SAFETY DATA SHEET



PA65 1K Plastic Primer - Aerosol

In accordance with the Standard for Classification and Labeling of Chemical Substance and Safety Data Sheet, Article 10 Paragraph 1

Section 1. Chemical product and company identification

- A. Product name
- : PA65 1K Plastic Primer Aerosol
- Product code
- : 400901(A)
- B. Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Not applicable.

Uses advised against Not applicable.

C. Manufacturer	: Valspar b.v. Zuiveringweg 89 8243 PE Lelystad The Netherlands tel: +31 (0)320 292200 fax: +31 (0)320 292201
Importer	: (주)클라텍 경기도 안양시 동안구 안양판교로 26-14,705 (관양동, 동진윗츠빌) tel: 031-425-7881 fax: 031-425-7882
Distributor	: (주)클라텍 경기도 안양시 동안구 안양판교로 26-14,705 (관양동, 동진윗츠빌) tel: 031-425-7881 fax: 031-425-7882
Emergency telephone number	: TEL: 031-425-7881(제공시간 - 24 시간) TEL: +31 (0)320 292200 - 네덜란드

Section 2. Hazards identification

A. Hazard classification	: AEROSOLS - Category 1 GASES UNDER PRESSURE - Compressed gas ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 REPRODUCTIVE TOXICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3
	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
	This product is classified in accordance with the Industrial Safety and Health Act and the Chemical Control Act.

B. GHS label elements, including precautionary statements



Section 2. Hazards identification

Hazard statements	:	Extremely flammable aerosol. Pressurised container: may burst if heated. Contains gas under pressure; may explode if heated. Causes skin irritation. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.
Precautionary statements		
Prevention	:	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe vapour or spray. Wash thoroughly after handling. Do not pierce or burn, even after use.
Response	:	IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice or attention. 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 or attention.
Storage	:	Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place. Keep container tightly closed.
Disposal	:	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Other hazards which do	:	None known.

C. Other hazards which do : None l not result in classification

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Ingredient name	Common name	Identifiers	%
xylene	XYLENE	CAS: 1330-20-7	≥45 - ≤50
dimethyl ether	DIMETHYL ETHER	CAS: 115-10-6	≥40 - ≤45
ethylbenzene	ETHYLBENZENE	CAS: 100-41-4	≤10
chlorobenzene	MONOCHLOROBENZENE	CAS: 108-90-7	≤5
toluene	TOLUENE	CAS: 108-88-3	≤5

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Α.	Eye contact	:	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
в.	Skin contact	:	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
C.	Inhalation	:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
D.	Ingestion	:	Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Е.	Notes to physician	:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Specific treatments	:	No specific treatment.
	Protection of first-aiders	:	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Firefighting measures

A. Extinguishing media	
Suitable extinguishing media	: Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: None known.
B. Specific hazards arising from the chemical	: Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide
C. Special protective equipment for fire- fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Date of issue/Date of revision	: 10/18/2023 Date of previous issue : 10/18/2023 Version : 1 3/14

Section 5. Firefighting measures

Special precautions for	: Promptly isolate the scene by removing all persons from the vicinity of the incident if
fire-fighters	there is a fire. No action shall be taken involving any personal risk or without
-	suitable training. Move containers from fire area if this can be done without risk.
	Use water spray to keep fire-exposed containers cool.

Section 6. Accidental release measures

Α.	Personal precautions, protective equipment and emergency procedures	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurised contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
в.	Environmental precautions	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
c .	Methods and material for c	ontainment and cleaning up
	Small spill	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	Large spill	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spill product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

A. <u>Precautions for safe handling</u>

Protective measures	: Put on appropriate personal protective equipment (see Section 8). Pressurised container: protect from sunlight and do not expose to temperature exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.
Advice on general occupational hygiene	: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

B. Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

A. Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
xylene	Ministry of Employment and Labor (Republic of Korea, 1/2020). [Xylene (all
	isomers)]
	STEL: 150 ppm, 0 times per shift, 15
	minutes.
	TWA: 100 ppm, 0 times per shift, 8 hours.
ethylbenzene	Ministry of Employment and Labor
	(Republic of Korea, 1/2020).
	STEL: 125 ppm 15 minutes.
	TWA: 100 ppm 8 hours.
chlorobenzene	Ministry of Employment and Labor
	(Republic of Korea, 1/2020).
	TWA: 10 ppm 8 hours.
	STEL: 20 ppm 15 minutes.
toluene	Ministry of Employment and Labor
	(Republic of Korea, 1/2020).
	STEL: 150 ppm 15 minutes.
	TWA: 50 ppm 8 hours.

Appropriate engineering controls	:	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
Environmental exposure controls	:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
Personal protective equip	m	<u>ent</u>
Respiratory protection	:	Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: EN 405:2001 + A1:2009 organic vapour (Type A) and particulate filter FFA2P3 R D
Eye protection	:	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. Recommended: chemical splash goggles and/or face shield.
Hand protection	:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. > 8 hours (breakthrough time): Recommended EN 374 butyl rubber >=
	controls Environmental exposure controls Personal protective equip Respiratory protection Eye protection	controls Environmental : exposure controls Personal protective equipme Respiratory protection : Eye protection :

Section 8. Exposure controls/personal protection

	0.7 mm < 1 hour (breakthrough time): Conditionally suitable materials for protective gloves; EN 374: Nitrile rubber - NBR (>= 0.35 mm). Only suitable as splash protection. Only suitable for brief exposure. In the event of contamination, change protective gloves immediately.
Body protection	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Recommended: Cotton or cotton/synthetic overalls or coveralls are normally suitable.
Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

	-			
Α.	Appearance			
	Physical state		•	. [Liquefied compressed gas.]
	Colour	1	Colou	rless.
В.	Odour	4	Aroma	atic.
С.	Odour threshold	1	Not av	vailable.
D.	рН	1	Not ap	oplicable.
Ε.	Melting/freezing point	1	Not ap	oplicable.
F.	Boiling point, initial boiling point, and boiling range	:	<35°C	; (<95°F)
G.	Flash point	1	Close	d cup: <-18°C (<-0.4°F)
I.	Flammability (solid, gas)	1	Not av	/ailable.
J.	Lower and upper explosive (flammable) limits	:	Lower Upper	: 0.8% : 26.2%
Κ.	Vapour pressure	:	340 kl	Pa (2550.2 mm Hg)
L.	Solubility(ies)			
	Colubility(ICS)			
	Media			Result
				Result Not soluble Not soluble
	Media cold water		Not ap	Not soluble
_	Media cold water hot water	:	Not ap	Not soluble Not soluble
	Media cold water hot water Solubility in water	:		Not soluble Not soluble oplicable.
М.	Media cold water hot water Solubility in water Miscible with water	:	No.	Not soluble Not soluble oplicable.
М.	Media cold water hot water Solubility in water Miscible with water Vapour density	: : :	No. >1 [Ai	Not soluble Not soluble oplicable. r = 1]
M. N.	Media cold water hot water Solubility in water Miscible with water Vapour density Relative density	: : : : :	No. >1 [Ai 0.77 0.77 g	Not soluble Not soluble oplicable. r = 1]
М. N. О.	Mediacold waterhot waterSolubility in waterMiscible with waterVapour densityRelative densityDensityPartition coefficient: n-		No. >1 [Ai 0.77 0.77 g Not ap	Not soluble Not soluble oplicable. r = 1] //cm ³
M. N. O. P.	Mediacold waterhot waterSolubility in waterMiscible with waterVapour densityRelative densityDensityPartition coefficient: n- octanol/waterAuto-ignition	: : : : : : : : : : : : : : : : : : : :	No. >1 [Ai 0.77 0.77 g Not ap 350°C	Not soluble Not soluble oplicable. r = 1] //cm ³ oplicable.
M. N. O. P.	Mediacold waterhot waterSolubility in waterMiscible with waterVapour densityRelative densityDensityPartition coefficient: n- octanol/waterAuto-ignition temperatureDecomposition		No. >1 [Ai 0.77 0.77 g Not ap 350°C	Not soluble Not soluble oplicable. r = 1] //cm ³ oplicable. : (662°F) oplicable.
M. N. O. P. Q.	Mediacold waterhot waterSolubility in waterMiscible with waterVapour densityRelative densityDensityPartition coefficient: n- octanol/waterAuto-ignition temperatureDecomposition temperature		No. >1 [Ai 0.77 g Not ap 350°C Not ap 35.64	Not soluble Not soluble oplicable. r = 1] //cm ³ oplicable. : (662°F) oplicable.

