



Health	2
Fire	2
Reactivity	0
PPE	G



SECTION 1: CHEMICAL PRODUCT AND COMPANY INFORMATION	
<b>Product Name:</b> Covaron InfernoWare™ Shield DD	<b>Supplier Information:</b> 1-734-315-4221
<b>Application:</b> Thermosetting amorphous ceramic compound	Covaron Advanced Materials
<b>CAS#:</b> <i>Not available</i>	4401 Varsity Dr, Suite A
<b>RTECS:</b> <i>Not available</i>	Ann Arbor, MI 48108
<b>Document Revision:</b> 1.0	<b>CHEMTREC (24-hour):</b> 1-800-424-9300
<b>Document Revision Date:</b> 2025 January 6	<b>Poison Control (24-hour):</b> 1-800-222-1222
	<b>For non-emergency assistance:</b> 1-734-315-4221

SECTION 2: HAZARDS IDENTIFICATION	
<p><b>GHS classification in accordance with 29 CFR 1910 (OSHA HCS)</b>            Physical - Flammable Liquids (4)            Health - Acute toxicity (4 Oral)            Reproductive toxicity (Category 1B),            Skin Corrosion 2            Skin Sensitization 1            Serious Eye damage 2A            May cause Cancer  <b>Signal word</b>            Warning</p> <p>Very toxic to aquatic life with long lasting effects (GHS category 1: aquatic toxicity - acute and/or chronic).</p>	<b>GHS hazard statements</b>
	<b>H302</b> Harmful if swallowed
	<b>H315</b> Cause skin irritation
	<b>H317</b> May cause an allergic skin reaction
	<b>H319</b> Cause serious eye irritation
	<b>H334</b> Respiratory sensitization
	<b>H336</b> May cause drowsiness or dizziness
	<b>H351</b> May cause cancer
	<b>H360</b> May damage fertility or the unborn child.
	<b>GHS precautionary statements</b>
	<b>P201</b> Obtain special instructions before use.
	<b>P210</b> Avoid heat/sparks/open flames/hot surfaces.
	<b>P261</b> Avoid breathing fumes, mist, and vapor.
	<b>P270</b> Do not eat, drink or smoke when using this product.
	<b>P271</b> Use only outdoors or in a well-ventilated area.
	<b>P272</b> Contaminated work clothing must not be allowed out of the workplace.
	<b>P280</b> Wear protective gloves/protective clothing/eye protection/face protection.
	<b>P284</b> Wear respiratory protection.
	<b>P301</b> IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
	<b>P312</b>
<b>P330</b>	
<b>P302</b> IF ON SKIN (or hair): remove immediately all contaminated clothing. Rinse skin with water or shower.	
<b>P361</b>	
<b>P352</b>	

	<b>P305</b> <b>P338</b> <b>P351</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
	<b>P314</b>	Get medical advice/attention if you feel unwell.
	<b>P333</b> <b>P313</b>	If skin irritation or rash occurs: Get medical advice/attention.
	<b>P363</b>	Wash contaminated clothing before use.
	<b>P370</b> <b>P378</b>	In case of fire: Use sand or carbon dioxide or powder extinguisher for extinction.
	<b>P403</b> <b>P235</b>	Store locked up in a well-ventilated place. Keep Cool
	<b>P501</b>	Dispose of contents and containers to an approved facility in accordance with local, regional, national, and international regulations.

### SECTION 3: Composition

Name	CAS#	Wt%
Proprietary resin	-	5-45
Parachlorobenzotrifluoride	98-56-6	20-65
propyleneglycol methyl ether acetate	108-65-6	0-15
Aluminum oxide	1344-28-1	0-10
Charcoal	16291-96-6	0-5
Titanium dioxide	1317-80-2	0-7
Iron oxide	1309-37-1	0-8

### SECTION 4: FIRST AID MEASURES

<b>General</b>	Consult a physician. Provide this data sheet to medical personnel. Move out of dangerous area.
<b>If inhaled</b>	Move person to fresh air. Seek medical attention. If not breathing or unconscious, provide artificial respiration. Exercise caution if performing mouth-to-mouth resuscitation for persons who have inhaled toxic substances.
<b>Skin Contact</b>	Immediately flush skin with large amount of water while removing contaminated clothing and shoes. Wash off with soap and water for at least 15 minutes. If symptoms persist, seek medical attention. Do not peel solidified product off the skin.
<b>Eye Contact</b>	Rinse thoroughly with plenty of water or saline solution for at least 15 minutes, occasionally lifting the upper and lower lid. Remove contact lenses if present and easy to do. Continue rinsing. Consult a physician.
<b>Ingestion</b>	To prevent aspiration of material into the lungs, lay the victim on one side with head lower than the waist. Never give anything by mouth to an unconscious

	person. Rinse mouth with water, then drink a lot of water. Remove denture if present. Seek medical advice.	
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**SECTION 5: Fire Fighting Measure**

