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

SAFETY DATA SHEET

Intersmooth 7460HS SPC Red

Section 1. Chemical product and company identification

A. Product name : **Intersmooth 7460HS SPC Red**

Product code : **BEA747**

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

Identified uses
Professional application of coatings and inks

Uses advised against	Reason
All Other Uses	

C. Manufacturer : International Paint Ltd.
Stoneygate Lane
Felling
Gateshead
Tyne and Wear
NE10 0JY UK
Tel: +44 (0)191 469 6111 Fax: +44 (0)191 438 3711

Emergency telephone number (with hours of operation) : +44 (0)191 469 6111 (24H)

e-mail address of person responsible for this SDS : sdsfellinguk@akzonobel.com

Section 2. Hazards identification

A. Hazard classification : FLAMMABLE LIQUIDS - Category 3
ACUTE TOXICITY (inhalation) - Category 4
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
CARCINOGENICITY - Category 1A
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
ACUTE AQUATIC HAZARD - Category 1
LONG-TERM AQUATIC HAZARD - Category 1

B. GHS label elements, including precautionary statements

Symbol :

Signal word : Danger

Hazard statements : Flammable liquid and vapour.
Harmful if inhaled.
Causes serious eye damage.
Causes skin irritation.
May cause cancer.
Causes damage to organs through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.

Precautionary statements

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Section 2. Hazards identification

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not breathe vapour. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Response : Collect spillage. Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

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

Supplemental label elements : Wear appropriate respirator when ventilation is inadequate.

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

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	Common name	CAS number	%	Classification
dicopper oxide	Dicopper oxide	1317-39-1	≥40 - <45	Acute Tox. 4, H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
xylene	xylene	1330-20-7	≥15 - <20	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 STOT RE 1, H372
diiron trioxide	iron(iii)oxide	1309-37-1	≥5 - <10	Not classified.
zinc oxide	zinc oxide	1314-13-2	≥5 - <10	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
bis(1-hydroxy-1H-pyridine-2-thionato-O,S)copper	bis(1-hydroxy-1H-pyridine-2-thionato-O,S) copper	14915-37-8	<10	Acute Tox. 4, H302 Acute Tox. 2, H330 Eye Dam. 1, H318

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Section 3. Composition/information on ingredients

				Aquatic Acute 1, H400 Aquatic Chronic 1, H410
ethylbenzene	ethylbenzene	100-41-4	≥0.1 - <5	Flam. Liq. 2, H225 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304
butan-1-ol	butan-1-ol	71-36-3	≥1 - <5	Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336
E96096	E96096	-	<10	Skin Sens. 1, H317 Aquatic Chronic 4, H413
ethanol	ethanol	64-17-5	<10	Flam. Liq. 2, H225 Carc. 1A, H350

There are no 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 : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.

B. Skin contact : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

C. Inhalation : Get medical attention immediately. Call a poison center or physician. 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. 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.

Section 4. First aid measures

D. Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Chemical burns must be treated promptly by a 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.

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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. This material is very toxic 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
sulfur oxides
carbonyl halides
metal oxide/oxides

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. Do not breathe 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. Collect spillage.

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.

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. Vapours are heavier than air and may spread along floors. Separate from oxidizing 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.

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Section 8. Exposure controls/personal protection

A. Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
dicopper oxide	고용노동부 (Republic of Korea, 8/2016). TWA: 0.1 mg/m³ 8 hours. Form: Fume
xylene	고용노동부 (Republic of Korea, 8/2016). STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.
diiron trioxide	**Ministry of Labor (Republic of Korea, 8/2013).** TWA: 5 mg/m³, (as Fe) 8 hours. Form: Fume TWA: 5 mg/m³, (as Fe) 8 hours. TWA: 10 mg/m³ 8 hours. Form: total dust with less than 1% of free SiO2
zinc oxide	**Ministry of Labor (Republic of Korea, 8/2013).** STEL: 10 mg/m³ 15 minutes. Form: Fume TWA: 5 mg/m³ 8 hours. Form: Fume TWA: 2 mg/m³ 8 hours. Form: Respirable dust
ethylbenzene	**Ministry of Labor (Republic of Korea, 8/2013).** STEL: 545 mg/m³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 435 mg/m³ 8 hours. TWA: 100 ppm 8 hours.
butan-1-ol	**Ministry of Labor (Republic of Korea, 8/2013). Absorbed through skin.** TWA: 60 mg/m³ 8 hours. TWA: 20 ppm 8 hours.
ethanol	**Ministry of Labor (Republic of Korea, 8/2013).** TWA: 1900 mg/m³ 8 hours. TWA: 1000 ppm 8 hours.

