

SAFETY DATA SHEET

Interzone 954GF Part B

Section 1. Identification

Interzone 954GF Part B : GHS product identifier
 ZFA046 : Product code

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

AkzoNobel Saudi Arabia Ltd. : Supplier's details
 PO Box 37
 Dammam 31411
 Saudi Arabia

Tel: +966 3 812 1044 Fax: +966 3 812 1169

+966 3 812 1044 : Emergency telephone number (with hours of operation)
 +966 55 388 0087 : National advisory body/ Poison Centre (For use only by licensed medical professionals.)
 sdsfellinguk@akzonobel.com : e-mail address of person responsible for this SDS

Section 2. Hazards identification

FLAMMABLE LIQUIDS - Category 3 : Classification of the substance or mixture
 ACUTE TOXICITY (oral) - Category 5
 ACUTE TOXICITY (dermal) - Category 5
 SKIN CORROSION/IRRITATION - Category 1B
 SKIN SENSITIZATION - Category 1
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (hearing organs) - Category 2
 ACUTE AQUATIC HAZARD - Category 1
 LONG-TERM AQUATIC HAZARD - Category 1

GHS label elements



: Hazard pictograms

Danger

: Signal word

Flammable liquid and vapour.

: Hazard statements

May be harmful if swallowed or in contact with skin.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

May cause damage to organs through prolonged or repeated exposure. (hearing organs)

Very toxic to aquatic life with long lasting effects.

Section 2. Hazards identification

Precautionary statements

Wear protective gloves. Wear eye or face protection. Wear protective clothing. 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 release to the environment. Do not breathe vapour. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.	: Prevention
Collect spillage. Get medical attention if you feel unwell. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. Take off contaminated clothing and wash it before reuse. 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. Immediately call a POISON CENTER or physician.	: Response
Store locked up. Store in a well-ventilated place. Keep cool.	: Storage
Dispose of contents and container in accordance with all local, regional, national and international regulations.	: Disposal
Wear appropriate respirator when ventilation is inadequate.	: Supplemental label elements
None known.	: Other hazards which do not result in classification

Section 3. Composition/information on ingredients

Mixture **: Substance/mixture**

Classification	CAS number	% by weight	Ingredient name
Eye Irrit. 2A, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	1257085-86-1	≥50 - ≤75	Polymer containing amino, substituted amino, aminocarbonyl substituted carbopolycycle with hydroxy epoxy alkane
Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 Asp. Tox. 1, H304	1330-20-7	≤13	xylene
Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Aquatic Chronic 3, H412	2579-20-6	≥10 - ≤15	1,3-Cyclohexanedimethanamine
Acute Tox. 4, H302 Acute Tox. 4, H332	100-51-6	≤10	benzyl alcohol
Flam. Liq. 2, H225 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319	100-41-4	≤3.4	ethylbenzene

Section 3. Composition/information on ingredients

STOT SE 3, H335 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304			
Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	71-36-3	≤2.6	butan-1-ol
Ox. Sol. 3, H272 Eye Irrit. 2A, H319	13477-34-4	≤3	Nitric acid, calcium salt, tetrahydrate

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

Description of necessary first aid measures

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. **: Eye contact**

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. Seek medical attention. 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. **: Inhalation**

Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. **: Skin contact**

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. **: Ingestion**

Most important symptoms/effects, acute and delayed

Potential acute health effects

Causes serious eye damage. **: Eye contact**

Section 4. First aid measures

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.

: **Inhalation**

Causes severe burns. May be harmful in contact with skin. May cause an allergic skin reaction.

: **Skin contact**

May be harmful if swallowed. May cause burns to mouth, throat and stomach.

: **Ingestion**

Over-exposure signs/symptoms

Adverse symptoms may include the following:

pain
watering
redness

: **Eye contact**

Adverse symptoms may include the following:

headache
drowsiness/fatigue
dizziness/vertigo
muscle weakness
unconsciousness

: **Inhalation**

Adverse symptoms may include the following:

pain or irritation
redness
blistering may occur

: **Skin contact**

Adverse symptoms may include the following:

stomach pains

: **Ingestion**

Indication of immediate medical attention and special treatment needed, if necessary

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.

: **Notes to physician**

No specific treatment.

