

## SAFETY DATA SHEET

Autowave MM 337GA Green To Purple

### Section 1. Identification

**GHS product identifier** : Autowave MM 337GA Green To Purple

**SDS code** : S51859

#### **Relevant identified uses of the substance or mixture and uses advised against**

Identified uses	
Industrial use	
Uses advised against	
Consumer use	

#### **Supplier's details**

Akzo Nobel Coatings, Inc.  
1845 Maxwell  
Troy, MI, 48084  
USA  
(800) 618-1010

Akzo Nobel Coatings Ltd.  
110 Woodbine Downs Blvd.  
Unit #4 Etobicoke, Ontario  
Canada M9W 5S6  
+1 (800) 618-1010

**Emergency telephone number (with hours of operation)** : CHEMTREC +1 (800) 424-9300 (Inside the US)  
CHEMTREC International +1 (703) 527-3887 (Outside the US, collect calls accepted)

### Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2A  
SKIN SENSITISATION - Category 1  
CARCINOGENICITY - Category 1A

#### **GHS label elements**

**Hazard pictograms** : 

**Signal word** : Danger

**Hazard statements** : Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
May cause cancer.

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**1/15**

## Section 2. Hazards identification

### Precautionary statements

<b>Prevention</b>	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Avoid breathing vapour. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.
<b>Response</b>	: IF exposed or concerned: Get medical advice or attention. Take off contaminated clothing and wash it before reuse. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or 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 advice or attention.
<b>Storage</b>	: Store locked up.
<b>Disposal</b>	: Dispose of contents and container in accordance with all local, regional, national or international regulations.
<b>Hazards not otherwise classified</b>	: None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

Ingredient name	%	CAS number
2-butoxyethanol	≤10	111-76-2
magnesium fluoride	≤5	7783-40-6
triisobutyl phosphate	≤1	126-71-6
ethanol	≤0.3	64-17-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified 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

<b>Eye contact</b>	: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
<b>Inhalation</b>	: 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 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.
<b>Skin contact</b>	: 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.

## Section 4. First aid measures

### Ingestion

: Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

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

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

**Skin contact** : Causes skin irritation. May cause an allergic skin reaction.

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

#### Over-exposure signs/symptoms

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

**Inhalation** : No specific data.

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

**Ingestion** : No specific data.

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

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**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

### Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.

## Section 5. Firefighting measures

<b>Hazardous thermal decomposition products</b>	: Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
<b>Special protective actions for fire-fighters</b>	: 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.
<b>Special protective equipment for fire-fighters</b>	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: 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. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	: 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".
<b>Environmental precautions</b>	: 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).

### Methods and material for containment and cleaning up

<b>Small spill</b>	: 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.
<b>Large spill</b>	: 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

### Precautions for safe handling

<b>Protective measures</b>	: 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. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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.
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## Section 7. Handling and storage

