

1. Identification

Product name xClean

Manufacturer or Supplier's Details

Company Name Nexa3D, Inc.
 Address 1923 Eastman Ave. STE200
 Ventura, CA 93003
 USA
 Telephone 1-805-465-9001

Emergency Contact

Emergency Telephone ChemTel 1-800-255-3924 (US) / 1-813-248-0585 Contract MIS3892732

Recommended use of the chemical and restrictions on use

Recommended Use Solvent for washing photopolymer residues
 Restrictions on use None known

2. Hazards Identification

GHS classification in accordance with 29 CFR 1902.1200

Flammable Liquids Category 4
 Acute toxicity (Oral) Category 4
 Acute toxicity (Inhalation) Category 4
 Eye irritation Category 2A
 Skin irritation Category 2
 Specific target organ systematic toxicity single exposure Category 3 (Respiratory system)

GHS label elements

Hazard pictograms



Signal Word

Warning

Hazard Statements

H227 Combustible Liquid
 H302 H312 H332 Harmful if swallowed, in contact with skin, or inhaled
 H315 Causes skin irritation
 H319 Causes serious eye irritation
 H335 May cause respiratory irritation

Precautionary Statements

Prevention:
 P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking
 P261 Avoid breathing dust/fume/gas/mist/vapors/spray
 P264 Wash skin thoroughly after handling
 P270 Do not eat drink or smoke when using this product
 P271 Use only outdoors or in a well-ventilated area
 P280 Wear protective gloves/eye protection/face protection

Response:
 P310 P312 P330 IF SWALLOWED Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
 P302 P352 P312 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/doctor if you feel unwell.

P304 P340 P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/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.
 P332 P313 If skin irritation occurs: Get medical advice/attention.
 P337 P313 If eye irritation persists: Get medical advice/attention
 P362 Take off contaminated clothing and wash before reuse
 P370 P378 In case of fire: Use dry sand, dry chemical, or alcohol resistant foam to extinguish.

Storage:

P403 P233 Store in a well-ventilated place. Keep container tightly closed.

P403 P235 Store in a well-ventilated place. Keep cool.

405 Store locked up.

Disposal:

P501 Dispose of contents/container to an approved waste disposal plant

Other hazards

No additional information available

3. Composition / Information on Ingredients

Chemical Name	CAS Number	EC-Number	Concentration (%wt)
2-butoxyethanol	111-762	203-905-0	>98%

4. First-Aid Measures

Description of first aid measures

Inhalation	Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
Skin contact	Wash immediately with lots of water. Soap may be used. Take victim to a doctor if irritation persists
Eye contact	Rinse immediately with plenty of water. Do not apply neutralizing agents. Remove contact lenses, if present and easy to do. Continue rinsing. Take victim to an ophthalmologist if irritation persists.
Ingestion	Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. Call a POISON CENTER/ doctor.

Most important symptoms and effects

Potential Adverse human health effects and symptoms	May be harmful if swallowed and enters airways. Harmful if swallowed. Causes mild skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness.
Chronic symptoms	No effects known.

Immediate medical attention and special treatment, if necessary

Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Do not induce vomiting.

5. Fire-Fighting Measures

General Fire Hazards	Combustible liquid and vapor
Suitable extinguishing media	Water spray Dry chemical Carbon Dioxide (CO ₂) Foam
Unsuitable extinguishing media	Do not use solid water stream
Specific hazards during fire fighting	Forms peroxides of unknown stability
Hazardous combustion products	None known
Special protective equipment for fire-fighters	Wear positive pressure self-contained breathing apparatus in addition to standard firefighting gear.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:	Wear appropriate personal protective equipment.
Environmental Precautions	Avoid release to the environment.
Methods and material for containment and cleaning up	Eliminate sources of ignition. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Large Spillages: Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.
Notification Procedures	In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

7. Handling and Storage

Precautions for safe handling	Avoid breathing mists or vapors. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling. Minimize exposure to air. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. Do not allow to evaporate to near dryness. Do not distill to near dryness. Addition of water or appropriate reducing materials will lessen peroxide formation.
Conditions for safe storage, including any incompatibilities	
Specific end use(s)	

8. Exposure Controls / Personal Protection**Components with occupational exposure limits**

Ingredient	CAS Number	Value type	Permissible concentration	Basis
2-butoxyethanol	111-762	TWA	20ppm	ACGIH
		TWA	5ppm 24 mg/m ³	NIOSH REL

		TWA	50ppm 240 mg/m ³	OSHA Z-1
		TWA	25ppm 120 mg/m ³	OSHA P0

Appropriate engineering controls

Ensure good ventilation of the workstation. Ensure that eyewash stations and safety showers are close to the workstation location. Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Personal protective equipment

Hand protection	Gloves
Eye protection	Wear safety glasses as minimum eye protection. Conditions may warrant the use of chemical goggles and possibly a face shield. Consult your standard operating procedure or safety professional for advice. Use protective eye and face devices that comply with ANSI Z87.1-1987
Skin protection	Protective clothing
Respiratory protection	Full face mask with filter type A when concentration in air is greater than exposure limit.

