SAFETY DATA SHEET

622 Line Comp A

SDS Number: AA00319-0000000084

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 : 622 Line Comp A

Product code : 15980

Product description : Paint.

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

Identified uses

Use in coatings - Industrial use

Use in coatings - Professional use

C. Manufacturer : Chokwang Jotun Ltd.
96, Gwahaksandan 1-ro
Gangseo-gu, Busan
South Korea
Tel: +82 51 797 6000
Fax: +82 51 711 7735
SDSJotun@jotun.com

Emergency telephone number : H.G.LEE Chokwang Jotun Ltd.
Tel: +82 51 797 6000

Section 2. Hazards identification

A. Hazard classification : FLAMMABLE LIQUIDS - Category 3
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

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

Symbol :

Signal word : Warning.

Hazard statements : H226 - Flammable liquid and vapour.
H335 - May cause respiratory irritation.
H351 - Suspected of causing cancer.
H373 - May cause damage to organs through prolonged or repeated exposure.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Section 2. Hazards identification

Prevention : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves, protective clothing and eye or face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P260 - Do not breathe vapour.

Response : P308 + P313 - IF exposed or concerned: Get medical advice or attention.
P304 + P340, P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

Storage : P405 - Store locked up.
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

C.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

Ingredient name	Common name	Identifiers	%
titanium dioxide	titanium dioxide	CAS: 13463-67-7	≥15 - ≤20
n-butyl acetate	n-butyl acetate	CAS: 123-86-4	≥15 - ≤20
c.i. pigment black 28	C.I. Pigment Black 28	CAS: 68186-91-4	≤10
xylene	xylene	CAS: 1330-20-7	≤10
ethylbenzene	ethylbenzene	CAS: 100-41-4	≤10
dimethyl carbonate	dimethyl ester	CAS: 616-38-6	≤10
4-methylpentan-2-one	methyl isobutyl ketone	CAS: 108-10-1	≤10
cyclohexanone	cyclohexanone	CAS: 108-94-1	≤3
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacat	CAS: 41556-26-7	≤3

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

A. 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.

B. 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

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. 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.

E. Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

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 dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

B. Specific hazards arising from the chemical : Flammable liquid and vapour. 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. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

Section 5. Firefighting measures

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.

Special precautions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if 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

A. 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. 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.

B. 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). Water polluting material. May be harmful to the environment if released in large quantities.

C. Methods and material for containment 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 spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

A. Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. 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 release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

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 in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. 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
n-butyl acetate	**Ministry of Employment and Labor (Republic of Korea, 1/2020).** STEL: 200 ppm 15 minutes. TWA: 150 ppm 8 hours.
xylene	**Ministry of Employment and Labor (Republic of Korea, 1/2020). [Xylene (all isomers)]** STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.
ethylbenzene	**Ministry of Employment and Labor (Republic of Korea, 1/2020).** STEL: 125 ppm 15 minutes. TWA: 100 ppm 8 hours.
4-methylpentan-2-one	**Ministry of Employment and Labor (Republic of Korea, 1/2020).** STEL: 75 ppm 15 minutes. TWA: 50 ppm 8 hours.
cyclohexanone	**Ministry of Employment and Labor (Republic of Korea, 1/2020). Absorbed through skin.** TWA: 25 ppm 8 hours. STEL: 50 ppm 15 minutes.

B. 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.

C. Personal protective equipment

Respiratory protection : If workers are exposed to concentrations above the exposure limit, they must use a respirator according to EN 140. Use respiratory mask with charcoal and dust filter when spraying this product, according to EN 14387(as filter combination A2-P2). In confined spaces, use compressed-air or fresh-air respiratory equipment. When use of roller or brush, consider use of charcoalfilter.

Eye protection : Use safety eyewear designed to protect against splash of liquids.

Hand protection :

Section 8. Exposure controls/personal protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.
The breakthrough time must be greater than the end use time of the product.
The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.
Gloves should be replaced regularly and if there is any sign of damage to the glove material.
Always ensure that gloves are free from defects and that they are stored and used correctly.
The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.
Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Wear suitable gloves tested to ISO 374-1:2016.
Recommended, gloves(breakthrough time) > 8 hours: Teflon (> 0.35 mm), polyvinyl alcohol (PVA) (> 0.3 mm), 4H/Silver Shield® (> 0.07 mm), fluor rubber (> 0.35 mm)
May be used, gloves(breakthrough time) 4 - 8 hours: nitrile rubber (> 0.75 mm), neoprene (> 0.35 mm), butyl rubber (> 0.4 mm), PVC (> 0.5 mm), Viton® (> 0.7 mm)

For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves.

