SAFETY DATA SHEET

Version #: 02
Issue date: 10-26-2022
Revision date: 06-12-2023
Supersedes date: 10-26-2022

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

1.1. Product identifier

Trade name or designation of the mixture IJR-4000 MW300

Registration number -

SDS number 18MM0011

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Ink for Printed Circuit Boards

Uses advised against Not available.

1.3. Details of the supplier of the safety data sheet

Manufacturer name TAIYO INK MFG. CO., (KOREA) LTD.

Address 166, Manhae-ro, Danwon-gu, Ansan-si, Gyeonggi-do, Korea

Telephone +82-31-491-9250(#5402)

Supplier name Taiyo America, Inc.

Address 2675 Antler Drive Carson City, NV 89701

Telephone +775-885-9959(M-F, 8AM-4PM, Pacific Time Zone)

Website http://www.taiyo-america.com/

e-Mail SDSinfo@taiyo-america.com

Only Representative

Company name CAPLINQ Europe BV at Industrieweg 15E

Address 1566JN Assendelf, The Netherlands

Telephone +31208932224

Disrtibutor Name Ventec Central Europe GmbH

Address Morschheimerstraße 15 67292 Kirchheimbolanden Germany

Telephone +496352 75326-0

Emergency telephone number +1-813-248-0585 International-product safety issues

Emergency telephone number +1-800-255-3924 Within U.S.A. only(24hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Acute toxicity, dermal	Category 3	H311 - Toxic in contact with skin.
Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.
Skin sensitization	Category 1A	H317 - May cause an allergic skin reaction.
Carcinogenicity	Category 2	H351 - Suspected of causing cancer.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate, 2,2-dimethyltrimethylene diacrylate; neopentyl glycol diacrylate, pentaerythritol tetraacrylate, pentaerythritol triacrylate, phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide, titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

Hazard pictograms

Signal word Danger

Hazard statements

H311	Toxic in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.

Precautionary statements

Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash hands and eyes thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response

P302 + P352	IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P361 + P364	Take off immediately all contaminated clothing and wash it before reuse.

Storage

P405	Store locked up.

Disposal

P501	Dispose of contents/container according to the regulations.

Supplemental label information 66,5% of the mixture consists of component(s) of unknown acute oral toxicity. 28,6% of the mixture consists of component(s) of unknown acute dermal toxicity. 98,6% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 94,7% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment. EUH211 - Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

2.3. Other hazards This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII. The mixture does not contain any substances included in the list established in accordance with REACH Article 59(1) for having endocrine disrupting properties at a concentration equal to or greater than 0.1% by weight.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
2,2-dimethyltrimethylene diacrylate; neopentyl glycol diacrylate	30 - < 40	2223-82-7 218-741-5	-	607-112-00-4	
Classification: Acute Tox. 3;H311;(ATE: 300 mg/kg bw), Skin Irrit. 2;H315, Eye Irrit. 2;H319, Skin Sens. 1;H317					
2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate	20 - < 30	15625-89-5 239-701-3	-	607-111-00-9	
Classification: Skin Irrit. 2;H315, Eye Irrit. 2;H319, Skin Sens. 1;H317					
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]	5 - < 10	13463-67-7 236-675-5	01-2119489379-17-XXXX	022-006-002	
Classification: Carc. 2;H351					

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	3 - < 5	162881-26-7 423-340-5	-	015-189-00-5	
Classification: Skin Sens. 1A;H317, Aquatic Chronic 4;H413					
pentaerythritol tetraacrylate	1 - < 3	4986-89-4 225-644-1	-	607-122-00-9	
Classification: Skin Irrit. 2;H315, Eye Irrit. 2;H319, Skin Sens. 1;H317					
pentaerythritol triacrylate	1 - < 3	3524-68-3 222-540-8	-	607-110-00-3	
Classification: Skin Irrit. 2;H315, Eye Irrit. 2;H319, Skin Sens. 1;H317					
Other components below reportable levels	10 - < 20				

List of abbreviations and symbols that may be used above

ATE: Acute toxicity estimate.
M: M-factor
vPvB: very persistent and very bioaccumulative substance.
PBT: persistent, bioaccumulative and toxic substance.
#: This substance has been assigned Union workplace exposure limit(s).
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information Take off immediately all contaminated clothing. IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

4.1. Description of first aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. Get medical advice/attention if you feel unwell. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

4.3. Indication of any immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Avoid breathing mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material.