Section 9. Physical and chemical properties

Particle characteristics Median particle size : Not applicable. Aerosol product Type of aerosol : Spray Section 10. Stability and reactivity A. Chemical stability The product is stable. 2 : Under normal conditions of storage and use, hazardous reactions will not occur. **Possibility of hazardous** reactions B. Conditions to avoid : Avoid all possible sources of ignition (spark or flame). C. Incompatible materials : No specific data. **D. Hazardous** : Under normal conditions of storage and use, hazardous decomposition products decomposition products should not be produced. Section 11. Toxicological information : Not available. A. Information on likely routes of exposure Potential acute health effects Inhalation : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. Ingestion : Can cause central nervous system (CNS) depression. **Skin contact** : Causes skin irritation. Eye contact : Causes serious eye irritation. **Over-exposure signs/symptoms** Inhalation : Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness reduced foetal weight increase in foetal deaths skeletal malformations Ingestion : Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations **Skin contact** : Adverse symptoms may include the following: irritation redness reduced foetal weight increase in foetal deaths skeletal malformations

- Eye contact : Adverse symptoms may include the following: pain or irritation watering redness
- B. Health hazards

Date of issue/Date of revision

Section 11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LC50 Inhalation Vapour	Rat - Male	29000 mg/l	4 hours
	LD50 Dermal	Rabbit	12126 mg/kg	-
	LD50 Oral	Rat	4300 mg/kg	-
dimethyl ether	LC50 Inhalation Gas.	Rat	309 g/m ³	4 hours
	LC50 Inhalation Gas.	Rat	164000 ppm	4 hours
ethylbenzene	LC50 Inhalation Vapour	Rat	6350 ppm	4 hours
-	LD50 Dermal	Rabbit	12126 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
chlorobenzene	LC50 Inhalation Vapour	Rat	29.7 mg/l	4 hours
	LD50 Dermal	Rabbit	>7940 mg/kg	-
	LD50 Oral	Rat	500 mg/kg	-
toluene	LC50 Inhalation Vapour	Rat	28.1 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	636 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
xylene	Eyes - Mild irritant	Rabbit	-	87 mg	-
-	Eyes - Severe irritant	Rabbit	-	24 hours 5	-
				mg	
	Skin - Mild irritant	Rat	-	8 hours 60	-
				uL	
	Skin - Moderate irritant	Rabbit	-	100 %	-
	Skin - Moderate irritant	Rabbit	-	24 hours	-
				500 mg	
ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 15	-
				mg	
toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes	-
				100 mg	
	Eyes - Mild irritant	Rabbit	-	870 ug	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2	-
				mg	
	Skin - Mild irritant	Pig	-	24 hours	-
				250 uL	
	Skin - Mild irritant	Rabbit	-	435 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20	-
				mg	
	Skin - Moderate irritant	Rabbit	-	500 mg	-

Sensitisation

Not available.