<b>Advice on general occupational hygiene</b>	: 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. Ensure spraying away from persons. Avoid inhalation of vapour, spray or mist. See also Section 8 for additional information on hygiene measures.
<b>Conditions for safe storage, including any incompatibilities</b>	: 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. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
2-butoxyethanol	<p><b>ACGIH TLV (United States, 1/2022).</b> TWA: 20 ppm 8 hours.</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b> <b>Absorbed through skin.</b> TWA: 25 ppm 8 hours. TWA: 120 mg/m<sup>3</sup> 8 hours.</p> <p><b>NIOSH REL (United States, 10/2020).</b> <b>Absorbed through skin.</b> TWA: 5 ppm 10 hours. TWA: 24 mg/m<sup>3</sup> 10 hours.</p> <p><b>OSHA PEL (United States, 5/2018).</b> <b>Absorbed through skin.</b> TWA: 50 ppm 8 hours. TWA: 240 mg/m<sup>3</sup> 8 hours.</p> <p><b>OSHA PEL Z2 (United States, 2/2013).</b> <b>[Fluoride as dust]</b> TWA: 2.5 mg/m<sup>3</sup> 8 hours. Form: Dust</p> <p><b>ACGIH TLV (United States, 1/2022).</b> <b>[Fluorides] Notes: as F</b> TWA: 2.5 mg/m<sup>3</sup>, (as F) 8 hours.</p> <p><b>OSHA PEL (United States, 5/2018).</b> <b>[Fluorides] Notes: as F</b> TWA: 2.5 mg/m<sup>3</sup>, (as F) 8 hours.</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b> <b>[Fluorides (as F)] Notes: as F</b> TWA: 2.5 mg/m<sup>3</sup>, (as F) 8 hours.</p>
magnesium fluoride	<p><b>OSHA PEL Z2 (United States, 2/2013).</b> <b>[Fluoride as dust]</b> TWA: 2.5 mg/m<sup>3</sup> 8 hours. Form: Dust</p> <p><b>ACGIH TLV (United States, 1/2022).</b> <b>[Fluorides] Notes: as F</b> TWA: 2.5 mg/m<sup>3</sup>, (as F) 8 hours.</p> <p><b>OSHA PEL (United States, 5/2018).</b> <b>[Fluorides] Notes: as F</b> TWA: 2.5 mg/m<sup>3</sup>, (as F) 8 hours.</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b> <b>[Fluorides (as F)] Notes: as F</b> TWA: 2.5 mg/m<sup>3</sup>, (as F) 8 hours.</p>
triisobutyl phosphate ethanol	<p>None.</p> <p><b>ACGIH TLV (United States, 1/2022).</b> STEL: 1000 ppm 15 minutes.</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 1000 ppm 8 hours.</p> <p><b>NIOSH REL (United States, 10/2020).</b> TWA: 1000 ppm 10 hours.</p> <p><b>OSHA PEL (United States, 5/2018).</b> TWA: 1900 mg/m<sup>3</sup> 10 hours.</p>

## Section 8. Exposure controls/personal protection

TWA: 1000 ppm 8 hours.  
TWA: 1900 mg/m<sup>3</sup> 8 hours.

**Appropriate engineering controls**

- If user operations generate dust, fumes, gas, vapour or mist, 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.

### Individual protection measures

**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.

**Eye/face 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.

**Skin protection**

**Hand protection**

- Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**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.

**Other skin 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.

**Respiratory protection**

- Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Wear a respirator conforming to EN140 with type A/P2 filter or better. Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flatting should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.

## Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

**Physical state**

- Liquid.

**Colour**

- Green.

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## Section 9. Physical and chemical properties and safety characteristics

<b>Odour</b>	: Not available.
<b>Odour threshold</b>	: Not available.
<b>pH</b>	: 8 [Conc. (% w/w): 100%] [DIN EN 1262]
<b>Melting point/freezing point</b>	: Not available.
<b>Boiling point, initial boiling point, and boiling range</b>	: 100°C (212°F)
<b>Flash point</b>	: Not available.
<b>Flammability</b>	: Not available.
<b>Lower and upper explosion limit</b>	: Not applicable.

### Vapour pressure :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
2-butoxyethanol	0.75	0.1				

<b>Relative vapour density</b>	: Not available.
<b>Relative density</b>	: 1.043 [ISO 8130-2/-3]

<b>Solubility(ies)</b>	:
Not available.	