For emergency responders	Keep unnecessary personnel away. Ensure adequate ventilation. Avoid breathing mist/vapors. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.
6.2. Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
6.3. Methods and material for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers.
6.4. Reference to other sections	For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing mist/vapors. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.
7.2. Conditions for safe storage, including any incompatibilities	Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).
7.3. Specific end use(s)	Observe industrial sector guidance on best practices.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Components	Type	Value	Form
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	MAK	5 mg/m3	Respirable dust.
	STEL	10 mg/m3	Respirable dust.

Belgium. Exposure Limit Values

Components	Type	Value
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	10 mg/m3

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	Type	Value	Form
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	10 mg/m3	Respirable dust.

Croatia. OELs (GVI). Regulation on Protection of Workers against Exposure to Dangerous Chemicals at Work, OELs and Biological Limit Values, Annex I (NN 91/2018), as amended

Components	Type	Value	Form
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	MAC	4 mg/m3	Respirable dust.
		10 mg/m3	Total dust.

Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.

Components	Type	Value
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	10 mg/m3

Denmark. Exposure Limit Values

Components	Type	Value
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TLV	6 mg/m3

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances (Regulation No. 105/2001, Annex), as amended

Components	Type	Value
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	5 mg/m3

Finland. Workplace Exposure Limits

Components	Type	Value	Form
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	10 mg/m3	Dust.

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Components	Type	Value
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	VME	10 mg/m3

Regulatory status: Indicative limit (VL)

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value	Form
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	0,3 mg/m3	Respirable fraction.

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Components	Type	Value	Form
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	AGW	10 mg/m3	Inhalable fraction.
		1,25 mg/m3	Respirable fraction.

Greece. OELs (Decree No. 90/1999, as amended)

Components	Type	Value	Form
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Inhalable

Iceland. OELs. Regulation 390/2009 on Pollution Limits and Measures to Reduce Pollution at the Workplace, as amended

Components	Type	Value
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	6 mg/m3

Ireland. Occupational Exposure Limits

Components	Type	Value	Form
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	4 mg/m3	Respirable dust.
		10 mg/m3	Total inhalable dust.

Italy. Occupational Exposure Limits

Components	Type	Value	Form
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	2,5 mg/m3	Respirable finescale particles
		0,2 mg/m3	Respirable nanoscale particles

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Components	Type	Value
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	10 mg/m3

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

Components	Type	Value
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	5 mg/m3

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TLV	5 mg/m3

Poland. Maximum permissible concentrations and intensities of harmful factors in the work environment (Dz.U.Poz. 1286/2018, Annex 1)

Components	Type	Value	Form
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	STEL	30 mg/m3	
	TWA	10 mg/m3	Inhalable fraction.

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

Components	Type	Value
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	10 mg/m3

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Components	Type	Value
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	STEL	15 mg/m3
	TWA	10 mg/m3

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Components	Type	Value
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	5 mg/m3

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

Components	Type	Value	Form
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	10 mg/m3	Inhalable fraction.
		1,25 mg/m3	Respirable fraction.

Spain. Occupational Exposure Limits

Components	Type	Value
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	10 mg/m3

Sweden. OELs (Annex 1). Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2018:1), as amended

Components	Type	Value	Form
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	5 mg/m3	Total dust.

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value	Form
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	3 mg/m3	Respirable dust.

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value	Form
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	4 mg/m3	Respirable.
		10 mg/m3	Inhalable

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls	Good general ventilation 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. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