CMR - ISHA Article 42 Occupational Exposure Limits

Product/ingredient name	Identifiers	Classification
ethylbenzene chlorobenzene toluene	CAS: 100-41-4 CAS: 108-90-7 CAS: 108-88-3	CARCINOGENICITY - Category 2 CARCINOGENICITY - Category 2 REPRODUCTIVE TOXICITY -
		Category 2

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Section 11. Toxicological information

Product/ingredient name	OSHA	IARC	NTP	ACGIH
xylene	-	3	-	A4
ethylbenzene chlorobenzene	-	2B -	-	A3 A3
toluene	-	3	-	A4

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
xylene	Category 3		Respiratory tract irritation
toluene	Category 3 Category 3		Narcotic effects Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	• •	Route of exposure	Target organs
xylene	Category 2	-	-
ethylbenzene	Category 2	-	-
toluene	Category 2	-	-

Aspiration hazard

Product/ingredient name	Result
xylene	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1
chlorobenzene	ASPIRATION HAZARD - Category 2
toluene	ASPIRATION HAZARD - Category 1

Potential chronic health effects

Chronic toxicity

Not available.

General	: May cause damage to organs through prolonged or repeated exposure.
Carcinogenicity	: Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity	: No known significant effects or critical hazards.
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
PA65 1K Plastic Primer - Aerosol	N/A	N/A	10854.2	137.8	N/A
xylene	4300	12126	5000	29000	N/A
dimethyl ether	N/A	N/A	164000	N/A	N/A
ethylbenzene	3500	12126	N/A	11	N/A
chlorobenzene	500	N/A	N/A	11	N/A
toluene	N/A	N/A	N/A	28.1	N/A

Section 12. Ecological information

A. Ecotoxicity

Product/ingredient name	Result	Species	Exposure
xylene	Acute EC50 1 to 10 mg/l	Algae	72 hours
	Acute EC50 1 to 10 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 8500 μg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
ethylbenzene	Acute EC50 4900 µg/l Marine water	Algae - Skeletonema costatum	72 hours
	Acute EC50 7700 µg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 6.53 mg/l Marine water	Crustaceans - <i>Artemia sp.</i> - Nauplii	48 hours
	Acute EC50 2.93 mg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
chlorobenzene	Acute EC50 19.6 mg/l	Algae - Phaeodactylum tricornutum	72 hours
	Acute EC50 4.3 mg/l	Daphnia	48 hours
	Acute LC50 7900 µg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 2370 µg/l Fresh water	Fish - Carassius auratus - Egg	96 hours
	Chronic NOEC 0.32 mg/l	Daphnia - <i>Daphnia magna</i>	16 days
	Chronic NOEC 4.8 mg/l	Fish - Danio rerio	28 days
toluene	Acute EC50 12.5 mg/l	Algae	72 hours
	Acute EC50 >433 ppm Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus	48 hours
		<i>pseudolimnaeus</i> - Adult	
	Acute EC50 3.8 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 5.5 mg/l	Fish - Oncorhynchus kisutch	96 hours
	Chronic NOEC 1 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	21 days

B. Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
toluene	-	-	Readily

C. Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
xylene	3.12	8.1 to 25.9	Low
dimethyl ether	0.07	-	Low
ethylbenzene	3.6	-	Low
chlorobenzene	2.46	4.3 to 40	Low
toluene	2.73	90	Low

D. <u>Mobility in soil</u> Soil/water partition

: Not available.

E. Other adverse effects

coefficient (Koc)

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Α.	Disposal methods	: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

B. Disposal precautions : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	UN	IMDG	IATA
A. UN number	UN1950	UN1950	UN1950
B. UN proper shipping name	AEROSOLS	AEROSOLS	Aerosols, flammable
C. Transport hazard class(es)	2.1	2.1	2.1
D. Packing group	Not applicable.	Not applicable.	Not applicable.
E. Environmental hazards	No.	No.	No.
Additional informa	tion		

