Gentoo™ XD
Advanced Clear Hydrophobic Coating

Safety Data Sheet

Section 1 - IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

1.1 Product Identifier

Trade Name	Gentoo XD - Part A
SDS Date	April 30, 2026

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

Product Use	Coating material. This product is one part of a two part product. Read and understand the hazard information on the SDS for Part B before using this product.
Uses Advised Against	For professional use only.

1.3 Details of the Supplier of the Substance or Mixture

Manufacturer	ULTRATECH INTERNATIONAL, INC. 11542 Davis Creek Court Jacksonville, FL 32256 +1 (904) 292-1611 Email: info@gentoocoating.com

1.4 Emergency Telephone Number

Emergency Spill Information	800-424-9300 (Chemtrec) +1-703-527-3887 for International Calls (collect calls accepted)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture – OSHA Hazard Communication 29CFR1910.1200-2012, WHMIS 2015, GHS and EU CLP Reg (EC) No. 1272/2008

Physical	Health	Environmental
Flammable Liquid Category 2	Eye Irritation Category 2A Skin Sensitization Category 1 Specific Target Organ Toxicity – Single Exposure 3	Not Hazardous

2.2 Label Elements

Danger!
Contains: 2-Propanol and Proprietary Polyurethane Silane

Hazard Phrases

H225 Highly flammable liquid and vapor.
H317 May cause an allergic skin reaction
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

Precautionary Phrases

Prevention
P210 Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment
P241 Use explosion-proof electrical, ventilating and lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing mist, vapors or spray.
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves and eye protection.
Response
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P333 + P313 If skin irritation or rash occurs: Get medical attention.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER or doctor if you feel unwell.
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 attention.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use water spray, alcohol resistant foam, dry chemical or carbon dioxide to extinguish.
Storage
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
Disposal
P501 Dispose of contents and container in accordance with local and national regulations.

2.3 Other Hazards: None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical Name	CAS Number / EINECS Number / REACH Reg. Number	% (w/w)	CLP/GHS Classification (1272/2008)
2-Propanol	67-63-0 / 200-661-7	60-70	Flam. Liq. 2 (H225), Eye Irrit. 2 (H319), STOT SE 3 (H336)
Proprietary Polyurethane Silane	Proprietary / Proprietary	20-30	Eye Irrit. 2 (H319), STOT SE 3 (H335), Skin Sens. 1 (H317)
Tetraethoxysilane	78-10-4 / 201-083-8	1-10	Flam. Liq. 3 (H226), Eye Irrit. 2 (H319), STOT SE 3 (H335) Acute Oral Tox. 4 (H302) ATE=2500 mg/kg
Acetylacetone	123-54-6 / 204-634-0	<1	Flam. Liq. 3 (H226) Acute Oral Tox. 4 (H302) ATE=570 mg/kg Acute Dermal Tox. 3 (H311) ATE=790 mg/kg Acute Inhalation Tox. 3 (H331) ATE=5.1 mg/L

See Section 16 for full text of GHS Classifications.
The specific identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

Inhalation: If symptoms of exposure develop, remove to fresh air. Get medical attention if symptoms appear and persist.
Skin contact: Wash skin with soap and water. If irritation or rash develops, get medical attention.
Eye contact: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation persists.
Ingestion: Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to a person who is unconscious or convulsing. Get medical attention if symptoms develop.

4.2 Most Important symptoms and effects, both acute and delayed: Causes eye irritation. May cause mild skin irritation. May cause an allergic skin reaction in some individuals. Inhalation of mists or vapors may cause upper respiratory tract irritation and may cause drowsiness or dizziness. Ingestion may cause gastrointestinal distress. Ingesting large amounts may be harmful.

4.3 Indication of any immediate medical attention and special treatment needed: Immediate medical attention is not generally required.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing Media: Use water spray, alcohol resistant foam, dry chemical or carbon dioxide to extinguish.

