

# SAFETY DATA SHEET

## ENVIROLINE 290 PART B

### Section 1. Chemical product and company identification

**A. Product name** : ENVIROLINE 290 PART B  
**Product code** : NVA265

**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 Farg AB  
 Holmedalen 3  
 Asperedes Industriområde  
 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** : ACUTE TOXICITY (inhalation) - Category 3  
 SKIN CORROSION/IRRITATION - Category 1  
 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1  
 SKIN SENSITIZATION - Category 1  
 GERM CELL MUTAGENICITY - Category 1B  
 CARCINOGENICITY - Category 1A  
 TOXIC TO REPRODUCTION (Fertility) - Category 1B  
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
 LONG-TERM AQUATIC HAZARD - Category 2

**B. GHS label elements, including precautionary statements**

**Symbol** :






**Signal word** : Danger

**Hazard statements** : Toxic if inhaled.  
 Causes severe skin burns and eye damage.  
 May cause an allergic skin reaction.  
 May cause genetic defects.  
 May cause cancer.  
 May damage fertility.  
 May cause damage to organs through prolonged or repeated exposure.

## Section 2. Hazards identification

Toxic to aquatic life with long lasting effects.

### Precautionary statements

- 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. Wear protective clothing. Use only outdoors or in a well-ventilated area. 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.
- 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. 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. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. 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.
- Storage** : Store locked up.
- 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
crystalline silica, respirable powder	silica, crystalline - quartz	14808-60-7	≥40 - <50	Carc. 1A, H350
2,2'-iminodiethylamine	diethylenetriamine	111-40-0	≥10 - <15	Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 2, H330 Skin Corr. 1, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335
bisphenol A	4,4'-isopropylidenediphenol	80-05-7	<10	Eye Dam. 1, H318  Skin Sens. 1, H317 Repr. 1B, H360 (Fertility) STOT SE 3, H335
benzyl alcohol	benzyl alcohol	100-51-6	<10	Acute Tox. 4, H302 Acute Tox. 4, H332
crystalline silica, respirable	Respirable content of	14808-60-7	<10	Carc. 1A, H350

### Section 3. Composition/information on ingredients

powder	crystalline silica in whole product			STOT RE 1, H372
titanium dioxide	Titanium dioxide	13463-67-7	≥0.1 - <5	Carc. 2, H351
xylene	xylene	1330-20-7	≥1 - <5	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
4-nonylphenol, branched	phenol, 4-nonyl-, branched	84852-15-3	≥0.3 - <5	Acute Tox. 4, H302  Skin Corr. 1, H314 Eye Dam. 1, H318 Repr. 2, H361fd (Fertility and Unborn child) Aquatic Acute 1, H400 Aquatic Chronic 1, H410
1-methoxy-2-propanol	1-methoxy-2-propanol	107-98-2	<10	Flam. Liq. 3, H226 STOT SE 3, H336
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
Solvent naphtha (petroleum), light arom.	Low boiling point naphtha- unspecified	64742-95-6	<10	Flam. Liq. 3, H226  Muta. 1B, H340 Carc. 1B, H350 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

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.

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## Section 4. First aid measures

- B. Skin contact** : 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.
- 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.
- 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 an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.
- B. Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is 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.

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## Section 5. Firefighting measures

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
 carbon dioxide  
 carbon monoxide  
 nitrogen oxides  
 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.

## 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. 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. 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. 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. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

## Section 7. Handling and storage

- B. Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in 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. 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. Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
crystalline silica, respirable powder	<b>Ministry of Labor (Republic of Korea, 8/2013).</b> TWA: 0.05 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction
2,2'-iminodiethylamine	<b>Ministry of Labor (Republic of Korea, 8/2013). Absorbed through skin.</b> TWA: 4 mg/m <sup>3</sup> 8 hours. TWA: 1 ppm 8 hours.
crystalline silica, respirable powder	<b>Ministry of Labor (Republic of Korea, 8/2013).</b> TWA: 0.05 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction
titanium dioxide	<b>Ministry of Labor (Republic of Korea, 8/2013).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: total dust with less than 1% of free SiO <sub>2</sub>
xylene	<b>Ministry of Labor (Republic of Korea, 8/2013).</b> STEL: 655 mg/m <sup>3</sup> 15 minutes. STEL: 150 ppm 15 minutes. TWA: 435 mg/m <sup>3</sup> 8 hours. TWA: 100 ppm 8 hours.
1-methoxy-2-propanol	<b>Ministry of Labor (Republic of Korea, 8/2013).</b> STEL: 540 mg/m <sup>3</sup> 15 minutes. STEL: 150 ppm 15 minutes. TWA: 360 mg/m <sup>3</sup> 8 hours. TWA: 100 ppm 8 hours.
ethylbenzene	<b>Ministry of Labor (Republic of Korea, 8/2013).</b> STEL: 545 mg/m <sup>3</sup> 15 minutes. STEL: 125 ppm 15 minutes. TWA: 435 mg/m <sup>3</sup> 8 hours. TWA: 100 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.
- 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.