<b>Partition coefficient: n-octanol/water</b>	: Not applicable.
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<b>Auto-ignition temperature</b>	:								
<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>°C</th> <th>°F</th> <th>Method</th> </tr> </thead> <tbody> <tr> <td>2-butoxyethanol</td> <td>230</td> <td>446</td> <td>DIN 51794</td> </tr> </tbody> </table>		Ingredient name	°C	°F	Method	2-butoxyethanol	230	446	DIN 51794
Ingredient name	°C	°F	Method						
2-butoxyethanol	230	446	DIN 51794						

<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Kinematic (room temperature): 115 mm <sup>2</sup> /s (115 cSt) [DIN EN ISO 3219] Kinematic (40°C (104°F)): Not applicable. [DIN EN ISO 3219]

<b>(****To be Translated****)</b>	: 82.61% (w/w)
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### Weight Volatiles

<b>(****To be Translated****)</b>	: 86.19 % (v/v)
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### Volume Volatiles

<b>(****To be Translated****)</b>	: 17.39 % (w/w)
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<b>Weight Solids</b>	: 13.81 % (v/v)
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<b>(****To be Translated****)</b>	: 2.9 lbs/gal 344 g/l minus water and exempt solvents
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### Regulatory VOC

<b>VOC Actual</b>	: 0.6 lbs/gal 77 g/l
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### Particle characteristics

<b>Median particle size</b>	: Not applicable.
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<b>Percentage of particles with aerodynamic diameter ≤ 10 µm</b>	: 0
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## Section 10. Stability and reactivity

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

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-butoxyethanol	LC50 Inhalation Gas.	Mouse	700 ppm	7 hours
	LC50 Inhalation Gas.	Rat	450 ppm	4 hours
	LC50 Inhalation Vapour	Mouse	3380 mg/m <sup>3</sup>	7 hours
	LC50 Inhalation Vapour	Rat	2900 mg/m <sup>3</sup>	7 hours
	LD50 Dermal	Guinea pig	230 uL/kg	-
	LD50 Dermal	Rabbit	220 mg/kg	-
	LD50 Intraperitoneal	Mouse	536 mg/kg	-
	LD50 Intraperitoneal	Rabbit	220 mg/kg	-
	LD50 Intraperitoneal	Rat	220 mg/kg	-
	LD50 Intravenous	Mouse	1130 mg/kg	-
	LD50 Intravenous	Rabbit	252 mg/kg	-
	LD50 Intravenous	Rat	307 mg/kg	-
	LD50 Oral	Guinea pig	1200 mg/kg	-
	LD50 Oral	Mouse	1230 mg/kg	-
	LD50 Oral	Mouse	1167 mg/kg	-
	LD50 Oral	Rabbit	300 mg/kg	-
	LD50 Oral	Rabbit	320 mg/kg	-
	LD50 Oral	Rat	917 mg/kg	-
	LD50 Oral	Rat	250 mg/kg	-
magnesium fluoride triisobutyl phosphate ethanol	LD50 Route of exposure unreported	Mouse	1050 mg/kg	-
	LD50 Route of exposure unreported	Rat	917 mg/kg	-
	LD50 Oral	Rat	2330 mg/kg	-
	LD50 Oral	Rat	>5 g/kg	-
	LC50 Inhalation Gas.	Mouse	>40000 ppm	10 minutes
	LC50 Inhalation Gas.	Mouse	>60000 ppm	1 hours
	LC50 Inhalation Gas.	Rat	20000 ppm	10 hours
	LC50 Inhalation Vapour	Mouse	39000 mg/m <sup>3</sup>	4 hours
	LC50 Inhalation Vapour	Rat	124700 mg/m <sup>3</sup>	4 hours
	LC50 Inhalation Vapour	Rat	5900 mg/m <sup>3</sup>	6 hours
	LD50 Intra-arterial	Rat	11 mg/kg	-
	LD50 Intraperitoneal	Guinea pig	3414 mg/kg	-
	LD50 Intraperitoneal	Mouse	4 mL/kg	-