9. Physical and Chemical Properties**Information on basic physical and chemical properties**

Physical State	Liquid
Form	Liquid
Color	Colorless
Odor	Mild sweet, ester
Odor threshold	0.48ppm
Freezing point	-75°C
Boiling point	171°C
Flash point (closed cup)	67°C
Relative evaporation rate	0.1
Flammability (solid, gas)	Not applicable
Vapor pressure	1.17 hPa (25°C)
Vapor density (air=1)	4
Specific gravity	0.90 (20°C) g/cm ³
Solubility in water	900 g/l (25°C)
Partition coefficient (n-octanol/water)	log POW 0.81
Auto-ignition temperature	230-245°C
Decomposition temperature	124.7°C (DSC) 21.7 J/g weak exotherm
Dynamic viscosity	3.3 mPa-s (20°C)
Kinematic viscosity	3.64 mm ² /s (20°C)
Explosive properties	No data available
Oxidizing properties	Not classified

Other Information

Minimum ignition temperature	230°C
VOC content	99%

10. Stability and Reactivity

Reactivity	None known
Chemical Stability	Stable
Possibility of hazardous reactions	Forms peroxides of unknown stability
Conditions to avoid	Heat, sparks, flames
Incompatible materials	Strong oxidizing agents
Hazardous decomposition products	Carbon Dioxide, Carbon Monoxide

11. Toxicological Information

Acute toxicity

Harmful if swallowed, in contact with skin, or inhaled

Product

Acute oral toxicity	No data available
Acute inhalation toxicity	No data available
Acute dermal toxicity	No data available

2-butoxyethanol

Acute oral toxicity	LD50 Oral (rat) 1,300 mg/k g
Acute inhalation toxicity	LC50 Vapor (rat) > 4.9 mg/l
Acute dermal toxicity	LD50 Dermal (rat) > 2,000 mg/kg
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
Skin corrosion / irritation	Not classified
Serious eye irritation / damage	Causes serious eye irritation

12. Ecological Information

Eco-Toxicity

Not harmful to crustacea. Not harmful to fishes. Groundwater pollutant. Slightly harmful to algae. Slightly harmful to bacteria. No significant hydrolysis.

2-butoxyethanol

Fish	LC50 Fish 1474 mg/l (OECD 203 Fish Acute Toxicity Test 96h)
Aquatic Invertebrates	EC50 Daphnia 1550 mg/l (OECD 202 Daphnia sp. Acute Immobilization Test 48h)

Persistence and degradability

Readily biodegradable in water

Bioaccumulative potential**2-butoxyethanol**

Log Pow	0.81 (20°C)
Bioaccumulative potential	Low potential for bioaccumulation (log Kow < 4)

Mobility in soil***2-butoxyethanol***

Surface tension	65 mN/m (20°C)
Ecology – soil	Low potential for adsorption in soil

Other adverse effects

No data available

13. Disposal Considerations

General information	No data available
Disposal methods	Dispose of waste and residues in accordance with local authority requirements. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport Information

DOT	Class combustible liquid, Packing group III for quantities of 450 liters (119 gallons) or more; not regulated for smaller quantities Possible shipping description: NA 1993 Combustible liquid, n.o.s., 3, III DOT quantity limitations passenger aircraft / rail (49 CFR173.27) – 60L DOT quantity limitations cargo aircraft (49 CFR 175.75) – 220L
IMDG – International Maritime Dangerous Goods Code	Class not regulated
IATA	Class not regulated

15. Regulatory Information**US Federal Regulations*****2-butoxyethanol***

Listed on the US Toxic Substances Control Act (TSCA) inventory

SARA 302 / 304: This product contains no known chemicals regulated under SARA 302 / 304

SARA 311 / 312: Fire hazard. Acute health

SARA 313: 2-Butoxyethanol Reporting threshold 1.0%

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

US State Regulations***2-butoxyethanol***

This material contains the following chemical substance which is regulated under California Proposition 65.

Ethylene glycol 107-21-1

International Regulations***2-butoxyethanol***

WHMIS (Canada) Status: controlled

WHMIS (Canada) Hazard Classification: B/3, D/1/B, D/2/B

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act): All intentional components of this product are listed on the DSL. Any impurities present in this product are exempt from listing

AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): The intentional components of this product are listed on AICS or otherwise complies with NICNAS. Any impurities present in this product are exempt from listing.

MITI (Japanese Handbook of Existing and New Chemical Substances): This product is listed in the Handbook or has been approved in Japan by new substance notification

ECL (Korean Toxic Substances Control Act): The intentional components of this product are listed on the Korean inventory or otherwise complies with the Korean Toxic Substances Control Act.

Philippines Inventory (PICCS) : The intentional components of this product are listed on the Philippine Inventory or otherwise comply with PICCS.

Inventory of Existing Chemical Substances in China: All intentional components of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC).

16. Other Information

HMIS® Hazard Ratings

Health - 2*, Flammability - 2, Chemical Reactivity - 1

Full text of H-phrases

H227	Combustible liquid
H302	Harmful if swallowed
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness

NFPA health hazard

2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury

NFPA fire hazard

2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.

