SAFETY DATA SHEET

Classified in accordance 29 CFR 1910.1200

1. Identification

Product identifier: ARISTA VARNISH

Recommended restrictions

Recommended use: Varnish
Restrictions on use: Reserved for industrial and professional use.

Manufactured for:

Distributor

LTD "ARISTA INK TECHNOLOGIES"
Aglonas 11-11
LV-1057
Riga
Latvia

Telephone: +371 22334368
Contact Person:
E-mail: office@arista.lv

Emergency telephone number:

Transport Emergency	Non-transportation
Chemtrec: +1 800 4249300 International: +32 3 4442111	Health Emergency Phone: +1 303 6235716

2. Hazard(s) identification

Hazard Classification

Health Hazards

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Toxic to reproduction	Category 2

Label Elements

Hazard Symbol:

Signal Word: Warning

Hazard Statement: Causes skin irritation.
Causes serious eye irritation.
Suspected of damaging fertility.

Precautionary Statements

Prevention: Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention. Specific treatment (see on this label). Take off contaminated clothing.

Storage: Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
Hexamethylene diacrylate		13048-33-4	50 - <100%
Isobornyl methacrylate		7534-94-3	10 - <20%
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol		67906-98-3	10 - <20%
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-		75980-60-8	10 - <20%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The exact concentration has been withheld as a trade secret.

4. First-aid measures

Description of necessary first-aid measures

General information: Get medical attention if symptoms occur.

Inhalation:	Move into fresh air and keep at rest. Get medical attention immediately. Show this safety data sheet to the doctor in attendance.
Skin Contact:	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before reuse.
Eye contact:	Flush thoroughly with water for at least 15 minutes. Get medical assistance.
Ingestion:	Rinse mouth with plenty of water. Call a physician immediately. Show this safety data sheet to the doctor in attendance.
Personal Protection for First-aid Responders:	CAUTION! First aid personnel must be aware of own risk during rescue! See Section 8 of the SDS for Personal Protective Equipment.

Most important symptoms/effects, acute and delayed

Symptoms:	See section 11 of the SDS for additional information on health hazards.
Hazards:	See section 11 of the SDS for additional information on health hazards.

Indication of immediate medical attention and special treatment needed

Treatment:	Treat symptomatically.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Extinguish with foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media:	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical:	During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures:	No data available.
Special protective equipment for fire-fighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.
For emergency responders:	Warn everybody of potential hazards and evacuate if necessary. Use personal protective equipment.
For non-emergency personnel:	Use personal protective equipment.
Methods and material for containment and cleaning up:	Stop the flow of material, if this is without risk. Absorb with sand or other inert absorbent.
Environmental Precautions:	Avoid release to the environment. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Handling

Technical measures (e.g. Local and general ventilation):	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Emergency showers and eye wash stations should be available.
Safe handling advice:	Avoid contact with eyes. Wash hands thoroughly after handling. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Avoid contact with skin. Avoid contact with eyes, skin, and clothing.
Contact avoidance measures:	Contact with incompatible materials.
Hygiene measures:	Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin. Observe good industrial hygiene practices.

Storage

Safe storage conditions:	Store locked up.
Safe packaging materials:	Keep in original container.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

Appropriate Engineering Controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Emergency showers and eye wash stations should be available.

Individual protection measures, such as personal protective equipment

General information:

Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available.

Eye/face protection:

Safety goggles

Skin Protection

Hand Protection:

Protective gloves should be used if there is a risk of direct contact or splash., Chemical resistant gloves required for prolonged or repeated contact., Butyl rubber., Glove thickness: > 0.35 mm, Break-through time: > 240 min, Risk of splashes:, Nitrile rubber., Nitrile gloves are recommended, but be aware that the liquid may penetrate the gloves. Frequent change is advisable., The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Skin and Body Protection:

Wear suitable protective clothing as protection against splashing or contamination.

Respiratory Protection:

Under normal conditions of use, respirator protection is not required. In case of inadequate ventilation, use respiratory protection. If respirators are used, OSHA requires compliance with its respiratory protection program (29 CFR 1910.134).