UN	:	Special provisions 63, 190, 277, 327, 344, 381
IMDG	:	Emergency schedules F-D, S-U Special provisions 63, 190, 277, 327, 344, 381, 959
ΙΑΤΑ	:	Quantity limitation Passenger and Cargo Aircraft: 75 kg. Packaging instructions: 203. Cargo Aircraft Only: 150 kg. Packaging instructions: 203. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y203. Special provisions A145, A167, A802
F. Special precautions for user	:	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
Transport in bulk according	:	Not available.

to IMO instruments

Section 15. Regulatory information

۱.	Regulation according to	ISH	<u>IA</u>
	ISHA article 117 (Harmful substances prohibited from manufacture)	:	None of the components are listed.
	ISHA article 118 (Harmful substances requiring permission)	:	None of the components are listed.

Section 15. Regulatory information

Exposure Limits of Chemical Substances and Physical Factors The following components have an OEL: xylene ethylbenzene chlorobenzene Toluene ISHA Enforcement Regs The following components are listed: toluene Annex 19 (Exposure standards established for harmful factors) ISHA Enforcement Regs : The following components are listed: xylene, ethyl benzene Annex 21 (Harmful Factors subject to Work Environment Massurement) ISHA Enforcement Regs : The following components are listed: xylene, ethyl benzene Annex 22 (Harmful Factors Subject to Special Health Check Massurement) : The following components are listed: xylene, ethyl benzene Safety and Health Annex 12 (Hazmful Annex 12 (Hazmful : The following components are listed: xylene, ethyl benzene Safety and Health Annex 12 (Hazmful Annex 12 (Hazmful : The following components are listed: xylene, ethyl benzene Article 11 (TRI) : The following components are listed: anthorization (K-Reach Article 20 Toxic : None of the components are listed. Article 20 Toxic : None of the		Article 2 of Youth Protection Act on Substances Hazardous to Youth	Not applicable.	
The following components have an OEL: xylene ethylberzene Totuene Totuene ISHA Enforcement Regs Messaurementit Messaurementit Special Health Check- up) Standard of Industrial			I Substances and Physical Factors	
Annex 19 (Exposure standards established for harmful factors) ISHA Enforcement Regs : The following components are listed: xylene, ethyl benzene Annex 21 (Harmful factors subject to Work Environment Measurement) ISHA Enforcement Regs : The following components are listed: Xylene, Ethyl benzene Annex 22 (Harmful Factors Subject to Special Health Check- up) Standard of Industrial Safety and Health Annex 12 (Hazmful Factors Subject to control) : The following components are listed: xylene, ethyl benzene Safety and Health Annex 12 (Hazmful Safety Management Act Safety Management		The following components xylene ethylbenzene chlorobenzene		
Annex 21 (Harmful factors subject to Work Environment Measurement) ISHA Enforcement Regs : The following components are listed: Xylene, Ethyl benzene Annex 22 (Harmful Factors Subject to Special Health Check- up) Standard of Industrial Safety and Health Annex 12 (Hazardous Substances subject to control) : The following components are listed: xylene, ethyl benzene Safety and Health Annex 12 (Hazardous Substances subject to control) B. Regulation according to Chemicals Control Act CCA Article 11 (TR) : The following components are listed: Xylene including o-,m-,p- isomer, Ethylbenzer Article 18 Prohibited (K- Reach Article 27) Article 19 Subject to chemicals (K-Reach Article 20 Toxic : None of the components are listed. Reach Article 20 Article 20 Toxic Article 20 Toxic : Not applicable Chemicals (K-Reach Article 20 Toxic : Note of the components are listed. (Accident Precaution Chemicals) CXA Article 39 Existing Chemical : None of the components are listed. (Accident Precaution Chemicals) Existing Chemical Substances Subject to Registration : The following components are listed. Xylene, Toluene Substances Subject to Registration C. Dangerous Materials : Class: Class 4 - Flammable Liquid Itern: 2. Class 1 petroleums - Water-insoluble liquid Threshold: 200 L Danger category: II Signal word: Contact with sources of ignition prohibited D. Wastes regulation : Dispose of contents and container in accordance with all local, regional, national and international regulations.		Annex 19 (Exposure standards established	The following components are listed: toluene	
Annex 22 (Harmful Factors Subject to Special Health Check- up) The following components are listed: xylene, ethyl benzene Safety and Health Annex 12 (Hazardous substances subject to control) B. Regulation according to Chemicals Control Act CCA Article 11 (TRI) : The following components are listed: Xylene including o-,m-,p- isomer, Ethylbenzer Article 18 Prohibited (K- Reach Article 27) Article 19 Subject to authorization (K-Reach Article 20 Toxic : None of the components are listed. Article 20 Toxic : None of the components are listed. Article 20 Toxic : None of the components are listed. Article 20 Toxic : None of the components are listed. Article 20 Farticle 10 (K-Reach Article 20) : None of the components are listed. Article 20 Farticle 11 (K- each Article 27) : None of the components are listed. CA Article 20 article 20 is in the components are listed. : None of the components are listed. Article 20 is in the components are listed. : None of the components are listed. CA Article 27) : Cass: Class 4 - Flammable Liquid Item: 2. Class 1 petroleums - Water-insoluble liquid Threshold: 200 L Danger category: II Signal word: Contact with sources of ignition prohibited D. Wastes regulation : Dispose of contents and container in accordance with all local, regional, national and international regulations. E. Regulation according to other foreign laws International regulations : Dispose of cont		Annex 21 (Harmful factors subject to Work Environment	The following components are listed: xylene, ethyl benzene	