: **Specific treatments**

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.

: **Protection of first-aiders**

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Use dry chemical, CO₂, water spray (fog) or foam.

: **Suitable extinguishing media**

Do not use water jet.

: **Unsuitable extinguishing media**

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.

: **Specific hazards arising from the chemical**

Decomposition products may include the following materials:

carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

: **Hazardous thermal decomposition products**

Section 5. Firefighting measures

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. : **Special protective actions 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 protective equipment for fire-fighters**

Section 6. Accidental release measures

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. : **For non-emergency personnel**

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.

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". : **For emergency responders**

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. : **Environmental precautions**

Methods and material for containment and cleaning up

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. : **Small 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. : **Large spill**

Section 7. Handling and storage

Precautions for safe handling

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 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. : **Protective measures**

Section 7. Handling and storage

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.

: **Advice on general occupational hygiene**

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.

: **Conditions for safe storage, including any incompatibilities**

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Exposure limits	Ingredient name
ACGIH TLV (United States, 3/2017). STEL: 651 mg/m ³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 434 mg/m ³ 8 hours. TWA: 100 ppm 8 hours.	xylene
ACGIH TLV (United States, 3/2015). TWA: 20 ppm 8 hours.	ethylbenzene
ACGIH TLV (United States, 3/2015). TWA: 20 ppm 8 hours.	butan-1-ol

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.

: **Appropriate engineering 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.

: **Environmental exposure controls**

Individual protection 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.

: **Hygiene measures**

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. Use eye protection according to EN 166, designed to protect against liquid splashes. 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.

: **Eye/face protection**

Skin protection

Section 8. Exposure controls/personal 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.

: Hand 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. EN ISO 13688 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.

: Body protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

: Other skin protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary according to EN529. 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.

: Respiratory protection

Section 9. Physical and chemical properties

Appearance

Liquid.

: Physical state

Colourless.

: Colour

Amine-like.

: Odour

Not available.

: Odour threshold

Not applicable.

: pH

Not available.

: Melting point

Lowest known value: 136.16°C (277.1°F) (xylene).

: Boiling point

Closed cup: 32°C (89.6°F)

: Flash point

Not available.

: Evaporation rate

Not available.

: Flammability (solid, gas)

Greatest known range: Lower: 1.3% Upper: 13% (benzyl alcohol)

: Lower and upper explosive (flammable) limits

Not available.

: Vapour pressure

Not available.

: Vapour density

1

: Relative density

Insoluble in the following materials: cold water.

: Solubility

Not available.

: Partition coefficient: n-octanol/water

Not available.

: Auto-ignition temperature

Not available.

: Decomposition temperature

Kinematic (room temperature): 799 mm²/s (799 cSt)

: Viscosity

Section 10. Stability and reactivity

No specific test data related to reactivity available for this product or its ingredients.	: Reactivity
The product is stable.	: Chemical stability
Under normal conditions of storage and use, hazardous reactions will not occur.	: Possibility of hazardous reactions
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.	: Conditions to avoid
Reactive or incompatible with the following materials: oxidizing materials	: Incompatible materials
Under normal conditions of storage and use, hazardous decomposition products should not be produced.	: Hazardous decomposition products

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Exposure	Dose	Species	Result	Product/ingredient name
-	4300 mg/kg	Rat	LD50 Oral	xylene 1, 3-Cyclohexanedimethanamine benzyl alcohol
-	880 mg/kg	Rat	LD50 Oral	
4 hours	>4178 mg/l	Rat	LC50 Inhalation Vapour	ethylbenzene
-	2000 mg/kg	Rabbit	LD50 Dermal	
-	1620 mg/kg	Rat	LD50 Oral	butan-1-ol
4 hours	4000 ppm	Rabbit	LC50 Inhalation Gas.	
-	17800 mg/kg	Rabbit	LD50 Dermal	Nitric acid, calcium salt, tetrahydrate
-	3500 mg/kg	Rat	LD50 Oral	
4 hours	24 mg/l	Rat	LC50 Inhalation Vapour	
-	3400 mg/kg	Rabbit	LD50 Dermal	
-	3900 mg/kg	Rat	LD50 Oral	