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

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.

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.

A. Appearance

Physical state : Liquid.

Colour : Various colours.

B. Odour : Characteristic.

C. Odour threshold : Not applicable.

D. pH : Not applicable.

E. Melting/freezing point : Not applicable.

F. Boiling point, initial boiling point, and boiling range : Lowest known value: 90.2°C (194.4°F) (dimethyl carbonate). Weighted average: 123.39°C (254.1°F)

G. Flash point : Closed cup: 25°C

H. Evaporation rate : Highest known value: 3.22 (dimethyl carbonate) Weighted average: 1.38compared with butyl acetate

I. Flammability (solid, gas) : Not applicable.

J. Lower and upper explosive (flammable) limits : 0.8 - 12.9%

K. Vapour pressure : Highest known value: 7.6 kPa (56.8 mm Hg) (at 20°C) (dimethyl carbonate). Weighted average: 2.4 kPa (18 mm Hg) (at 20°C)

Section 9. Physical and chemical properties

L. Solubility : cold water Not soluble
hot water Not soluble

M. Vapour density : Highest known value: 4 (Air = 1) (n-butyl acetate). Weighted average: 3.63 (Air = 1)

N. Relative density : 1.27 to 1.33 g/cm³

O. Partition coefficient: n-octanol/water : Not available.

P. Auto-ignition temperature : Lowest known value: 415°C (779°F) (n-butyl acetate).

Q. Decomposition temperature : Not available.

R. Viscosity : Kinematic (40°C (104°F)): >20.5 mm^2/s (>20.5 cSt)

S. Molecular weight : Not applicable.

Particle characteristics

Median particle size : Not applicable.

Section 10. Stability and reactivity

A. Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

B. Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

C. Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.

D. Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

There are no data available on the mixture itself. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. Ingestion may cause nausea, diarrhea and vomiting.

A. Information on likely routes of exposure : Not available.

Potential acute health effects

Inhalation : May cause respiratory irritation.

Ingestion : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Eye contact : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Ingestion : No specific data.

Section 11. Toxicological information

Skin contact : No specific data.

Eye contact : No specific data.

B. Health hazards

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
n-butyl acetate	LC50 Inhalation Vapour	Rat	>21.1 mg/l	4 hours
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	13100 mg/kg	-
xylene	LC50 Inhalation Vapour	Rat	20 mg/l	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
	TDLo Dermal	Rabbit	4300 mg/kg	-
ethylbenzene	LC50 Inhalation Vapour	Rat - Male	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
dimethyl carbonate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	13 g/kg	-
cyclohexanone	LC50 Inhalation Gas.	Rat	8000 ppm	4 hours
	LD50 Dermal	Rabbit	1 mL/kg	-
	LD50 Oral	Rat	1800 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
titanium dioxide	Skin - Mild irritant	Human	-	72 hours	-
xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
4-methylpentan-2-one	Eyes - Mild irritant	Mammal - species unspecified	-	-	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 microliters	-
	Eyes - Severe irritant	Rabbit	-	40 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
cyclohexanone	Eyes - Irritant	Mammal - species unspecified	-	-	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 250 Micrograms	-
	Skin - Mild irritant	Human	-	48 hours 50 Percent	-
	Skin - Mild irritant	Mammal - species unspecified	-	-	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	skin	Mammal - species unspecified	Sensitising

CMR - ISHA Article 42 Occupational Exposure Limits

Section 11. Toxicological information

Product/ingredient name	Identifiers	Classification
Titanium dioxide	CAS: 13463-67-7	CARCINOGENICITY - Category 2
Ethyl benzene	CAS: 100-41-4	CARCINOGENICITY - Category 2
Hexone	CAS: 108-10-1	CARCINOGENICITY - Category 2
Cyclohexanone	CAS: 108-94-1	CARCINOGENICITY - Category 2

Mutagenicity

Conclusion/Summary : No known significant effects or critical hazards.

Carcinogenicity

Conclusion/Summary : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	OSHA	IARC	NTP	ACGIH
c.i. pigment black 28	-	3	-	-
ethylbenzene	-	2B	-	A3
4-methylpentan-2-one	-	2B	-	A3
cyclohexanone	-	3	-	A3

Reproductive toxicity

Not available.

Teratogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
622 Line Comp A (mmi-wcs)	Category 3	-	Respiratory tract irritation
n-butyl acetate	Category 3	-	Narcotic effects
xylene	Category 3	-	Respiratory tract irritation
4-methylpentan-2-one	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
622 Line Comp A (mmi-wcs)	Category 2	-	-
ethylbenzene	Category 2	-	hearing organs

Aspiration hazard

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

Potential chronic health effects

Chronic toxicity

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 : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
n-butyl acetate	13100	N/A	N/A	N/A	N/A
xylene	4300	1100	N/A	20	N/A
ethylbenzene	3500	N/A	N/A	17.8	N/A
dimethyl carbonate	13000	N/A	N/A	N/A	N/A
4-methylpentan-2-one	2080	N/A	N/A	11	N/A
cyclohexanone	1800	1100	N/A	11	N/A

Section 12. Ecological information

A. Ecotoxicity

This material is harmful to aquatic life with long lasting effects.

Product/ingredient name	Result	Species	Exposure
titanium dioxide	Acute LC50 3 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 6.5 mg/l Fresh water	Daphnia - Daphnia pulex - Neonate	48 hours
	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
xylene	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 7700 µg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 2.93 mg/l	Daphnia	48 hours
	Acute LC50 4.2 mg/l	Fish	96 hours
4-methylpentan-2-one	Chronic NOEC 78 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 168 mg/l Fresh water	Fish - Pimephales promelas - Embryo	33 days
cyclohexanone	Acute EC50 32.9 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours
	Chronic EC10 3.56 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours

B. Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene	-	-	Readily
ethylbenzene	-	-	Readily
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	-	-	Not readily

C. Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
n-butyl acetate	2.3	-	low
xylene	3.12	8.1 to 25.9	low
ethylbenzene	3.6	-	low
dimethyl carbonate	0.354	-	low
4-methylpentan-2-one	1.9	-	low
cyclohexanone	0.86	-	low

D. Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Section 12. Ecological information

E. Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

A. 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. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	UN	IMDG	IATA
A. UN number	UN1263	UN1263	UN1263
B. UN proper shipping name	Paint	Paint	Paint
C. Transport hazard class(es)	3 	3 	3 
D. Packing group	III	III	III
E. Environmental hazards	No.	No.	No.

Additional information

IMDG : **Emergency schedules** F-E, S-E

ADR/RID : **Hazard identification number** 30
Tunnel code (D/E)

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 to IMO instruments : Not available.

Transport in accordance with ADR/RID, IMDG/IMO and ICAO/IATA and national regulation.

Section 15. Regulatory information

A. Regulation according to ISHA

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.

Article 2 of Youth Protection Act on Substances Hazardous to Youth : Not applicable.

Exposure Limits of Chemical Substances and Physical Factors

The following components have an OEL:
n-butyl acetate
xylene
ethylbenzene
4-methylpentan-2-one
cyclohexanone

ISHA Enforcement Regs Annex 19 (Exposure standards established for harmful factors) : The following components are listed: cyclohexanone

ISHA Enforcement Regs Annex 21 (Harmful factors subject to Work Environment Measurement) : The following components are listed: titanium dioxide, n-butyl acetate, chromium and its inorganic compounds, xylene, ethyl benzene, methyl isobutyl ketone, cyclohexanone

ISHA Enforcement Regs Annex 22 (Harmful Factors Subject to Special Health Check-up) : The following components are listed: Chromium and its compounds, Xylene, Ethyl benzene, Methyl isobutyl ketone, Cyclohexanone

Standard of Industrial Safety and Health Annex 12 (Hazardous substances subject to control) : The following components are listed: titanium dioxide, n-butyl acetate, copper and its compounds, xylene, ethyl benzene, methyl isobutyl ketone, cyclohexanone

B. Regulation according to Chemicals Control Act

AREC Article 17 (TRI) : The following components are listed: Chromium and its compounds, Xylene including o-,m-,p- isomer, Ethylbenzene

AREC Article 32 (Banned) : None of the components are listed.

Article 19 Subject to authorization (K-Reach Article 25) : None of the components are listed.

AREC Toxic chemicals : Not applicable

AREC Article 32 (Restricted) : 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

Section 15. Regulatory information

C. Dangerous Materials Safety Management Act : **Class:** Class 4 - Flammable Liquid
Item: 4. Class 2 petroleums - Water-insoluble liquid
Threshold: 1000 L
Danger category: III
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

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 16. Other information

A. References : - Registry of Toxic Effects of Chemical Substances
- United States Environmental Protection Agency ECOTOX

B. Date of issue : 25.01.2022

Date of revision : 29.11.2023

C. Version : 1.05

Date of printing : **29.11.2023**

D. Other

Indicates information that 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 = Intermediate Bulk Container
IMDG = 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

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the given data without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.