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

SAFETY DATA SHEET

Interfine 979 RAL6001 EmeraldGreen PtA

Section 1. Chemical product and company identification

A. Product name : Interfine 979 RAL6001 EmeraldGreen PtA

Product code : SYE589

B. <u>Relevant identified uses of the substance or mixture and uses advised against</u>

Identified uses		
Professional application of coatings and inks		
Uses advised against	Reason	
All Other Uses		

C. Manufacturer	: International Farg AB Holmedalen 3 Aspereds Industriomrade SE-424 22 Angered Sweden
	Tel: +46 (0) 31 928500 Fax: +46 (0) 31 928530
Emergency telephone number (with hours of operation)	: +46 8 33 12 31
e-mail address of person responsible for this SDS	: sdsfellinguk@akzonobel.com

Section 2. Hazards identification

A. Hazard classification	: FLAMMABLE LIQUIDS - Category 3
	SKIN CORROSION/IRRITATION - Category 2
	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
	SKIN SENSITIZATION - Category 1

B. GHS label elements, including precautionary statements

Symbol



Signal word	:	Warning
Hazard statements	:	Flammable liquid and vapour. Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction.

Precautionary statements

Prevention: 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. Avoid breathing vapour. Wash hands thoroughly
after handling. Contaminated work clothing should not be allowed out of the
workplace.



Section 2. Hazards identification

Response	:	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 or rash 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. If eye irritation persists: Get medical attention.
Storage	:	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	:	None known.

classification

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Ingredient name	Common name	CAS number	%	Classification
hexamethylene diacrylate	hexane-1,6-diol diacrylate	13048-33-4	≥10 - <20	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Isopropyl alcohol	propan-2-ol	67-63-0	≥5 - <10	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Amides, castor-oil, hydrogenated, N,N'-[1, 3-phenylene-bis(methylene)] bis-	Amides, castor-oil, hydrogenated, N,N'-[1, 3-phenylene-bis (methylene)] bis-	911674-82-3	<10	Skin Sens. 1, H317
				Aquatic Chronic 4, H413
iron hydroxide oxide yellow	C.I. Pigment Yellow 42	51274-00-1	≥1 - <5	Not classified.
titanium dioxide	Titanium dioxide	13463-67-7	≥0.1 - <5	Carc. 2, H351

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

:

: 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.

Section 4. First aid measures

В.	Skin contact	:	Wash with plenty of soap and 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. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. 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 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 adverse health effects persist or are severe. 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. 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. Get medical attention if adverse health effects persist or are severe. 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. 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

Α.	Extinguishing media		
	Suitable extinguishing media	:	Use dry chemical, CO_2 , water spray (fog) or foam.
	Unsuitable extinguishing media	:	Do not use water jet.
В.	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.
	Hazardous thermal decomposition products	:	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur 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

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. 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 o	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). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. 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.

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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. 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.

Section 8. Exposure controls/personal protection

A. <u>Control parameters</u>

Occupational exposure limits

Ingredient name	Exposure limits
Isopropyl alcohol	Ministry of Labor (Republic of Korea, 8/2013).
	STEL: 980 mg/m ³ 15 minutes. STEL: 400 ppm 15 minutes. TWA: 480 mg/m ³ 8 hours. TWA: 200 ppm 8 hours.
titanium dioxide	Ministry of Labor (Republic of Korea, 8/2013). TWA: 10 mg/m ³ 8 hours. Form: total dust with less than 1% of free SiO2

В.	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	:	Emissions from ventilation or work process equipment should be checked to ensure

exposure controls 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

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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.
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.
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/

Section 8. Exposure controls/personal protection

	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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 9. Physical and chemical properties

Α.	<u>Appearance</u>		
	Physical state	:	Liquid.
	Colour	:	Green.
В.	Odour	:	Solvent.
C.	Odour threshold	:	Not available.
D.	рН	:	Not applicable.
Ε.	Melting/freezing point	:	Not available.
F.	Boiling point/boiling range	:	Not available.
G.	Flash point	:	Closed cup: 37°C (98.6°F)
	Fire point	:	Not available.
Н.	Evaporation rate	:	Not available.
I.	Flammability (solid, gas)	:	Not available.
J.	Lower and upper explosive (flammable) limits	:	Greatest known range: Lower: 2% Upper: 12% (Isopropyl alcohol)
Κ.	Vapour pressure	:	Not available.
L.	Solubility	:	Insoluble in the following materials: cold water.
Μ.	Vapour density	:	Not available.
Ν.	Relative density	:	1.38
0.	Partition coefficient: n- octanol/water	:	Not available.
Ρ.	Auto-ignition temperature	:	Not available.
Q.	Decomposition temperature	:	Not available.
R.	Viscosity	:	Kinematic (room temperature): 210 mm ² /s (210 cSt)
S.	Molecular weight	:	Not applicable.