Irritation/Corrosion

Observation	Exposure	Score	Species	Result	Product/ingredient name
-	87 milligrams	-	Rabbit	Eyes - Mild irritant	xylene
-	24 hours 5 milligrams	-	Rabbit	Eyes - Severe irritant	
-	8 hours 60 microliters	-	Rat	Skin - Mild irritant	benzyl alcohol
-	24 hours 500 milligrams	-	Rabbit	Skin - Moderate irritant	
-	100 Percent	-	Rabbit	Skin - Moderate irritant	
-	48 hours 16 milligrams	-	Man	Skin - Mild irritant	
-	100 Percent	-	Pig	Skin - Moderate irritant	ethylbenzene
-	24 hours 100 milligrams	-	Rabbit	Skin - Moderate irritant	
-	500 milligrams	-	Rabbit	Eyes - Severe irritant	butan-1-ol
-	24 hours 15 milligrams	-	Rabbit	Skin - Mild irritant	
-	24 hours 2 milligrams	-	Rabbit	Eyes - Severe irritant	
-	0.005	-	Rabbit	Eyes - Severe irritant	

Section 11. Toxicological information

-	Milliliters 24 hours 20 milligrams	-	Rabbit	Skin - Moderate irritant	Nitric acid, calcium salt, tetrahydrate
-	24 hours 500 milligrams	-	Rabbit	Eyes - Mild irritant	
-	24 hours 500 milligrams	-	Rabbit	Skin - Mild irritant	

Sensitisation

Result	Species	Route of exposure	Product/ingredient name
Sensitising	Mouse	skin	Polymer containing amino, substituted amino, aminocarbonyl substituted carbopolycycle with hydroxy epoxy alkane

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

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

Specific target organ toxicity (repeated exposure)

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

Aspiration hazard

Result	Name
ASPIRATION HAZARD - Category 1	xylene
ASPIRATION HAZARD - Category 1	ethylbenzene

Not available.

: Information on likely routes of exposure

Potential acute health effects

Causes serious eye damage.

: Eye contact

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.

: Inhalation

Section 11. Toxicological information

Causes severe burns. May be harmful in contact with skin. May cause an allergic skin reaction. : **Skin contact**

May be harmful if swallowed. May cause burns to mouth, throat and stomach. : **Ingestion**

Symptoms related to the physical, chemical and toxicological characteristics

Adverse symptoms may include the following: : **Eye contact**

pain
watering
redness

Adverse symptoms may include the following: : **Inhalation**

headache
drowsiness/fatigue
dizziness/vertigo
muscle weakness
unconsciousness

Adverse symptoms may include the following: : **Skin contact**

pain or irritation
redness
blistering may occur

Adverse symptoms may include the following: : **Ingestion**

stomach pains

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Not available. : **Potential immediate effects**

Not available. : **Potential delayed effects**

Long term exposure

Not available. : **Potential immediate effects**

Not available. : **Potential delayed effects**

Potential chronic health effects

Not available.

May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. : **General**

No known significant effects or critical hazards. : **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. : **Fertility effects**

Numerical measures of toxicity

Acute toxicity estimates

ATE value	Route
2965.3 mg/kg	Oral
4618 mg/kg	Dermal
43.14 mg/l	Inhalation (vapours)

Section 12. Ecological information

Toxicity

Exposure	Species	Result	Product/ingredient name	
72 hours	Algae - Pseudokirchneriella subcapitata	Acute EC50 0.029 mg/l	Polymer containing amino, substituted amino, aminocarbonyl substituted carbopolycycle with hydroxy epoxy alkane	
48 hours	Daphnia - Daphnia Magna	Acute EC50 0.9 mg/l		
96 hours	Fish - Oncorhynchus mykiss	Acute LC50 28 mg/l		
72 hours	Algae - Pseudokirchneriella subcapitata	Chronic NOEC 0.0023 mg/l		
48 hours	Daphnia - Daphnia magna	Chronic NOEC 0.32 mg/l		
96 hours	Fish - Oncorhynchus mykiss	Chronic NOEC 3.2 mg/l		
48 hours	Crustaceans - Palaemonetes pugio	Acute LC50 8500 µg/l Marine water		xylene
96 hours	Fish - Pimephales promelas	Acute LC50 13400 µg/l Fresh water		ethylbenzene
96 hours	Algae - Pseudokirchneriella subcapitata	Acute EC50 3.6 mg/l Fresh water		
48 hours	Daphnia - Daphnia magna - Neonate	Acute LC50 18.4 to 25.4 mg/l Fresh water		butan-1-ol
96 hours	Fish - Menidia menidia	Acute LC50 5.1 to 5.7 mg/l Marine water		
48 hours	Daphnia - Daphnia magna	Acute EC50 1983 to 2072 mg/l Fresh water		
96 hours	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	Acute LC50 1910 mg/l Fresh water		