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## Section 8. Exposure controls/personal protection

### 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.
- 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.
- 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

### A. Appearance

- Physical state** : Liquid.
- Colour** : Off-white.
- 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: 207°C (404.6°F) (2,2'-iminodiethylamine).
- G. Flash point** : Closed cup: 63°C (145.4°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: 1.3% Upper: 13% (benzyl alcohol)
- K. Vapour pressure** : Not available.

## Section 9. Physical and chemical properties

- L. Solubility** : Insoluble in the following materials: cold water.
- M. Vapour density** : Not available.
- N. Relative density** : 1.62
- O. Partition coefficient: n-octanol/water** : Not available.
- P. Auto-ignition temperature** : Not available.
- Q. Decomposition temperature** : Not available.
- R. Viscosity** : Kinematic (room temperature): 931 mm<sup>2</sup>/s (931 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** : No specific data.
- C. Incompatible materials** : No specific data.
- 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** : Toxic 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** : May cause burns to mouth, throat and stomach.
- Skin contact** : Causes severe burns. May cause an allergic skin reaction.
- Eye contact** : Causes serious eye damage.
- Over-exposure signs/symptoms**
- Inhalation** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
stomach pains  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations

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## Section 11. Toxicological information

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

### B. Health hazards

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2,2'-iminodiethylamine	LC50 Inhalation Dusts and mists	Rat	0.07 mg/l	4 hours
	LD50 Dermal	Rabbit	1090 mg/kg	-
	LD50 Oral	Rat	1080 mg/kg	-
bisphenol A	LD50 Oral	Rat	1200 mg/kg	-
benzyl alcohol	LC50 Inhalation Vapour	Rat	>4178 mg/l	4 hours
	LD50 Dermal	Rabbit	2000 mg/kg	-
	LD50 Oral	Rat	1620 mg/kg	-
xylene	LD50 Oral	Rat	4300 mg/kg	-
4-nonylphenol, branched	LD50 Oral	Rat	1300 mg/kg	-
1-methoxy-2-propanol	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Oral	Rat	6600 mg/kg	-
ethylbenzene	LC50 Inhalation Gas.	Rabbit	4000 ppm	4 hours
	LD50 Dermal	Rabbit	17800 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
Solvent naphtha (petroleum), light arom.	LD50 Oral	Rat	8400 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2,2'-iminodiethylamine	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
bisphenol A	Eyes - Severe irritant	Rabbit	-	24 hours	-
				250 Micrograms	
	Skin - Mild irritant	Rabbit	-	24 hours	-
				500 milligrams	
	Skin - Mild irritant	Rabbit	-	250 milligrams	-
benzyl alcohol	Skin - Mild irritant	Man	-	48 hours	-
				16 milligrams	
	Skin - Moderate irritant	Pig	-	100 Percent	-
	Skin - Moderate irritant	Rabbit	-	24 hours	-
				100 milligrams	
titanium dioxide	Skin - Mild irritant	Human	-	72 hours	-
				300 Micrograms	
				Intermittent	
4-nonylphenol, branched	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
				24 hours	
	Skin - Severe irritant	Rabbit	-	500 milligrams	-
				24 hours	
1-methoxy-2-propanol	Eyes - Mild irritant	Rabbit	-	500 milligrams	-
				24 hours	
				500 milligrams	
	Skin - Mild irritant	Rabbit	-	500 milligrams	-

## Section 11. Toxicological information

ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-
Solvent naphtha (petroleum), light arom.	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters	-

### Sensitisation

Not available.

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

Product/ingredient name	CAS number	Classification
Silica (Crystalline quartz)	14808-60-7	Carc. 1A
Silica (Crystalline quartz)	14808-60-7	Carc. 1A
Titanium dioxide	13463-67-7	Carc. 2
Ethyl benzene	100-41-4	Carc. 2

### 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
2,2'-iminodiethylamine	Category 3	Not applicable.	Respiratory tract irritation
bisphenol A	Category 3	Not applicable.	Respiratory tract irritation
xylene	Category 3	Not applicable.	Narcotic effects
1-methoxy-2-propanol	Category 3	Not applicable.	Narcotic effects
ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation
Solvent naphtha (petroleum), light arom.	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
crystalline silica, respirable powder	Category 1	Not determined	Not determined
xylene	Category 1	Not determined	Not determined
ethylbenzene	Category 2	Not determined	hearing organs

### Aspiration hazard

Name	Result
ethylbenzene	ASPIRATION HAZARD - Category 1
Solvent naphtha (petroleum), light arom.	ASPIRATION HAZARD - Category 1

### Potential chronic health effects

#### Chronic toxicity

## Section 11. Toxicological information

Not available.