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Section 10. Stability and reactivity

C	ation 44 Touriso		aical information
D.	Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
C.	Incompatible materials	:	Reactive or incompatible with the following materials: oxidizing materials
В.	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.
,	Possibility of hazardous reactions		Under normal conditions of storage and use, hazardous reactions will not occur.
Α.	Chemical stability	:	The product is stable.

Section 11. Toxicological information

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

Potential acute health effects

Polential acute neal	in enects
Inhalation	: 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. May cause an allergic skin reaction.
Eye contact	: Causes serious eye irritation.
Over-exposure signs	s/symptoms
Inhalation	: Adverse symptoms may include the following: headache drowsiness/fatigue dizziness/vertigo muscle weakness unconsciousness
Ingestion	: No specific data.
Skin contact	: Adverse symptoms may include the following: irritation redness
Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness

B. Health hazards

:

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
hexamethylene diacrylate Isopropyl alcohol	LD50 Oral LD50 Dermal LD50 Oral	Rat Rabbit Rat	5 g/kg 12800 mg/kg 5000 mg/kg	- - -

Irritation/Corrosion

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Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
hexamethylene diacrylate	Skin - Severe irritant	Rabbit	-	24 hours 500	-
				milligrams	
Isopropyl alcohol	Eyes - Moderate irritant	Rabbit	-	24 hours 100	-
				milligrams	
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
titanium dioxide	Skin - Mild irritant	Human	-	72 hours 300	-
				Micrograms Intermittent	

Sensitisation

Not available.

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

Product/ingredient name	CAS number	Classification	
Titanium dioxide	13463-67-7	Carc. 2	

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name		Route of exposure	Target organs
Isopropyl alcohol	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Potential chronic health effects

Chronic toxicity

Not available.

General	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	No known significant effects or critical hazards.
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.





Section 11. Toxicological information

Fertility effects

: No known significant effects or critical hazards.

ATE value

Route	Result
Oral	24201.7 mg/kg

Section 12. Ecological information

A. Ecotoxicity

Product/ingredient name	Result	Species	Exposure
Isopropyl alcohol	Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 1400000 μg/l	Fish - Gambusia affinis	96 hours

B. Persistence and degradability

Not available.

C. Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
hexamethylene diacrylate	2.81	-	low
Isopropyl alcohol	0.05	-	low
titanium dioxide	-	352	low

D. Mobility in soil

Soil/water partition	: Not available.
coefficient (Koc)	

E. Other adverse effects : 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.
Β.	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
UN1263	UN1263	UN1263
PAINT	PAINT	PAINT
3	3	3
	Ш	Ш
No.	No.	No.
-	-	-
	UN1263 PAINT 3 W	UN1263 PAINT PAINT 3 3 111 III III UN1263 PAINT III III

IMDG Code Segregation : Not applicable. group

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. <u>Regulation according to ISHA</u> **ISHA** article 37 : None of the components are listed. (Harmful substances prohibited from manufacture) **ISHA** article 38 : None of the components are listed. (Harmful substances requiring permission) Article 2 of Youth : Not applicable. **Protection Act on Substances Hazardous** to Youth **Exposure Limits of Chemical Substances and Physical Factors** The following components have an OEL: propan-2-ol titanium dioxide **ISHA Enforcement Regs** : None of the components are listed. Annex 11-3 (Exposure standards established for harmful factors) ISHA Enforcement Regs : The following components are listed: Isopropyl alcohol; Iron oxide Annex 11-4 (Harmful factors subject to Work Environment Measurement)

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Section 15. Regulatory information

	ISHA Enforcement Regs Annex 12-2 (Harmful Factors Subject to Special Health Check- up)	:	The following components are listed: Isopropyl alcohol; Iron oxide
	Standard of Industrial Safety and Health Annex 12 (Hazardous substances subject to control)	:	The following components are listed: Isopropyl alcohol; Iron and its compounds
В.	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: Barium and its compounds; 2-Propanol
	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.
Е.	Regulation according to c	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

Α.	References	:	Not available.		
В.	Date of issue/Date of revision	:	30/05/2017		
C.	Version	:	3		
	Date of printing	:	30/05/2017		
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 = Internediate 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)		



Section 16. Other information

UN = United Nations

Notice to reader

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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