General information	Wear chemical protective equipment that is specifically recommended by the manufacturer. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Eye/face protection	Wear eye/face protection. Chemical respirator with organic vapor cartridge and full facepiece.
Skin protection	
- Hand protection	Wear appropriate chemical resistant gloves. Wear appropriate chemical resistant gloves. Gloves for short term exposure/splash protection - non exhaustive list: Laminated multilayer gloves, break through time: > 60 min Nitrile rubber (NBR), thickness: > 0.56 mm, break through time: < 60 min The chemical resistance depends on the type of product and amount of product on the glove. Therefore gloves need to be changed when in contact with chemicals. Not suitable gloves - non exhaustive list: Latex gloves Due to many conditions (e.g. temperature, abrasion) the practical usage of a chemical protective glove in practice may be much shorter than the permeation time determined through testing. Use PE gloves as under gloves for difficult situations like for instance: high exposure, unknown composition or unknown properties of the chemicals.
- Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	Chemical respirator with organic vapor cartridge and full facepiece.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures	Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Form	Liquid.
Color	White
Odor	a weak odor
Melting point/freezing point	Not available.
Boiling point or initial boiling point and boiling range	Not available.
Flammability	Not available.
Flash point	230,0 °F (110,0 °C) Setaflash
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
pH	Not available.
Kinematic viscosity	Not available.
Solubility	
Solubility (water)	Insoluble in water
Partition coefficient (n-octanol/water) (log value)	Not available.
Vapor pressure	Not available.
Density and/or relative density	Not available.
Vapor density	Not available.
Particle characteristics	Not available.

9.2. Other information

9.2.1. Information with regard to physical hazard classes	No relevant additional information available.

9.2.2. Other safety characteristics

Specific gravity	1,18
Viscosity	40 cPs

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidizing agents. Strong acids. Strong bases.
10.6. Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information	Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Toxic in contact with skin. Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.
Symptoms	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity	Toxic in contact with skin.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Suspected of causing cancer.

Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)

titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)

IARC Monographs. Overall Evaluation of Carcinogenicity

2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate (CAS 15625-89-5)	2B Possibly carcinogenic to humans.
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	2B Possibly carcinogenic to humans.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Mixture versus substance information	No information available.

11.2. Information on other hazards

Endocrine disrupting properties	This mixture does not contain any substances having endocrine disrupting properties with respect to human health as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity	Based on available data, the classification criteria are not met for hazardous to the aquatic environment, long term. Due to partial or complete lack of data the classification for hazardous to the aquatic environment, acute hazard, is not possible.
12.2. Persistence and degradability	No data is available on the degradability of any ingredients in the mixture.
12.3. Bioaccumulative potential	No data available.
Partition coefficient n-octanol/water (log Kow)	Not available.
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.
12.6. Endocrine disrupting properties	This mixture does not contain any substances having endocrine disrupting properties with respect to the environment as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.
12.7. Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

IATA

14.1. UN number	UN2810
14.2. UN proper shipping name	Toxic liquid, organic, n.o.s.
14.3. Transport hazard class(es)	
Class	6.1
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	No.
ERG Code	6L
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

14.1. UN number	UN2810
14.2. UN proper shipping name	TOXIC LIQUID, ORGANIC, N.O.S.
14.3. Transport hazard class(es)	
Class	6.1
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-A
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

14.7. Maritime transport in bulk according to IMO instruments Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorizations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide (CAS 162881-26-7)

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations

According to Directive 92/85/EEC as amended, pregnant women should not work with the product, if there is the least risk of exposure.

Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended. Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.
Water hazard class: Obviously hazardous to water (WGK 2)

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS: Chemical Abstract Service.
CEN: European Committee for Standardization.
IATA: International Air Transport Association.
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.
IMDG: International Maritime Dangerous Goods.
MARPOL: International Convention for the Prevention of Pollution from Ships.
PBT: Persistent, bioaccumulative and toxic.
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.
vPvB: Very persistent and very bioaccumulative.

References

Not available.

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any statements, which are not written out in full under sections 2 to 15	H311 Toxic in contact with skin. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H351 Suspected of causing cancer. H413 May cause long lasting harmful effects to aquatic life.
Training information	Follow training instructions when handling this material.
Disclaimer	The contents listed in this data sheet were prepared based on currently available documents, information, and data, but may be revised due to amendments to laws and regulations or new findings. In addition, generic or general names are used for the ingredients of mixtures, except for those listed under chemical names, for the sake of confidentiality. Please refer to this data sheet and technical documentations for the usage of this product, and take safety measures appropriate for the actual situation at the responsibility of the user. This data sheet is not a guarantee of safety or quality. When taking this product overseas, please contact our sales representative in advance. Export procedures may be required.