<b>General</b>	: 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.
<b>Carcinogenicity</b>	: May cause cancer. Risk of cancer depends on duration and level of exposure.
<b>Mutagenicity</b>	: May cause genetic defects.
<b>Teratogenicity</b>	: No known significant effects or critical hazards.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: May damage fertility.

### ATE value

Route	Result
Oral	4106.6 mg/kg
Dermal	7923.9 mg/kg
Inhalation (vapours)	125.6 mg/l
Inhalation (dusts and mists)	0.6414 mg/l

## Section 12. Ecological information

### A. Ecotoxicity

Product/ingredient name	Result	Species	Exposure
bisphenol A	Acute EC50 1.506 mg/l	Algae - Prorocentrum minimum - Exponential growth phase	72 hours
	Acute EC50 9940 µg/l Fresh water	Daphnia - Daphnia magna - Young	48 hours
	Acute LC50 4.32 mg/l Marine water	Crustaceans - Tigriopus japonicus - Adult	48 hours
	Acute LC50 3.5 mg/l Marine water	Fish - Rivulus marmoratus - Embryo	96 hours
	Chronic NOEC 2 mg/l Fresh water	Algae - Chlorolobion braunii - Exponential growth phase	4 days
	Chronic NOEC 10 µg/l Marine water	Crustaceans - Tigriopus japonicus - Nauplii	21 days
	Chronic NOEC 0.86 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
xylene	Chronic NOEC 0.2 µg/l Fresh water	Fish - Carassius auratus - Adult	90 days
	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
4-nonylphenol, branched	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 0.03 mg/l Marine water	Algae - Skeletonema costatum	72 hours
	Acute EC50 0.027 mg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute LC50 0.047 mg/l Marine water	Crustaceans - Americamysis bahia - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 17 µg/l Marine water	Fish - Pleuronectes americanus - Larvae	96 hours
ethylbenzene	Chronic EC10 0.012 mg/l Marine water	Algae - Skeletonema costatum	96 hours
	Chronic NOEC 7.4 µg/l Fresh water	Fish - Pimephales promelas - Embryo	33 days
	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

## Section 12. Ecological information

### B. Persistence and degradability

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

### C. Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
2,2'-iminodiethylamine	-5.58	4.466835921	low
bisphenol A	3.4	43.651583224	low
benzyl alcohol	0.87	-	low
titanium dioxide	-	352	low
xylene	3.12	8.1 to 25.9	low
4-nonylphenol, branched	5.4	251.18864315	low
1-methoxy-2-propanol	<1	-	low
ethylbenzene	3.6	15	low
Solvent naphtha (petroleum), light arom.	-	10 to 2500	high

### D. Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : 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. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	UN	IMDG	IATA
<b>A. UN number</b>	UN2922	UN2922	UN2922
<b>B. UN proper shipping name</b>	CORROSIVE LIQUID, TOXIC, N.O.S. (2,2'-iminodiethylamine)	CORROSIVE LIQUID, TOXIC, N.O.S. (2,2'-iminodiethylamine). Marine pollutant (4-nonylphenol, branched)	CORROSIVE LIQUID, TOXIC, N.O.S. (2,2'-iminodiethylamine)

## Section 14. Transport information

<b>C. Transport hazard class(es)</b>	8 (6.1)  	8 (6.1)   	8 (6.1)  
<b>D. Packing group</b>	II	II	II
<b>E. Environmental hazards</b>	No.	Yes.	No.
<b>F. Additional information</b>	-	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)** : The following components are listed: Nonylphenols and Nonylphenol ethoxylates

**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:

crystalline silica, respirable powder

2,2'-iminodiethylamine

crystalline silica, respirable powder

titanium dioxide

Xylene

1-methoxy-2-propanol

ethylbenzene

**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: Diethylene triamine; Quartz; Quartz; Titanium dioxide; Xylene, o,m,p-isomers

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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: Diethylenetriamine; Xylene

**Standard of Industrial Safety and Health Annex 12 (Hazardous substances subject to control)** : The following components are listed: Diethylene triamine; Titanium dioxide; Xylene

### 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)** : The following components are listed: Nonylphenols and Nonylphenol ethoxylates

**CSCA Article 11 (TRI)** : The following components are listed: 4,4'-Bisphenol A; Xylene; Ethylbenzene; Branched 4-nonylphenol

**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** : 12/04/2018

**C. Version** : 4

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**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,

## Section 16. Other information

1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
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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