Safety and Health Annex 12 (Hazardous substances subject to control) Image: Subject to control Act CCA Article 11 (TR) : The following components are listed: Xylene including o-,m-,p- isomer, Ethylbenzer Article 18 Prohibited (K- Reach Article 27) : None of the components are listed. Article 19 Subject to authorization (K-Reach Article 20 Toxic : None of the components are listed. Article 20 Toxic : None of the components are listed. Article 20 Toxic : None of the components are listed. Article 20 Toxic : None of the components are listed. Article 20 Toxic : None of the components are listed. Reach Article 20 : None of the components are listed. Article 20 Toxic : None of the components are listed. Reach Article 27) : None of the components are listed. CCA Article 39 : None of the components are listed. (Accident Precaution Chemicals) : The following components are listed. Existing Chemical Substances Subject to Registration : Class: Class 4 - Flammable Liquid Item: 2. Class 1 petroleums - Water-insoluble liquid Threshold: 200 L Danger category: II Signal word: Contact with sources of ignition prohibited D. Wastes regulation : Dispose of contents and container in accordance with all local, regional, national and international regulations. E. Regulation according to other foreign laws Internati		Annex 22 (Harmful Factors Subject to Special Health Check-	The following components are listed: Xylene, Ethyl benzene	
CCA Article 11 (TR) : The following components are listed: Xylene including o-,m-,p- isomer, Ethylbenzer Article 18 Prohibited (K- : None of the components are listed. Reach Article 27) : None of the components are listed. Article 19 Subject to authorization (K-Reach Article 25) : None of the components are listed. Article 20 Toxic : Not applicable Chemicals (K-Reach Article 27) : Note of the components are listed. Article 20 Toxic : None of the components are listed. Article 20 Restricted (K- : None of the components are listed. Article 20 : None of the components are listed. Article 20 : None of the components are listed. Article 39 : None of the components are listed. (Accident Precaution Chemicals) : None of the components are listed. (Accident Precaution Chemical : The following components are listed: Xylene, Toluene Substances Subject to Registration : Class: Class 4 - Flammable Liquid Item: 2. Class 1 petroleums - Water-insoluble liquid Threshol: 200 L Danger category: II Signal word: Contact with sources of ignition prohibited D. Wastes regulation : Dispose of contents and container in accordance with all local, regional, national and international regulations. E. Regulation according to other foreign la		Safety and Health Annex 12 (Hazardous substances subject to	The following components are listed: xylene, ethyl benzene	
Article 18 Prohibited (K- Reach Article 27) : None of the components are listed. Article 19 Subject to authorization (K-Reach Article 25) : None of the components are listed. Article 20 Toxic Chemicals (K-Reach Article 20) : Not applicable Article 20 Restricted (K- Reach Article 27) : None of the components are listed. CCA Article 39 (Accident Precaution Chemicals) : None of the components are listed. Existing Chemical Substances Subject to Registration : The following components are listed: Xylene, Toluene C. Dangerous Materials Safety Management Act : Class: Class 4 - Flammable Liquid Item: 2. Class 1 petroleums - Water-insoluble liquid Threshold: 200 L Danger category: II Signal word: Contact with sources of ignition prohibited D. Wastes regulation : Dispose of contents and container in accordance with all local, regional, national and international regulations.	В.	Regulation according to (emicals Control Act	
Reach Article 27) Article 19 Subject to authorization (K-Reach Article 25) : None of the components are listed. Article 20 Toxic : Not applicable Chemicals (K-Reach Article 20) : Not applicable Article 20 Restricted (K- : None of the components are listed. Reach Article 27) : None of the components are listed. CCA Article 39 : None of the components are listed. (Accident Precaution Chemicals) : None of the components are listed. Existing Chemical Substances Subject to Registration : The following components are listed: Xylene, Toluene C. Dangerous Materials Safety Management Act : Class: Class 4 - Flammable Liquid Item: 2. Class 1 petroleums - Water-insoluble liquid Threshold: 200 L Danger category: II Signal word: Contact with sources of ignition prohibited D. Wastes regulation : Dispose of contents and container in accordance with all local, regional, national and international regulations. E. Regulation according to other foreign laws International regulations : Ditem foreign laws International regulations		CCA Article 11 (TRI)	The following components are listed: Xylene including o-,m-,p- isomer,	Ethylbenzene
