

**TESLA NANOCOATINGS, 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® 4000 Low VOC Urethane Topcoat – Part A

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

Product Use: Topcoat
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.hawkins@teslanano.com

Only Representative (REACH)/Nominated EU Importer:

nEMCEL LTD.
Mylarintie 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
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2.1 Classification of the Substance or Mixture:

GHS Classification:
Flammable Liquid Category 3 (H226)

EU Classification:
Flammable (F) R10

2.2 Label Elements:

Warning!



Contains: N-Butyl Acetate

Hazard Phrases

H226	Flammable liquid and vapour.
H320	Causes eye irritation.

Precautionary Phrases

P210	Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
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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.
P264	Wash skin and face thoroughly after handling.
P280	Wear permeation resistant protective gloves and clothing. Wear eye protection and face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use dry sand, dry chemical, carbon dioxide (CO ₂), alcohol-resistant foam or water spray to extinguish.
P403 + 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: EUH066 Repeated exposure may cause skin dryness or cracking.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture:

Chemical Name	CAS#	EINECS#	EU Classification (67/548/EEC)	CLP Annex VI Classification	%
N-Butyl Acetate	123-86-4	204-658-1	R10, R66, R67	Flam. Liq. Cat 3 (H226), STOT SE Cat 3 (H336), EUH066	45 - 50
Propylene Glycol Monomethyl Ether Acetate	108-65-6			Eye Irr. Cat 2B Flam. Liq. Cat 3	25 - 30

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

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures:

Eye: Flush eyes with water. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Remove contact lenses. If eye irritation persists, get medical attention.

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

Inhalation: Remove victim to fresh air. Give artificial respiration if needed. Get medical attention if you feel unwell. Consult a physician after significant exposure. If unconscious place in recovery position and seek medical advice.

Ingestion: Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention.

4.2 Most Important symptoms and effects, both acute and delayed: Causes eye irritation with symptoms of reddening, tearing, stinging and swelling.

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SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing Media: dry sand, dry chemical, carbon dioxide (CO₂), alcohol-resistant foam.

5.2 Unsuitable Extinguishing Media: High volume water jet.

5.3 Special Hazards Arising from the Substance or Mixture:

Unusual Fire and Explosion Hazards: Flammable liquid and vapor. Vapours may spread long distances and ignite. Vapours or mist may be a fire and explosion hazard when exposed to high temperature or ignition. Vapours or fumes may form explosive mixture with air. Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.

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

5.4 Further Information: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.

5.5 Advice for Fire-Fighters:

Wear self-contained breathing apparatus. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture. Do not allow run-off from fire fighting to enter drains or water courses.

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:

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. 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

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters:

Chemical Name	Exposure Limits
N-Butyl Acetate	150 ppm TWA, 200 ppm STEL ACGIH 150 ppm, 710 mg/m ³ TWA, 200 ppm, 950 mg/m ³ ST NIOSH REL 150 ppm, 710 mg/m ³ TWA OSHA Z-1 PO 200 ppm, 950 mg/m ³ STEL OSHA PO

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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic Physical and Chemical Properties:

Appearance:	Vapor Density: No data available
Odor: Mild odor	Specific Gravity: 1.268
Odor Threshold: No data available	Solubility: No data available
pH: Not available	Octanol/Water Partition Coefficient: No data available
Melting Point/Freezing Point: No data available	Autoignition Temperature: No data available
Boiling Point: Not available	Decomposition Temperature: No data available
Flash Point: 99°F (37.2°C)	Viscosity: No data available
Evaporation Rate: Not available	Explosive Properties: Not explosive
Flammable Limits: LEL: Not available UEL: Not available	Oxidizing Properties: Not an oxidizer
Vapor Pressure: No data available	Relative Density: No data available
Molecular Formula: Mixture	Flammability (solid, gas): Not applicable
Molecular Weight: Mixture	

9.2 Other Information: VOC: 2.4 lbs/gal / 288 g/L (calculated on non-exempt (US EPA) solvent basis), % Volatile weight: 37.5%, %Volatile volume: 53.3%.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity: Not reactive.