5.2 Special Hazards Arising from the Substance or Mixture: Highly flammable liquid and vapor. Vapors may accumulate in confined areas and present a fire of explosion hazard. Vapors may be heavier than air and travel along surfaces to remote ignition sources and flash back. Closed containers may rupture if exposed to extreme heat. Use water spray to cool containers. Burning may produce carbon oxides, silicon oxides, hydrogen fluoride (HF) and carbonyl fluoride (COF2).

5.3 Advice for Fire-Fighters: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for all fires involving chemicals. Cool fire exposed containers with water.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures: Caution – slip hazard. Eliminate all ignition sources and ventilate the area with explosion-proof equipment. Wear appropriate protective clothing and equipment as described in Section 8.

6.2 Environmental Precautions: Prevent spill from entering sewers and water courses. Report releases as required by local and national authorities.

6.3 Methods and Material for Containment and Cleaning Up: Stop spill at the source if it is safe to do so. Absorb with an inert material. Collect into a suitable container for disposal. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard.

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 contact with skin and eyes. Avoid inhalation of vapor or mist. Wear protective clothing and equipment as described in Section 8. Use only with adequate ventilation. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep product and vapor away from heat, sparks, flames and all other sources of ignition.

Do not reuse containers. Empty containers retain product residues can be hazardous. Follow all SDS precautions when handling empty containers. Do not cut, drill, weld, braze, etc. on or near containers, even empty containers.

This product is one part of a two part product. Read and understand the hazard information on the SDS for Part B before using this product. Use in accordance with product instructions.

7.2 Conditions for Safe Storage, Including any Incompatibilities: Store in a cool, well-ventilated area. Protect containers from physical damage. Store away from strong oxidizers, high temperatures, and ignition sources.

7.3 Specific end use(s):
Industrial uses: Coating material
Professional uses: Coating material

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters: Refer to local regulations for exposure limits listed below.

Chemical Name	US OEL	EU IOEL	German Limits	UK Limits
2-Propanol	400 ppm TWA OSHA PEL 200 ppm TWA, 400 ppm STEL ACGIH TLV	None Established	200 ppm TWA, 400 ppm STEL	400 ppm TWA, 500 ppm STEL
Proprietary Polyurethane Silane	None Established	None Established	None Established	None Established
Tetraethoxysilane	10 ppm TWA OSHA PEL 100 ppm TWA ACGIH TLV	None Established	10 ppm TWA, 10 ppm STEL	10 ppm TWA, 30 ppm STEL
Acetylacetone	25 ppm TWA ACGIH TLV (skin)	None Established	20 ppm TWA, 40 ppm STEL	None Established

8.2 Exposure Controls:
Appropriate Engineering Controls: Use with adequate general or local exhaust ventilation to minimize exposures levels.

Personal Protective Measures: Refer to Regulation (EU) 2016/425
Respiratory protection: For operations where the exposure limits are exceeded, a NIOSH or local authority approved respirator with an organic vapor cartridge or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration. Selection of respiratory protection depends on the contaminant type, form and concentration. Select in accordance with local regulations and good Industrial Hygiene practice. For firefighting, use self-contained breathing apparatus.
Skin protection: Wear impervious gloves to avoid skin contact.
Eye protection: Wear safety glasses or goggles to avoid eye contact.
Other: None known.

SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

9.1 Information on basic Physical and Chemical Properties

Appearance (physical state, color, etc.): Clear amber liquid.

Odor:	Alcohol like odor.	**Color:**	Amber
Odor threshold:	Not determined.	**pH:**	N/A
Melting point/freezing point:	Not determined.	**Boiling point:**	181.4 °F (83 °C)
Flash point:	54 °F (12 °C)	**Evaporation rate (butyl acetate =1):**	Not determined
Flammability (solid, gas):	Not applicable.	**VOC (Wt./Gal) wet:**	Not determined

SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

Flammable limits: LEL:	1%	**UEL:**	12%
Vapor pressure:	Not determined.	**Vapor density:**	Not determined
Relative density:	0.898	**Solubility(ies):**	Not determined
Partition coefficient: n-octanol/ water:	Not determined.	**Auto-ignition temperature:**	750.2 °F (399 °C)
Decomposition temperature:	Not determined.	**Viscosity:**	3.92 cst @ 40 °C
Explosive Properties:	Not applicable.	**Oxidizing Properties:**	Not oxidizing
Particle Characteristics:	Not applicable.		