Hygiene measures:

Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin. Observe good industrial hygiene practices.

9. Physical and chemical properties

Appearance	
Physical state:	liquid
Form:	liquid
Color:	Colorless
Odor:	Sweetish
Odor Threshold:	No data available.
pH:	No data available.
Freezing point:	< 0 °C
Boiling Point:	> 100 °C
Flash Point:	> 100 °C
Evaporation Rate:	No data available.
Flammability (solid, gas):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.

Vapor pressure:	No data available.
Vapor density (air=1):	No data available.
Density:	No data available.
Relative density:	1.046 (20 °C)
Solubility(ies)	
Solubility in Water:	No data available.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Self Ignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Kinematic viscosity:	No data available.
Dynamic viscosity:	No data available.
Explosive properties:	No data available.
Oxidizing properties:	No data available.

Other information

VOC Content: 0.0 g/l ~0.0 % (calculated) VOC content excluding water

10. Stability and reactivity

Reactivity: Material is stable under normal conditions.

Chemical Stability: Material is stable under normal conditions.

Possibility of hazardous reactions: Not known.

Conditions to avoid: Avoid heat or contamination.

Incompatible Materials: None known.

Hazardous Decomposition Products: By heating and fire, harmful vapors/gases may be formed.

11. Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation: Inhalation is the primary route of exposure. In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.

Skin Contact: May cause an allergic skin reaction. Causes skin irritation.

Eye contact: Eye contact is possible and should be avoided. Causes serious eye irritation.

Ingestion: May be ingested by accident. Ingestion may cause irritation and malaise.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: Not classified for acute toxicity based on available data.

Dermal
Product: ATEmix: 3,068.22 mg/kg

Inhalation
Product: Not classified for acute toxicity based on available data.

Repeated dose toxicity

Product: No data available.

Components:

Hexamethylene diacrylate	NOAEL (Rat(Female, Male), Oral, 28 - 52 d): 250 mg/kg Oral Experimental result, Key study
Isobornyl methacrylate	NOAEL (Rat(Female, Male), Oral, > 28 d): 25 mg/kg Oral Experimental result, Key study NOAEL (Rat, Oral, > 28 d): 500 mg/kg Oral Experimental result, Key study NOAEL (Rat(Female, Male), Oral, 3 - 4 Months): 120 mg/kg Oral Read-across from supporting substance (structural analogue or surrogate), Weight of Evidence study
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	LOAEL (Rat(Female, Male), Oral, 28 d): 250 mg/kg Oral Experimental result, Key study No data available. NOAEL (Rat(Female, Male), Oral, 28 d): 50 mg/kg Oral Experimental result, Key study LOAEL (Rat(Female, Male), Oral, 64 - 91 d): 300 mg/kg Oral Experimental result, Key study NOAEL (Rat(Female, Male), Oral, 64 - 91 d): 100 mg/kg Oral Experimental result, Key study

Skin Corrosion/Irritation

Product: Causes skin irritation.

Components:

Hexamethylene diacrylate	in vivo (Rabbit): Category 2
Isobornyl methacrylate	in vivo (Rabbit): Not Classified in vivo (Rabbit): Not Classified
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	in vivo (Rabbit): Not irritant

Serious Eye Damage/Eye Irritation

Product: Causes serious eye irritation.

Respiratory or Skin Sensitization

Product: May cause an allergic skin reaction.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogens present or none present in regulated quantities

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogens present or none present in regulated quantities

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:
No carcinogens present or none present in regulated quantities

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Components:

Hexamethylene diacrylate	LC 50 (Leuciscus idus, 96 h): 4.6 - 10 mg/l Experimental result, Key study
Isobornyl methacrylate	LOAEL (Danio rerio, 96 h): 1.81 mg/l experimental result
Phosphine oxide, diphenyl(2,4,6-	LC 50 (Oryzias latipes, 48 h): +/- 6.53 mg/l Experimental result, Key study

trimethylbenzoyl)-

Aquatic Invertebrates

Product: No data available.

