

Printing date 26/03/2021

Revision: 26/03/2021

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

▫ **Trade name:** X-cleaner

1.2 Synonym / Description: Cleaner for 3D printed parts

1.3 Relevant identified uses of substance or mixture and uses advised against

▫ **Application of the substance / the preparation**

1.4 Cleaner for 3D printed parts

1.5 Details of the supplier of the safety data sheet

▫ **Manufacturer / Supplier:**

BlueCast

Corso Italia, 25 Verdello 24049 BG Italy

+39 035 52 93 098

+39 3483391300

1.6 Emergency telephone number

+39 3483391300

+39 035 52 93 098

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Hazard classification

This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200

Other hazards no data available

SECTION 3: Composition/information on ingredients

3.1 Chemical characterization: Substances

Glycols C.A.S. reserved

Methyl ether glycols blend C.A.S. reserved

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice: If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin contact: Wash off with plenty of water.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed Notes to physician: Maintain adequate ventilation and oxygenation of the patient. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

5.2 Special hazard arising from the substance or mixture

Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

5.3 Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.

5.4 Advice for firefighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures: Keep unnecessary and unprotected personnel from entering the area. Keep upwind of spill. Ventilate area of leak or spill. Use

appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Small spills: Absorb with materials such as: Sand. Vermiculite. Collect in suitable and properly labeled containers. Large spills: Contain spilled material if possible. Pump into suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

SECTION 7: Handling and storage

Precautions for safe handling: Keep container closed. Use with adequate ventilation. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Store in the following material(s): Carbon steel. Stainless steel. Phenolic lined steel drums. Do not store in: Aluminum. Copper. Galvanized iron. Galvanized steel. Viton. Neoprene. Nitrile. Natural rubber.

Storage stability Steel drums. 24 Month Shelf life: Use within, Bulk 6 Month

SECTION 8: Exposure controls/personal protection

Control parameters Exposure limits are listed below, if they exist. None established Exposure controls Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures Eye/face protection: Use safety glasses (with side shields). Skin protection Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Butyl rubber. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: When prolonged or frequently repeated contact could occur, use protective clothing chemically resistant to this material. Selection of specific items such as faceshield, boots, apron, or full-body suit will depend on the task. Respiratory protection: Under intended handling conditions, no respiratory protection should be needed.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

▪ **General information**

▪ **Appearance:**

Form: Liquid

Color: Transparent

▪ **Odor:** Characteristic glycols

▪ **Odor threshold:** Not determined

▪ **Change in condition**

Melting point / Melting range:

Not applicable

Boiling point / Boiling range:

> 240°C

▪ **Flash point:**

> 100°C

▪ **Flammability (solid, gaseous):**

Product is not flammable.

▪ **Ignition temperature:**

Decomposition temperature:

>277°C

▪ **Self-igniting:**

Product is not self-igniting.

▪ **Danger of explosion:**

Not explosive.

▪ **Explosion limits:**

Lower:

Not determined.

Upper:

Not determined.

▪ **Vapour pressure:**

Not applicable.

▪ **Density:**

Not determined.

▪ Bulk density at 20°C:

1.08 g/cm³

▪ Relative density:

Not determined.

▪ Vapour density:

Not applicable.

▪ **Evaporation rate:**

Not applicable.

▪ **Solubility in / Miscibility with water at 20°C:**

>300 g/L

▪ **Position coefficient (n-octanol/water):**

Not determined.

▪ **Viscosity:**

Dynamic (25°C):

Not applicable.

Kinematic:

Not applicable.

Solid contents:

100.0%

9.2 Other information: No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

Do not expose to temperatures above 60 Celsius.

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known.

10.4 Condition to avoid No further relevant information available.

10.5 Incompatible materials

Incompatible with acids and bases.

Avoid moisture.

10.6 Hazardous decomposition products No dangerous decomposition products known.

SECTION 11: Toxicological information

Toxicological information on this product or its components appear in this section when such data is available.

Acute oral toxicity Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

LD50, Rat, male and female, 3,500 mg/kg

Acute dermal toxicity. Prolonged skin contact is unlikely to result in absorption of harmful amounts. Prolonged skin contact with very large amounts may cause dizziness or drowsiness.

LD50, Rabbit, > 15,440 mg/kg

Acute inhalation toxicity. No adverse effects are anticipated from single exposure to vapor. Based on the available data, narcotic effects were not observed. Based on the available data, respiratory irritation was not observed.

LC0, Rat, 8 Hour, vapour, > 30 ppm No deaths occurred at this concentration.

Skin corrosion/irritation. Prolonged exposure not likely to cause significant skin irritation.

Serious eye damage/eye irritation. May cause slight temporary eye irritation. Corneal injury is unlikely.

Sensitization. Did not demonstrate the potential for contact allergy in mice.

For respiratory sensitization: No relevant data found.

Specific Target. Organ Systemic Toxicity (Single Exposure) Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Carcinogenicity. Similar material(s) did not cause cancer in laboratory animals.

Teratogenicity. Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

Reproductive toxicity. For similar material(s): In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

Aspiration Hazard . Based on physical properties, not likely to be an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

▪ **Aquatic toxicity:** Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested). Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

▪ **12.2 Persistence and degradability :** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation rate may increase in soil and/or water with acclimation. 10-day Window: Pass Biodegradation: 60 % Exposure time: 28 d Method: OECD Test Guideline 301F or Equivalent

SECTION 13: Disposal considerations

13.1 Waste treatment methods

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

SECTION 14: Transport information

14.1 UN-Number ADR, AND, IMDG, IATA	Void
14.2 UN pro per shipping name ADR AND, IMDG, IATA	Void Void
14.3 Transport hazard class(es) ADR, AND, IMDG, IAT Calss	Void
14.4 Packing group ADR, IMDG, IATA	Void

14.5 Environmental hazards:

Marine pollutant: No

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II

of MARPOL73/78 and the IBC Code

Not applicable.

- UN "Model Regulation":

-

SECTION 15: Regulatory information

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

The data are based on the current state of our knowledge and are intended to describe the product with regard to the requirements of safety. The data should not be taken to imply any guarantee of a particular or general specification. It is the responsibility of the user of the product to ensure to his satisfaction that the product is suitable for the intended purpose and method to use. We do not accept responsibility for any harm caused by the use of this information. Furthermore, nothing contained herein shall be construed as a recommendation to use any product in conflict with existing patents covering any material or its use. In all cases, our general condition of sale is applied.