<b>Extinguishing media</b>	<b>Suitable methods of extinction:</b> Use only sand, dry chemical or carbon dioxide. <b>Unsuitable methods of extinction:</b> Water jets streams may spread the fire.
<b>Special hazards</b>	Flammable liquid and vapor! Vapors are heavier than air and can travel along the ground to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. Liquid will float and may reignite on the surface of water.
<b>Advice for firefighters</b>	Wear self-contained breathing apparatus for firefighting if necessary.
<b>Further information</b>	Use water spray to cool unopened containers.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

<b>Personal precautions, protective equipment and emergency procedures</b>	Avoid breathing mist or vapors. Wear respiratory protection. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapor accumulation in low-lying areas.
<b>Environmental precautions</b>	Prevent further leakage or spillage, if practical and safe. Do not allow product to enter drains. Avoid discharge into the environment.
<b>Methods and materials for containment and remediation</b>	Stop leak if possible and safe. Cover spill with vermiculite, perlite or ground clay. Do not use combustible material such as saw dust. Sweep up and store in appropriate waste container for disposal via a licensed waste disposal company.

**SECTION 7: HANDLING AND STORAGE**

<p><b>Precautions for safe handling:</b></p>	<p><b>This material is flammable:</b>          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. Flammable vapors 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.</p> <p><b>Avoid bodily contact with material:</b>          Wear appropriate personal protective equipment. Avoid contact with skin and eyes. Wash hands thoroughly after handling and avoid contact with eyes. No eating, drinking or smoking near areas where substance is handled, processed or stored.</p>
<p><b>Conditions for safe storage, including incompatibilities</b></p>	<p>Keep container clearly labeled and tightly closed in a cool, dry, well-ventilated area. Opened containers must be carefully resealed and kept upright to prevent leakage. Keep away from heat, flames, static electricity. Containers are hazardous when empty as they contain product residues. Ventilate closed areas. Keep out of reach of children.</p>

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

**Engineering Control:** Adequate room ventilation plus local exhaust at points of emission to maintain levels of airborne contaminants 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:**

**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:** 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.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Dark liquid	<b>Evap. Rate:</b>	No data available
<b>Physical state:</b>	Liquid	<b>Decomp Temp:</b>	No data available
<b>Density:</b>	0.8 - 1.4 g/cm <sup>3</sup>	<b>Odor:</b>	Organic solvent
<b>Viscosity:</b>	50-100 Cp	<b>Solubility:</b>	negligible
<b>Boiling Point:</b>	>136 °C	<b>Freezing/Melting pt.:</b>	Not Available
<b>Flammability:</b>	Flammable	<b>Flash Point:</b>	43 °C, closed cup
<b>Partition Coefficient</b>	Not Available	<b>Vapor Density:</b>	No data available
<b>Vapor Pressure</b>	Not Available	<b>VOC:</b>	15wt%
<b>pH:</b>	N/A	<b>Auto-ignition Temp:</b>	>500C (932F)
		<b>UFL/LFL:</b>	No data available

**SECTION 10: STABILITY AND REACTIVITY**

<b>Hazardous polymerization</b>	No
<b>Hazardous Decomposition</b>	Thermal decomposition products include oxides of carbon.
<b>Materials to avoid</b>	Strong oxidizers
<b>Chemical stability</b>	Stable

### SECTION 11: TOXICOLOGICAL INFORMATION

NTP Carcinogen: yes                      IARC Monographs: No                      OSHA Regulated: Yes (5mg/m3, 8hTWA)  
*Titanium dioxide* is recognized as suspected 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.

Based on sums of components, following animal effects are expected:  
 Oral LD50, rat: 1000 mg/kg

### SECTION 12: ECOLOGICAL INFORMATION

Harmful to aquatic life with long lasting effects.