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 : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 8. Exposure controls/personal protection

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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection : Use chemical resistant gloves classified under Standard EN 374: Protective gloves against chemicals and micro-organisms. Recommended: Viton® or Nitrile gloves. When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. 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. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/ puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier. Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

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

A. Appearance

Physical state : Liquid.

Colour : Red.

B. Odour : Solvent.

C. Odour threshold : Not available.

D. pH : Not applicable.

E. Melting/freezing point : Not available.

F. Boiling point/boiling range : Lowest known value: 136.16°C (277.1°F) (xylene).

G. Flash point : Closed cup: 25°C (77°F)

Fire point : Not available.

H. Evaporation rate : Not available.

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

J. Lower and upper explosive (flammable) limits : Greatest known range: Lower: 0.8% Upper: 6.7% (xylene)

K. Vapour pressure : Not available.

L. Solubility : Insoluble in the following materials: cold water.

M. Vapour density : Not available.

N. Relative density : 1.91

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Section 9. Physical and chemical properties

O.	**Partition coefficient: n-octanol/water**	: Not available.
P.	**Auto-ignition temperature**	: Not available.
Q.	**Decomposition temperature**	: Not available.
R.	**Viscosity**	: Kinematic (room temperature): 117 mm^2/s (117 cSt)
S.	**Molecular weight**	: 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**	: Reactive or incompatible with the following materials: oxidizing materials
D.	**Hazardous decomposition products**	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

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

Potential acute health effects

Inhalation : Harmful if inhaled. May give off gas, vapour or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion : Irritating to mouth, throat and stomach.

Skin contact : Causes skin irritation.

Eye contact : Causes serious eye damage.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
headache
drowsiness/fatigue
dizziness/vertigo
muscle weakness
unconsciousness

Ingestion : Adverse symptoms may include the following:
stomach pains

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

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Section 11. Toxicological information

B. Health hazards

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
dicopper oxide	LC50 Inhalation Dusts and mists	Rat	3.34 mg/l	4 hours
	LD50 Oral	Rat	1340 mg/kg	-
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
bis(1-hydroxy-1H-pyridine-2-thionato-O,S)copper	LC50 Inhalation Dusts and mists	Rat	70 mg/m³	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	1075 mg/kg	-
ethylbenzene	LC50 Inhalation Gas.	Rabbit	4000 ppm	4 hours
	LD50 Dermal	Rabbit	17800 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
butan-1-ol	LC50 Inhalation Vapour	Rat	24 mg/l	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
ethanol	LC50 Inhalation Vapour	Rat	124700 mg/m³	4 hours
	LD50 Oral	Rat	7 g/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-
zinc oxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-
butan-1-ol	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Eyes - Severe irritant	Rabbit	-	0.005 Mililiters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	0. 066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	400	-

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Section 11. Toxicological information

	Skin - Moderate irritant	Rabbit	-	milligrams 24 hours 20 milligrams	-

Sensitisation

Not available.

CMR - ISHA Article 42 Public Notice No 2013-38 Occupational Exposure Limits

Product/ingredient name	CAS number	Classification
Ethyl benzene Ethanol	100-41-4 64-17-5	Carc. 2 Carc. 1A

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
xylene ethylbenzene butan-1-ol	Category 3 Category 3 Category 3	Not applicable. Not applicable. Not applicable.	Narcotic effects Respiratory tract irritation Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
xylene ethylbenzene	Category 1 Category 2	Not determined Not determined	Not determined hearing organs

Aspiration hazard

Name	Result
ethylbenzene	ASPIRATION HAZARD - Category 1

Potential chronic health effects

Chronic toxicity

Not available.

General : Causes damage to organs through prolonged or repeated exposure.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

ATE value

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Section 11. Toxicological information

Route	Result
Oral	2337.4 mg/kg
Dermal	6330.1 mg/kg
Inhalation (gases)	29415.8 ppm
Inhalation (vapours)	283.7 mg/l
Inhalation (dusts and mists)	1.58 mg/l