## Section 11. Toxicological information

LD50 Intraperitoneal	Mouse	528 mg/kg	-
LD50 Intraperitoneal	Rabbit	963 mg/kg	-
LD50 Intraperitoneal	Rat	3600 µg/kg	-
LD50 Intravenous	Mouse	2.8 mL/kg	-
LD50 Intravenous	Mouse	1973 mg/kg	-
LD50 Intravenous	Rabbit	2374 mg/kg	-
LD50 Intravenous	Rat	1440 mg/kg	-
LD50 Oral	Guinea pig	5560 mg/kg	-
LD50 Oral	Mouse	10.5 mL/kg	-
LD50 Oral	Mouse	3450 mg/kg	-
LD50 Oral	Rabbit	6300 mg/kg	-
LD50 Oral	Rat	7 g/kg	-
LD50 Oral	Rat	7060 mg/kg	-
LD50 Oral	Rat	15010 mg/kg	-
LD50 Subcutaneous	Mouse	8285 mg/kg	-

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-butoxyethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
triisobutyl phosphate	Eyes - Moderate irritant	Rabbit	-	100 UI	-
	Skin - Moderate irritant	Rabbit	-	500 UI	-
ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Moderate irritant	Rabbit	-	100 UI	-
	Eyes - Moderate irritant	Rabbit	-	0.0666666667 minutes 100 mg	-
	Eyes - Severe irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	400 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 mg	-

### Sensitisation

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Classification

Product/ingredient name	OSHA	IARC	NTP
2-butoxyethanol	-	3	-
magnesium fluoride	-	3	-
ethanol	-	1	-

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

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## Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
magnesium fluoride	Category 3	-	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

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

### Potential acute health effects

<b>Eye contact</b>	: Causes serious eye irritation.
<b>Inhalation</b>	: No known significant effects or critical hazards.
<b>Skin contact</b>	: Causes skin irritation. May cause an allergic skin reaction.
<b>Ingestion</b>	: No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Eye contact</b>	: Adverse symptoms may include the following: pain or irritation watering redness
<b>Inhalation</b>	: No specific data.
<b>Skin contact</b>	: Adverse symptoms may include the following: irritation redness
<b>Ingestion</b>	: No specific data.

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

#### Short term exposure

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

#### Long term exposure

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

### Potential chronic health effects

Not available.

<b>General</b>	: 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>	: No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: No known significant effects or critical hazards.

### Numerical measures of toxicity

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## Section 11. Toxicological information

### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Product as-supplied 2-butoxyethanol	19027.6 1200	N/A N/A	N/A N/A	47.6 3	N/A N/A

