This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements:

|                        |         |     |
|------------------------|---------|-----|
| 1,2,4-trimethylbenzene | 95-63-6 | <5% |
|------------------------|---------|-----|

**Section 302 Extremely Hazardous Substances (TPQ):** None

**EPA Toxic Substances Control Act (TSCA) Status:** All of the components of this mixture are listed on the TSCA inventory.

**INTERNATIONAL REGULATIONS:**

**EUROPEAN REGULATIONS**

**REACH:** Tesla NanoCoatings, Inc. products comply with REACH regulation as applicable. For more information, contact Tesla NanoCoatings, Inc.

**SVHC:** This product contains the following Substances of Very High Concern (SVHCs): None

**15.2 Chemical Safety Assessment:** None Required

### SECTION 16: OTHER INFORMATION

**HMIS Ratings:** Health - 2                      Flammability - 3                      Physical Hazard - 0

**NFPA Ratings:** Health - 2                      Flammability - 3                      Instability - 0

**SDS Revision History:**

12/14/16: New SDS

|                      |   |
|----------------------|---|
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| Date of Preparation: | 12/14/16  |



**GHS Classification for Reference (See Sections 2 and 3):**

- Acute Tox. Cat 4 Acute Toxicity Category 4
- Aq. Chronic Cat 2 Aquatic Chronic Toxicity Category 2
- Eye Irrit. Cat 2A Eye Irritant Category 2A
- Flam. Liq. Cat 2 Flammable Liquid Category 2
- Flam. Liq. Cat 3 Flammable Liquid Category 3
- Skin Irrit. Cat 2 Skin Irritant Category 2
- Skin Sens. Cat 1 Skin Sensitizer Category 1
- STOT SE Cat 3 Specific Target Organ Toxicity Single Exposure Category 3
- H225 Highly flammable liquid and vapor.
- H226 Flammable liquid and vapor.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H411 Toxic to aquatic life with long lasting effects.
- EUH066 Repeated exposure may cause skin dryness or cracking.

**EU Classes and Risk Phrases for Reference (See Sections 2 and 3):**

- F Highly flammable
- N Dangerous for the Environment.
- Xi Irritant
- Xn Harmful
- R10 Flammable
- R11 Highly flammable
- R20 Harmful by inhalation.
- R21/22 Harmful in contact with skin and if swallowed.
- R36/37/38 Irritating to eyes, respiratory system and skin.
- R36/38 Irritating to eyes and skin.
- R43 May cause sensitization by skin contact.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R66 Repeated exposure may cause skin dryness or cracking.

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This above information is believed to be correct but does not propose to be all inclusive and shall be used only as a guide. Tesla NanoCoatings, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

|                      |   |
|----------------------|---|
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| Date of Preparation: | 12/14/16  |