authorization (K-Reach Article 25) Article 20 Toxic : Not applicable Chemicals (K-Reach Article 20) : None of the components are listed. Article 20 Restricted (K- Reach Article 27) : None of the components are listed. CCA Article 39 (Accident Precaution Chemicals) : None of the components are listed. Existing Chemical Substances Subject to Registration : The following components are listed: Xylene, Toluene C. Dangerous Materials Safety Management Act : Class: Class 4 - Flammable Liquid Item: 2. Class 1 petroleums - Water-insoluble liquid Threshold: 200 L Danger category: II Signal word: Contact with sources of ignition prohibited D. Wastes regulation : Dispose of contents and container in accordance with all local, regional, national and international regulations. E. Regulation according to other foreign laws International regulations			None of the components are listed.	
Chemicals (K-Reach Article 20) Image: Chemical Structure of the components are listed. Article 20 Restricted (K- Reach Article 27) Image: None of the components are listed. CCA Article 39 (Accident Precaution Chemicals) Image: None of the components are listed. Existing Chemical Substances Subject to Registration Image: The following components are listed: Xylene, Toluene C. Dangerous Materials Safety Management Act Image: Class: Class 4 - Flammable Liquid Item: 2. Class 1 petroleums - Water-insoluble liquid Threshold: 200 L Danger category: II Signal word: Contact with sources of ignition prohibited D. Wastes regulation Image: Dispose of contents and container in accordance with all local, regional, national and international regulations. E. Regulation according to other foreign laws International regulations		authorization (K-Reach	None of the components are listed.	
Reach Article 27) CCA Article 39 : None of the components are listed. (Accident Precaution Chemicals) : The following components are listed: Xylene, Toluene Existing Chemical Substances Subject to Registration : The following components are listed: Xylene, Toluene C. Dangerous Materials Safety Management Act : Class: Class 4 - Flammable Liquid Item: 2. Class 1 petroleums - Water-insoluble liquid Threshold: 200 L Danger category: II Signal word: Contact with sources of ignition prohibited D. Wastes regulation : Dispose of contents and container in accordance with all local, regional, national and international regulations. E. Regulation according to other foreign laws International regulations : Dispose of contents and container in accordance with all local, regional, national and international regulations.		Chemicals (K-Reach	Not applicable	
 (Accident Precaution Chemicals) Existing Chemical Substances Subject to Registration Class: Class 4 - Flammable Liquid Item: 2. Class 1 petroleums - Water-insoluble liquid Threshold: 200 L Danger category: II Signal word: Contact with sources of ignition prohibited Wastes regulation Dispose of contents and container in accordance with all local, regional, national and international regulations. 			None of the components are listed.	
Substances Subject to Registration C. Dangerous Materials Safety Management Act : Class: Class 4 - Flammable Liquid Item: 2. Class 1 petroleums - Water-insoluble liquid Threshold: 200 L Danger category: II Signal word: Contact with sources of ignition prohibited D. Wastes regulation : Dispose of contents and container in accordance with all local, regional, national and international regulations. E. Regulation according to other foreign laws International regulations		(Accident Precaution	None of the components are listed.	
Safety Management Act Item: 2. Class 1 petroleums - Water-insoluble liquid Threshold: 200 L Danger category: II Signal word: Contact with sources of ignition prohibited D. Wastes regulation : Dispose of contents and container in accordance with all local, regional, national and international regulations. E. Regulation according to other foreign laws International regulations		Substances Subject to	The following components are listed: Xylene, Toluene	
 D. Wastes regulation : Dispose of contents and container in accordance with all local, regional, national and international regulations. E. <u>Regulation according to other foreign laws</u> <u>International regulations</u> 	C.	-	Item: 2. Class 1 petroleums - Water-insoluble liquid Threshold: 200 L Danger category: II	
International regulations	D.	Wastes regulation	Dispose of contents and container in accordance with all local, regional	, national
	Е.	Regulation according to o	-	
Date of issue/Date of revision : 10/18/2023 Date of previous issue : 10/18/2023 Version : 1 12/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/		International regulations		
	Dat	e of issue/Date of revision	: 10/18/2023 Date of previous issue : 10/18/2023 Version	:1 12/14