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
2-butoxyethanol ethanol	<p>Acute EC50 &gt;1000 mg/l Fresh water</p> <p>Acute LC50 800000 µg/l Marine water</p> <p>Acute LC50 1490000 µg/l Fresh water</p> <p>Acute LC50 1250000 µg/l Marine water</p> <p>Acute EC50 17.921 mg/l Marine water</p> <p>Acute EC50 1074 mg/l Fresh water</p> <p>Acute EC50 7640 mg/l Fresh water</p> <p>Acute EC50 2000 µg/l Fresh water</p> <p>Acute EC50 12.9 g/L Fresh water</p> <p>Acute EC50 12800 mg/l Fresh water</p> <p>Acute LC50 25500 µg/l Marine water</p> <p>Acute LC50 5577000 µg/l Fresh water</p> <p>Acute LC50 3715000 µg/l Fresh water</p> <p>Acute LC50 6076000 µg/l Fresh water</p> <p>Acute LC50 5680 mg/l Fresh water</p> <p>Acute LC50 9268000 µg/l Fresh water</p> <p>Acute LC50 9248000 µg/l Fresh water</p> <p>Acute LC50 11000000 µg/l Marine water</p> <p>Acute LC50 42000 µg/l Fresh water</p> <p>Acute LC50 12720 ppm Fresh water</p> <p>Chronic NOEC 14 ppm Fresh water</p> <p>Chronic NOEC 350 ppm Fresh water</p> <p>Chronic NOEC 50 µl/L Marine water</p> <p>Chronic NOEC 20 ppm Fresh water</p> <p>Chronic NOEC 4.995 mg/l Marine water</p> <p>Chronic NOEC 100 µl/L Fresh water</p> <p>Chronic NOEC 100 µl/L Fresh water</p> <p>Chronic NOEC 0.375 µl/L Fresh water</p>	<p>Daphnia - Daphnia magna</p> <p>Crustaceans - Crangon crangon</p> <p>Fish - Lepomis macrochirus</p> <p>Fish - Menidia beryllina</p> <p>Algae - Ulva pertusa</p> <p>Crustaceans - Cypris subglobosa</p> <p>Daphnia - Daphnia magna</p> <p>Daphnia - Daphnia magna</p> <p>Fish - Pimephales promelas</p> <p>Fish - Pimephales promelas</p> <p>Crustaceans - Artemia franciscana - Larvae</p> <p>Crustaceans - Ceriodaphnia dubia - Neonate</p> <p>Crustaceans - Ceriodaphnia dubia - Neonate</p> <p>Crustaceans - Ceriodaphnia dubia - Neonate</p> <p>Daphnia - Daphnia magna - Neonate</p> <p>Daphnia - Daphnia magna - Neonate</p> <p>Daphnia - Daphnia magna - Neonate</p> <p>Fish - Alburnus alburnus</p> <p>Fish - Oncorhynchus mykiss</p> <p>Fish - Pimephales promelas</p> <p>Algae - Eutreptiella sp.</p> <p>Algae - Heterosigma akashiwo</p> <p>Algae - Hormosira banksii - Gamete</p> <p>Algae - Prorocentrum minimum</p> <p>Algae - Ulva pertusa</p> <p>Daphnia - Daphnia magna - Neonate</p> <p>Daphnia - Daphnia magna - Neonate</p> <p>Fish - Gambusia holbrooki - Larvae</p>	<p>48 hours</p> <p>48 hours</p> <p>96 hours</p> <p>96 hours</p> <p>96 hours</p> <p>96 hours</p> <p>48 hours</p> <p>48 hours</p> <p>96 hours</p> <p>96 hours</p> <p>48 hours</p> <p>48 hours</p> <p>48 hours</p> <p>48 hours</p> <p>48 hours</p> <p>96 hours</p> <p>4 days</p> <p>96 hours</p> <p>96 hours</p> <p>96 hours</p> <p>72 hours</p> <p>96 hours</p> <p>96 hours</p> <p>21 days</p> <p>21 days</p> <p>12 weeks</p>

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## Section 12. Ecological information

### Persistence and degradability

Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
2-butoxyethanol ethanol	0.81 -0.35	- -	low low

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

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

## Section 13. Disposal considerations

**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. 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

The information provided in section 14 is based on a bulk package shipment via ground transport in North America. All shippers are responsible for ensuring the proper transportation classification and package/container requirements are followed for the relevant mode of transport.

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	-	-	-	-	-
<b>Transport hazard class(es)</b>	-	-	-	-	-
<b>Packing group</b>	-	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.	No.

## Section 14. Transport information

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments** : Not available.

## Section 15. Regulatory information

<b>U.S. Federal regulations</b>	<p><b>TSCA 5(a)2 final significant new use rules:</b> No products found.</p> <p><b>TSCA 5(e) substance consent order:</b> No products found.</p> <p><b>TSCA 8(a) PAIR:</b> triisobutyl phosphate; n-butyl methacrylate; mequinol</p> <p><b>TSCA 8(a) CDR Exempt/Partial exemption:</b> Not determined</p> <p><b>United States inventory (TSCA 8b):</b> All components are active or exempted.</p> <p><b>Clean Water Act (CWA) 307:</b> chromium</p> <p><b>Clean Water Act (CWA) 311:</b> methyl methacrylate</p>
<b>Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)</b>	: Listed
<b>Clean Air Act Section 602 Class I Substances</b>	: Not listed
<b>Clean Air Act Section 602 Class II Substances</b>	: Not listed
<b>DEA List I Chemicals (Precursor Chemicals)</b>	: Not listed
<b>DEA List II Chemicals (Essential Chemicals)</b>	: Not listed

### SARA 302/304

#### Composition/information on ingredients

No products were found.