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

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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 and acids.

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

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:

Potential Health Effects:

- Eye:** May cause mild to moderate eye irritation. Corneal injury is unlikely.
- Skin:** Product may cause mild to moderate irritation, defatting and dermatitis.
- Inhalation:** Inhalation of vapors or mists may cause mucous membrane and respiratory tract irritation, dizziness, weakness, fatigue nausea and headache.
- Ingestion:** May cause nausea and vomiting.
- Chronic Hazards:** None known.

Acute Toxicity Values:

Propylene Glycol Monomethyl Ether Acetate: Oral rat LD50- 8532 mg/kg; Skin rabbit LD50- >5000 mg/kg
 N-Butyl Acetate: Oral rat LD50-12789 mg/kg; Inhalation rat LC50->21 mg/L/4hr; Skin rabbit LD50->16 mL/kg

Skin corrosion/irritation: No data available for the mixture. This product is not classified as a skin irritant.

Eye damage/irritation: No data available for the mixture. This product is not 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 not expected to cause skin sensitization.

Germ Cell Mutagenicity: No data available.

Carcinogenicity: Crystalline silica is classified as a Category 1 carcinogen (Carcinogenic to Humans) by IARC, as Known to be a Human Carcinogen by NTP, and as an A2 carcinogen (Suspected Human Carcinogen) by ACGIH. Titanium dioxide is classified as a Category 2B (Possibly Carcinogenic to Humans) by IARC. The crystalline silica and titanium dioxide are inextricably bound in the product and no exposure is anticipated in normal use or foreseeable emergencies. None of the other components of this product 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:

Product is classified as harmful to the environment with long lasting effects. Prevent releases to the environment.

The following information is for the components:

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N-Butyl Acetate: 96 hr LC50 Fathead minnow- 18 mg/L; 48 hr EC50 Daphnia magna- 44 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 Hazards
US DOT	UN1263	Paint*	3	PG III	No
Canadian TDG	UN1263	Paint	3	PG III	No
EU ADR/RID	UN1263	Paint	3	PG III	No
IMDG	UN1263	Paint	3	PG III	No
IATA/ICAO	UN1263	Paint	3	PG III	No

* Hazardous Substance (49CFR172.101):

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:

SARA TITLE III:

Hazard Category for Section 311/312: Fire Hazard

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

None

Section 302 Extremely Hazardous Substances (TPQ): None

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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 - 1	Flammability - 2	Physical Hazard - 0
NFPA Ratings: Health - 1	Flammability - 3	Instability - 0

SDS Revision History:

- 1/30/15: New SDS
- 3/03/16: Revised/Updated SDS
- 10/05/16: Revised/Updated SDS
- 1/26/18: Revised/Updated SDS

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

- Acute Tox. Cat 4 Acute Toxicity Category 4
- Acute Tox. Cat 3 Acute Toxicity Category 3
- Carc. Cat 1 Carcinogen Category 1
- Carc. Cat 2 Carcinogen Category 2
- Flam. Liq. Cat 2 Flammable Liquid Category 2
- Flam. Liq. Cat 3 Flammable Liquid Category 3
- STOT RE Cat 1 Specific Target Organ Toxicity Repeat Exposure 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.
- H311 Toxic in contact with skin.
- H312 Harmful in contact with skin.
- H331 Toxic if inhaled.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H350 May cause cancer.
- H351 Suspected of causing cancer.
- H372 Causes damage to organs through prolonged or repeated exposure.
- EUH066 Repeated exposure may cause skin dryness or cracking.

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

- F Highly flammable
- Xn Harmful
- R10 Flammable
- R11 Highly flammable
- R20 Harmful by inhalation.
- R20/22 Harmful by inhalation and if swallowed.
- R66 Repeated exposure may cause skin dryness or cracking.
- R67 Vapors may cause drowsiness and dizziness.

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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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