Section 15. Regulatory information

Chemical Weapon Convention List Schedules I, II & III Chemicals						
Not listed.						
Montreal Protocol	Montreal Protocol					
Not listed.	Not listed.					
Stockholm Convention on Persistent Organic Pollutants						
Not listed.						
Rotterdam Convention on Prior Informed Consent (PIC)						
Not listed.						
UNECE Aarhus Protoco	UNECE Aarhus Protocol on POPs and Heavy Metals					
Not listed.						
Inventory list						
Australia	:	All components are listed or exempted.				
Canada	:	All components are listed or exempted.				
China	:	All components are listed or exempted.				
Eurasian Economic Union	-	Russian Federation inventory: All components are listed or exempted.				
Japan	:	Japan inventory (CSCL): Not determined. Japan inventory (ISHL): Not determined.				
New Zealand	:	All components are listed or exempted.				
Philippines	:	All components are listed or exempted.				
Republic of Korea	:	All components are listed or exempted.				
Taiwan	1	All components are listed or exempted.				
Thailand	:	All components are listed or exempted.				
Turkey	1	Not determined.				
United States	1	Not determined.				
Viet Nam	1	All components are listed or exempted.				

Section 16. Other information

A. References	 Registry of Toxic Effects of Chemical Substances United States Environmental Protection Agency ECOTOX
B. Date of issue/Date of revision	: 10/18/2023
C. Version	: 1
Date of printing	: 10/26/2023
D. Other	
Indicates information that	at has changed from previously issued version.
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = International Air Transport Association IBC = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available SGG = Segregation Group UN = United Nations
Notice to reader	

Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the abovenamed supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.