**Acute and prolonged toxicity to fish** : LC50 *Lepomis macrochirus*(Bluegill) 9h 5.6mg/l

**Toxicity to aquatic invertebrates** EC50 *Daphnia magna* (water fleas) 48h 3.7-5.6mg/L

Avoid disposal in Landfills and sewage systems. Avoid releases into water sources

### SECTION 13: DISPOSAL CONSIDERATIONS

This product, as well as any materials impregnated or infused with it during its use, must be disposed of in accordance with all applicable local, state and federal regulations. Contact a licensed professional waste disposal service to dispose of this material

### SECTION 14: TRANSPORT INFORMATION

UN number: not subject to transport regulations

**US DOT and IATA**

Proper Shipping n/a

Hazard Class: none

UN Number n/a

Packing Group: n/a

Environmentally hazardous substance (aquatic environment) p-chlorobenzotrifluoride

**Remarks**

Covaron InfernoWare™ Shield DD is **not subject to transportation regulations** as rule 49 CFR § 173.120(a)(3) of the hazardous materials regulations, declares that “Any liquid with a flash point greater than 35 °C (95 °F) that does not sustain combustion according to ASTM D 4206 or the procedure in appendix H of this part” do not meet the definition of a Class 3 Flammable Liquid. Also rule 49 CFR § 173.120(a)(3) states that liquid with a flash point above 60°C is not considered Flammable.

Similarly, International Air Transport Association (IATA) Dangerous Goods Regulations section 3.3.1.3(a) states that liquids which do not sustain combustion and has "passed a suitable test for combustibility" are not considered as flammable.

Covaron proprietary resin has a flash point of 90C, and the blend of propylene glycol methyl ether acetate and p-Chlorobenzotrifluoride does not sustain combustion when testing with ASTM D 4206. Covaron InfernoWare™ Shield DD therefore does not meet the 49 CFR § 173.120(a)(3) criteria for flammable and is **NOT considered regulated for purposes of transportation**.

**Remarks**

The high volatility of p-Chlorobenzotrifluoride (PCBTF) causes it to preferentially partition to the atmosphere. The impact of a spill of 100 kg is estimated to be 99.93% in the atmosphere and 0.06% in the water (M. Garlanda, 1990). Similarly, PCBTF's aqueous solubility (29.1 mg/L) limits its potential impact on aquatic ecosystems. The PCBTF has shown significant toxicity to aquatic species under laboratory conditions but is unlikely to exhibit a similar level of acute toxicity under environmental conditions because of its solubility and volatility. PCBTF's physical/chemical properties also mitigate the moderate level of bioaccumulation measured in laboratory tests. PCBTF should rapidly volatilize from dry and moist soils. As a result of its volatility and relative environmental partitioning characteristics, PCBTF is unlikely to pose a significant threat to aquatic or terrestrial ecosystems.

**SECTION 15: REGULATORY INFORMATION**

Component	CAS#	Wt%	Regulations
Proprietary resin	—	5-40	TSCA, PA, M, NJ
parachlorobenzotrifluoride	98-56-6	20-65	TSCA (export notification), NJ, PA, CA prop. 65
propyleneglycol methyl ether acetate	108-65-6	0-15	TSCA
Titanium dioxide	1317-80-2	0-7	TSCA, PA, M, NJ, CA prop 65

PA = PA Right-To-Know List of Hazardous Substances  
M=Massachusetts Right-To-Know List of Hazardous Substances  
NJ= New Jersey Right-To-Know List of Hazardous Substances  
DE= Delaware Right-To-Know List of Hazardous Substances  
NY= New York Right-To-Know List of Hazardous Substances  
PA= Pennsylvania Right-To-Know List of Hazardous Substances  
RI= Rhode Island Right-To-Know List of Hazardous Substances  
WI= Wisconsin Right-To-Know List of Hazardous Substances  
CA Prop. 65 = Safe Drinking Water and Toxic Enforcement Act  
TSCA = Toxic Substances Control Act

The following are on California Prop65 list:

- Para chlorobenzotrifluoride*
- Titaiun Dioxide*

Covaron 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.

This compound is subject to TSCA 12b export notification requirement 475645-84-2

#### SECTION 16: OTHER INFORMATION

##### **NFPA**

Health=2

Fire=2

Reactivity=0

Specific Hazard=No

##### **HMIS**

Health=2

Fire=2

Physical Hazard=0

PPE: G- Safety Glasses, Gloves, Vapor respirators

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.

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