#### **SARA 304 RQ**

: Not applicable.

### SARA 311/312

<b>Classification</b>	<p>SKIN IRRITATION - Category 2</p> <p>EYE IRRITATION - Category 2A</p> <p>SKIN SENSITISATION - Category 1</p> <p>CARCINOGENICITY - Category 1A</p>
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#### Composition/information on ingredients

Name	%	Classification
2-butoxyethanol	≤10	<p>FLAMMABLE LIQUIDS - Category 4</p> <p>ACUTE TOXICITY (oral) - Category 4</p> <p>ACUTE TOXICITY (inhalation) - Category 3</p> <p>SKIN IRRITATION - Category 2</p> <p>EYE IRRITATION - Category 2A</p>
magnesium fluoride	≤5	<p>SKIN IRRITATION - Category 2</p> <p>EYE IRRITATION - Category 2A</p> <p>SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3</p>
triisobutyl phosphate	≤1	SKIN SENSITISATION - Category 1
ethanol	≤0.3	FLAMMABLE LIQUIDS - Category 2

## Section 15. Regulatory information

		EYE IRRITATION - Category 2A CARCINOGENICITY - Category 1A
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### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	2-butoxyethanol	111-76-2	≤10
<b>Supplier notification</b>	2-butoxyethanol	111-76-2	≤10

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### State regulations

- Massachusetts** : The following components are listed: 2-BUTOXYETHANOL
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: 2-BUTOXY ETHANOL; FLUORIDES; ETHYL ALCOHOL
- Pennsylvania** : The following components are listed: ETHANOL, 2-BUTOXY-

### California Prop. 65

### Inventory list

- Australia** : At least one component is not listed.
- Canada** : At least one component is not listed.
- China** : All components are listed or exempted.
- Eurasian Economic Union** : **Russian Federation inventory:** Not determined.
- Japan** : **Japan inventory (CSCL):** At least one component is not listed.  
**Japan inventory (ISHL):** Not determined.
- New Zealand** : At least one component is not listed.
- Philippines** : At least one component is not listed.
- Republic of Korea** : At least one component is not listed.
- Taiwan** : All components are listed or exempted.
- Thailand** : Not determined.
- Turkey** : At least one component is not listed.
- United States** : All components are active or exempted.
- Viet Nam** : Not determined.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		1
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

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## Section 16. Other information

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

### Procedure used to derive the classification

Classification	Justification
SKIN IRRITATION - Category 2	Calculation method
EYE IRRITATION - Category 2A	Calculation method
SKIN SENSITISATION - Category 1	Calculation method
CARCINOGENICITY - Category 1A	Calculation method

### History

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<b>Key to abbreviations</b>	:	<p>ATE = Acute Toxicity Estimate  BCF = Bioconcentration Factor  GHS = Globally Harmonized System of Classification and Labelling of Chemicals  IATA = International Air Transport Association  IBC = Intermediate Bulk Container  IMDG = International Maritime Dangerous Goods  LogPow = logarithm of the octanol/water partition coefficient  MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  N/A = Not available  SGG = Segregation Group  UN = United Nations</p>

✓ Indicates information that has changed from previously issued version.

### Notice to reader

FOR PROFESSIONAL USE ONLY

**IMPORTANT NOTE** The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws. Any person using this product must determine for themselves, by preliminary tests or otherwise, the suitability of this product for their purposes. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Safety Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. The application, use and processing of AkzoNobel's products and the products manufactured by Buyer on the basis of AkzoNobel's technical advice are beyond AkzoNobel's control and, therefore, entirely Buyer's own responsibility. AkzoNobel makes no warranty as to accuracy and/or sufficiency of such information and/or suggestions, as to the product's merchantability or fitness for any particular purpose, or that any suggested use will not infringe any patent. Nothing contained herein shall be construed as granting or extending any license under any patent. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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