9.2 Other Information: None available

SECTION 10: STABILITY and REACTIVITY

10.1 Reactivity: Not reactive.
10.2 Chemical Stability: Stable.
10.3 Possibility of Hazardous Reactions: None known.
10.4 Conditions to Avoid: Heat, flames and sparks. Extremes of temperature and direct sunlight.
10.5 Incompatible Materials: Strong oxidizers and acids.
10.6 Hazardous Decomposition Products: Fluoropolymers will degrade upon prolonged heating or in a fire, liberating hydrogen fluoride (HF) and carbonyl fluoride (COF2). Carbon oxides, silicon oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:

Potential Health Effects:
Inhalation: Inhalation causes irritation to the upper respiratory tract. May cause drowsiness or dizziness.
Ingestion: Ingestion may cause gastrointestinal distress. Ingesting large amounts may be harmful.
Skin contact: May cause mild skin irritation. May cause an allergic skin reaction in some individuals.
Eye contact: Causes irritation with redness, pain, and tearing.
Chronic Effects: None expected.
Acute Toxicity: Based on available data, the classification criteria are not met.

Product ATE:	LD50 Oral >5,000 mg/kg LD50 Dermal > 10,000 mg/kg LC50 Inhalation >20 mg/L
2-Propanol:	LD50 Oral rat 5,840 mg/kg LD50 Dermal rabbit 16,400 mg/kg LC50 Inhalation rat >10,000 ppm
Proprietary Polyurethane Silane:	Not classified as acutely toxic.
Tetraethoxysilane:	LD50 Oral rat 2500 mg/kg LD50 Dermal rabbit 5,878 mg/kg LC50 inhalation rat 10 mg/L/4 h (as aerosol)

Acetylacetone:	LD50 Oral rat 570 mg/kg
	LD50 Dermal rabbit 790 mg/kg
	LC50 Inhalation rat 5.1 mg/L / 4 hr.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Eye damage/ irritation: Eye irritant.
Respiratory Irritation: Based on available data, the classification criteria are not met.
Respiratory Sensitization: Components are not respiratory sensitizers.
Skin Sensitization: Proprietary Polyurethane Silane may cause skin sensitization.
Germ Cell Mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met. None of the components of this product are listed as carcinogens by IARC, NTP, US OSHA or the EU CLP or classified as carcinogens under the GHS.
Reproductive Toxicity: Based on available data, the classification criteria are not met.
Specific Target Organ Toxicity:
Single Exposure: May cause drowsiness or dizziness.
Repeat Exposure: No data available.
Aspiration Hazard: Based on available data, the classification criteria are not met.

11.2 Information on Other Hazards
11.2.1 Endocrine Disrupting Properties: None known
11.2.2 Other information: No data available

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity: Based on available data, the classification criteria are not met.

2-Propanol:	LC50: Pimephales promelas (fathead minnows) 11,130 mg/L /96 hr.
	EC50: Daphnia magna > 10,000 mg/L/48 hr.
Tetraethoxysilane:	LC50: Zebrafish >245 mg/L /96 hr.
	EC50: Daphnia magna > 844 mg/L/48 hr.
Acetylacetone:	LC50 Pimephales promelas (fathead minnow) 104 mg/L/96 hr.
	EC50 Daphnia magna (water flea) 75 mg/L/48 hr.

12.2 Persistence and degradability:

2-Propanol:	Readily bio-degradable
Tetraethoxysilane:	Volatilization half-lives for a model river and model lake are 2.9 and 25 days, respectively
Acetylacetone:	69.6% in 20 days.