Section 12. Ecological information

A. Ecotoxicity

Product/ingredient name	Result	Species	Exposure
dicopper oxide	Acute EC50 0.042 mg/l Fresh water	Daphnia - Daphnia similis	48 hours
	Acute IC50 0.71 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	96 hours
	Acute LC50 0.075 mg/l Fresh water	Fish - Danio rerio	96 hours
	Chronic IC10 0.009 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	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
zinc oxide	Acute EC50 0.042 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute EC50 1 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute IC50 0.17 mg/l	Algae - Selenastrum capricornutum	72 hours
	Acute LC50 1.1 mg/l	Fish - Oncorhynchus Mykiss	96 hours
	Chronic NOEC 0.017 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
bis(1-hydroxy-1H-pyridine-2-thionato-O,S)copper	Acute EC50 0.035 mg/l	Algae - Skeletonems Costatum	72 hours
	Acute EC50 0.022 mg/l	Crustaceans - Daphnia Magna	48 hours
	Acute LC50 0.0032 mg/l	Fish - Oncorhynchus mykiss	96 hours
ethylbenzene	Acute EC50 3.6 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute LC50 18.4 to 25.4 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 5.1 to 5.7 mg/l Marine water	Fish - Menidia menidia	96 hours
butan-1-ol	Acute EC50 1983 to 2072 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1910 mg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
ethanol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks

Section 12. Ecological information

B. Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
zinc oxide	-	-	Not readily
ethylbenzene	-	-	Readily

C. Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
xylene	3.12	8.1 to 25.9	low
zinc oxide	-	60960	high
ethylbenzene	3.6	15	low
butan-1-ol	1	-	low
ethanol	-0.35	-	low

D. Mobility in soil

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

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

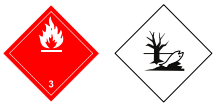
Section 13. Disposal considerations

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. Marine pollutant (dicopper oxide, zinc oxide)	PAINT
C. Transport hazard class(es)	3 	3 	3 
D. Packing group	III	III	III

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Section 14. Transport information

E. Environmental hazards	No.	Yes.	No.
F. Additional information	-	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.	The environmentally hazardous substance mark may appear if required by other transportation regulations.

IMDG Code Segregation group : Not applicable.

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.

Section 15. Regulatory information

A. Regulation according to ISHA

ISHA article 37 (Harmful substances prohibited from manufacture) : None of the components are listed.

ISHA article 38 (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:
dicopper oxide
Xylene
diiron trioxide
zinc oxide
ethylbenzene
butan-1-ol
ethanol

ISHA Enforcement Regs Annex 11-3 (Exposure standards established for harmful factors) : None of the components are listed.

ISHA Enforcement Regs Annex 11-4 (Harmful factors subject to Work Environment Measurement) : The following components are listed: Xylene, o,m,p-isomers; Ethylbenzene; n-Butyl alcohol; Zinc oxide; Iron oxide

ISHA Enforcement Regs Annex 12-2 (Harmful Factors Subject to Special Health Check-up) : The following components are listed: Xylene; Ethylbenzene; n-Butyl alcohol; Zinc oxide; Copper dusts, fume and mists; Iron oxide

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Section 15. Regulatory information

Standard of Industrial Safety and Health Annex 12 (Hazardous substances subject to control) : The following components are listed: Xylene; Ethyl benzene; n-Butyl alcohol; Zinc and its compounds; Copper and its compounds; Iron and its compounds

B. Regulation according to Chemicals Control Act

K-Reach Article 20 (Toxic chemicals) : Not applicable

K-Reach Article 27 (Prohibited) : None of the components are listed.

K-Reach Article 27 (Restricted) : None of the components are listed.

CSCA Article 11 (TRI) : The following components are listed: Xylene; Ethylbenzene; Zinc and its compounds; Copper and its compounds; Copper and its compounds

Korea inventory : Not determined.

CSCA Article 39 (Accident Precaution Chemicals) : None of the components are listed.

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

Europe inventory : Not determined.

United States inventory (TSCA 8b) : Not determined.

Japan inventory : **Japan inventory (ENCS)**: Not determined.
Japan inventory (ISHL): Not determined.

Section 16. Other information

A. References : Not available.

B. Date of issue/Date of revision : 13/07/2018

C. Version : 3

Date of printing : **13/07/2018**

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)
UN = United Nations

Notice to reader

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Section 16. Other information

IMPORTANT NOTE: the information contained in this data sheet (as may be amended from time to time) is not intended to be exhaustive and is presented in good faith and believed to be correct as of the date on which it is prepared. It is the user's responsibility to verify that this data sheet is current prior to using the product to which it relates.

Persons using the information must make their own determinations as to the suitability of the relevant product for their purposes prior to use. Where those purposes are other than as specifically recommended in this safety data sheet, then the user uses the product at their own risk.

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