Persistence and degradability

Inoculum	Dose	Result	Test	Product/ingredient name
-	-	16 % - Not readily - 28 days	41102286	Polymer containing amino, substituted amino, aminocarbonyl substituted carbopolycycle with hydroxy epoxy alkane

Biodegradability	Photolysis	Aquatic half-life	Product/ingredient name
Not readily	-	-	Polymer containing amino, substituted amino, aminocarbonyl substituted carbopolycycle with hydroxy epoxy alkane ethylbenzene
Readily	-	-	

Bioaccumulative potential

Potential	BCF	LogP _{ow}	Product/ingredient name
low	-	2.56	Polymer containing amino, substituted amino, aminocarbonyl substituted carbopolycycle with hydroxy epoxy alkane
low	8.1 to 25.9	3.12	
low	-	0.783	xylene
low	-	0.87	1, 3-Cyclohexanedimethanamine
low	15	3.6	benzyl alcohol
low	-	1	ethylbenzene
low	-	-	butan-1-ol

Section 12. Ecological information

Mobility in soil

Not available.

: Soil/water partition coefficient (K_{oc})

No known significant effects or critical hazards.

: Other adverse effects




Section 13. Disposal considerations

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.

: Disposal methods

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. 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

IATA	IMDG	UN	
UN3470	UN3470	UN3470	UN number
PAINT, CORROSIVE, FLAMMABLE	PAINT, CORROSIVE, FLAMMABLE. Marine pollutant (Polymer containing amino, substituted amino, aminocarbonyl substituted carbopolycycle with hydroxy epoxy alkane)	PAINT, CORROSIVE, FLAMMABLE	UN proper shipping name
8 (3) 	8 (3) 	8 (3) 	Transport hazard class(es)
II	II	II	Packing group
No.	Yes.	No.	Environmental hazards
The environmentally hazardous substance mark may appear if required by other transportation regulations.	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.	-	Additional information

Not applicable.

: IMDG Code Segregation group

Section 14. Transport information

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. : **Special precautions for user**

Not available.

: **Transport in bulk according to Annex II of Marpol and the IBC Code**

Section 15. Regulatory information

No known specific national and/or regional regulations applicable to this product (including its ingredients). : **Safety, health and environmental regulations specific for the product**

Section 16. Other information

Justification

Justification	Classification
On basis of test data	Flam. Liq. 3, H226
Calculation method	Acute Tox. 5, H303
Calculation method	Acute Tox. 5, H313
Calculation method	Skin Corr. 1B, H314
Calculation method	Skin Sens. 1, H317
Calculation method	STOT RE 2, H373 (hearing organs)
Calculation method	Aquatic Acute 1, H400
Calculation method	Aquatic Chronic 1, H410

History

23/11/2018

: **Date of printing**

23/11/2018

: **Date of issue/Date of revision**

No previous validation

: **Date of previous issue**

1

: **Version**

ATE = Acute Toxicity Estimate

: **Key to abbreviations**

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

Not available.

: **References**

Indicates information that has changed from previously issued version.

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.

MANUFACTURER'S DISCLAIMER: the conditions, methods and factors affecting the handling, storage, application, use and disposal of the product are not under the control and knowledge of the manufacturer.

Section 16. Other information

Therefore the manufacturer does not assume responsibility for any adverse events which may occur in the handling, storage, application, use, misuse or disposal of the product and, so far as permitted by applicable law, the manufacturer expressly disclaims liability for any and all loss, damages and/or expenses arising out of or in any way connected to the storage, handling, use or disposal of the product. Safe handling, storage, use and disposal are the responsibility of the users. Users must comply with all applicable health and safety laws.

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