12.3 Bioaccumulative Potential:

2-Propanol:	Bioconcentration in aquatic organisms is low.
Tetraethoxysilane:	Bioconcentration in aquatic organisms is low.
Acetylacetone:	Bioconcentration in aquatic organisms is low.

12.4 Mobility in Soil:

2-Propanol:	Very high.
Tetraethoxysilane:	Very high.
Acetylacetone:	Very high.

12.5 Results of PBT and vPvB assessment: Components are not classified as PBT or vPvB.
12.6 Endocrine Disrupting Properties: None known
12.7 Other Adverse Effects: None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods: Dispose in accordance with all local and national regulations. It is the responsibility of the user, at the time of disposal, to determine whether the product meets the criteria for hazardous waste.

SECTION 14: TRANSPORTATION INFORMATION

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Hazard Class(s)	14.4 Packaging Group	14.5 Environmental Hazards
US DOT	UN1263	Paint	3	II	No
Canadian TDG	UN1263	Paint	3	II	No
EU ADR/RID	UN1263	Paint	3	II	No
IMDG	UN1263	Paint	3	II	No
IATA/ICAO	UN1263	Paint	3	II	No

14.6 Special Precautions for User: None known.

14.7 Transport in Bulk According to IMO Instruments: Not applicable.

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

EPA Toxic Substances Control Act (TSCA): All of the components of this product are listed on the TSCA Inventory or exempted from TSCA.
SARA 302 Listed Chemicals: None.
SARA 311/312 Hazard Categories: Classified as per Section 2 of this SDS.
SARA 313 This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under the SARA Section 313 (40 CFR 372): None
California Proposition 65: ⚠ This product can exposure you to chemicals include 1,4-dioxane, which is known to the State of California to cause cancer, and pentadecafluorooctanoic acid, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.
Canadian Environmental Protection Act: One or more components of this product are not listed on the Canadian Domestic Substances List.
Australia: One or more of the ingredients of this product are not listed on the Australian Inventory of Chemical Substances (AICS).
China: One or more of the ingredients of this product are not listed on the Inventory of Existing Chemical Substance in China (IECSC).
Korea: All of the components are listed on the Korean Existing Chemical List (KECL).
Japan: All of the components are listed on the Japanese Existing and New Chemical Substances List (ENCS).
New Zealand: All of the components of this product are listed on the New Zealand Inventory of Chemicals (NZIoC).
Taiwan: All the components are listed on the existing chemicals inventory.

15.2 Chemical safety assessment: Not required

SECTION 16: OTHER INFORMATION

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

CLP/GHS Classification and H Phrases for Reference (See Section 3)
Acute Inhalation Tox. 3 - Acute Inhalation Toxicity Category 3
Acute Oral Tox. 4 - Acute Oral Toxicity Category 4
Acute Dermal Tox. 3 – Acute Dermal Toxicity Category 3
Eye Irrit. 2 - Eye Irritation Category 2
Flam. Liq. 2 – Flammable Liquids Category 2
Flam. Liq. 3 – Flammable Liquids Category 3
Skin Sens. 1 – Skin Sensitization Category 1
STOT SE 3 – Specific Target Organ Toxicity Single Exposure Category 3

Gentoo™ XD
Advanced Clear Hydrophobic Coating

H225 Highly flammable liquid and vapor.
H226 Flammable Liquid and vapor.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H317 May cause an allergic skin reaction
H319 Causes serious eye irritation
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

SDS Revision History: Section 15
Date of SDS preparation: April 30, 2026
Date of previous revision: April 8, 2022

The information contained herein is true and correct to the best of Ultratech International, Inc's knowledge. However, no warranty, expressed or implied, is made. Nothing herein should be interpreted as a recommendation to infringe existing patents or violate any laws or regulations. Final determination of the suitability of the material is the sole responsibility of the user.