Components:

Hexamethylene diacrylate	EC 50 (Daphnia magna, 48 h): 2.6 mg/l Experimental result, Key study
Isobornyl methacrylate	LOAEL (48 h): > 2.57 mg/l experimental result EC 50 (48 h): 1.1 mg/l experimental result EC 50 (48 h): > 2.57 mg/l experimental result
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	EC 50 (Daphnia magna, 48 h): 3.53 mg/l Experimental result, Key study

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

Components:

Hexamethylene diacrylate	60 - 70 % (28 d) Detected in water. Experimental result, Key study
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	> 0 - 10 % (28 d) Detected in water. Experimental result, Key study

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Components:

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	Cyprinus carpio, Bioconcentration Factor (BCF): 22 - 32 Aquatic sediment Experimental result, Key study Cyprinus carpio, Bioconcentration Factor (BCF): 18 - 22 Aquatic sediment Experimental result, Key study Cyprinus carpio, Bioconcentration Factor (BCF): 53 - 72 Aquatic sediment Experimental result, Key study Cyprinus carpio, Bioconcentration Factor (BCF): 23 - 40 Aquatic sediment Experimental result, Key study Cyprinus carpio, Bioconcentration Factor (BCF): 47 - 55 Aquatic sediment Experimental result, Key study

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Components:

Hexamethylene diacrylate	Log Kow: 2.62 - 3.08 25 °C No Experimental result, Supporting study Log Kow: 3.08 (DSC)

Mobility in soil: No data available.

Components:

Hexamethylene diacrylate	No data available.
Isobornyl methacrylate	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.

Other adverse effects: Harmful to aquatic life with long lasting effects.

13. Disposal considerations

General information: Waste disposal should be in accordance with existing federal, state and local environmental control laws.

Disposal methods: Waste disposal should be in accordance with existing federal, state and local environmental control laws. Recover nonusable free liquid and/or contaminated water, and dispose of in an approved and permitted treatment system.

Recondition or dispose of empty container in accordance with governmental regulations.

Contaminated Packaging: Dispose in accordance with all applicable regulations.

US. RCRA Hazardous Waste Classification (40 CFR 261) If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

14. Transport information

DOT

UN Number	Not regulated.
UN Proper Shipping Name	Not regulated.
Transport Hazard Class(es)	Not regulated.
Packing Group	Not regulated.
Environmental Hazards	Not regulated.
Special precautions for user	Not regulated.

IATA

UN Number	Not regulated.
UN Proper Shipping Name	Not regulated.
Transport Hazard Class(es)	Not regulated.
Packing Group	Not regulated.
Environmental Hazards	Not regulated.
Special precautions for user	Not regulated.

IMDG

UN Number	Not regulated.
UN Proper Shipping Name	Not regulated.
Transport Hazard Class(es)	Not regulated.
Packing Group	Not regulated.
Environmental Hazards	Not regulated.
Special precautions for user	Not regulated.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
Hexamethylene diacrylate	10000 lbs
Isobornyl methacrylate	10000 lbs
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	10000 lbs
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	10000 lbs

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 111 SOCMI Intermediate or Final Volatile Organic Compounds (40 CFR 60.489):

None present.

Clean Air Act (CAA) Section 112, 1990 Amendments, Statutory Hazardous Air Pollutants:

None present.

Clean Air Act (CAA) Section 112(i) High-Risk Hazardous Air Pollutants (40 CFR 63.74):

None present.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

No ingredient requiring a warning under CA Prop 65.

US. New Jersey Worker and Community Right-to-Know Act

No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List

No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances

No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

US. Toxic Substances Control Act (TSCA)

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substance Control Act (U.S, EPA TSCA) 8(b) inventory.

16.Other information, including date of preparation or last revision

Issue Date:	02-05-2020
Revision Information:	No data available.
Version #:	1.1
Further Information:	This information is furnished without warranty, expressed or implied, and is believed to be accurate to the best knowledge of the manufacturer. The data on this SDS relates only to the specific material designated herein. The manufacturer assumes no legal responsibility for use or reliance upon these data.