

# SAFETY DATA SHEET

ARALDITE® F 2048 CI

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : ARALDITE® F 2048 CI  
**Product code** : 00068526  
**Product description** :

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

**Product use** : Acrylate adhesive

### 1.3 Details of the supplier of the safety data sheet

**Supplier** : Huntsman Advanced Materials (Europe)BVBA  
Everslaan 45  
3078 Everberg / Belgium  
Tel.: +41 61 299 20 41  
Fax: +41 61 299 20 40

**e-mail address of person responsible for this SDS** : Global\_Product\_EHS\_AdMat@huntsman.com

### 1.4 Emergency telephone number

#### Supplier

**Telephone number** : EUROPE: +32 35 75 1234  
France ORFILA: +33(0)145425959  
ASIA: +65 6336-6011  
China: +86 20 39377888  
Australia: 1800 786 152  
New Zealand: 0800 767 437  
USA: +1/800/424.9300

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Working pack (preparation)

#### Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

**Classification** : O; R7  
F; R11  
Xi; R41, R37  
R43  
N; R50/53

**Physical/chemical hazards** : May cause fire. Highly flammable.

**Human health hazards** : Risk of serious damage to eyes. Irritating to respiratory system. May cause sensitisation by skin contact.

**Environmental hazards** : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Additional information** : According to Directive 99/45/EC, Article 6, Paragraph 1b, classification derived from direct toxicological testing of the preparation take precedence over classification derived from using the conventional (calculation) method.

See Section 16 for the full text of the R phrases or H statements declared above.

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## SECTION 2: Hazards identification

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Hazard symbol or symbols** :



**Indication of danger** : Oxidising, Irritant, Dangerous for the environment

**Risk phrases**

- : R7- May cause fire.
- R11- Highly flammable.
- R41- Risk of serious damage to eyes.
- R37- Irritating to respiratory system.
- R43- May cause sensitisation by skin contact.
- R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Safety phrases**

- : S3/14- Keep in a cool place away from reducing agents.
- S7- Keep container tightly closed.
- S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
- S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- S61- Avoid release to the environment. Refer to special instructions/safety data sheet.

**Hazardous ingredients**

- : methyl methacrylate
- dibenzoyl peroxide

**Supplemental label elements**

- : Not applicable.

#### Special packaging requirements

**Containers to be fitted with child-resistant fastenings**

- : Not applicable.

**Tactile warning of danger**

- : Not applicable.

### 2.3 Other hazards

**Other hazards which do not result in classification**

- : Not available.

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**SECTION 3: Composition/information on ingredients**

Substance/mixture : Working pack (preparation)

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
methyl methacrylate	CAS: 80-62-6 EC: 201-297-1	30-60	F; R11 Xi; R37/38 R43	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT SE 3, H335	[1] [2]
dibenzoyl peroxide	CAS: 94-36-0 EC: 202-327-6	3-7	E; R3 O; R7 Xi; R36 R43 N; R50	Org. Perox. B, H241 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400	[1]
methacrylic acid	CAS: 79-41-4 EC: 201-204-4	3-7	Xn; R21/22 C; R35	Acute Tox. 4, H302 Acute Tox. 3, H311 Acute Tox. 4, H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
2,2'-[(4-methylphenyl)imino]bisethanol	CAS: 3077-12-1 EC: 221-359-1	1-3	Xn; R22 Xi; R41	Acute Tox. 4, H302 Eye Dam. 1, H318	[1]
oxydipropyl-dibenzoate R36 R51/53	CAS: 27138-31-4 EC: 248-258-5	1-3	Xi; R36 N; R51/53	Eye Irrit. 2, H319 Aquatic Chronic 2, H411	[1]
2-propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate	CAS: 52628-03-2 EC: 258-053-2	1-3	C; R34	Skin Corr. 1B, H314 Eye Dam. 1, H318	[1]
2,4,6-tris(dimethylaminomethyl)phenol	CAS: 90-72-2 EC: 202-013-9	1-3	Xn; R22 C; R34 R52/53	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412	[1]
			<b>See Section 16 for the full text of the R-phrases declared above.</b>	<b>See Section 16 for the full text of the H statements declared above.</b>	

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

**SECTION 4: First aid measures**

4.1 Description of first aid measures

- Eye contact** : Get medical attention immediately. 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.
- Inhalation** : 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. 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. In case of inhalation of decomposition

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**SECTION 4: First aid measures**

products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

**4.2 Most important symptoms and effects, both acute and delayed**

Potential acute health effects

- Eye contact** : Severely irritating to eyes. Risk of serious damage to eyes.
- Inhalation** : Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : May cause skin irritation. May cause sensitisation by skin contact.
- 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** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

- 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** : Symptomatic treatment and supportive therapy as indicated. Following severe exposure the patient should be kept under medical review for at least 48 hours.

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

### 5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Highly flammable liquid. May cause fire. This material increases the risk of fire and may aid combustion. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
 carbon dioxide  
 carbon monoxide  
 nitrogen oxides  
 phosphorus oxides  
 metal oxide/oxides

### 5.3 Advice for firefighters

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. This material is very toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : 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 Section 8 for additional information on hygiene measures.

### 6.2 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.

### 6.3 Methods and materials 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. Do not absorb in sawdust or other combustible material. It may lead to a fire risk when it dries out. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

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## SECTION 6: Accidental release measures

**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. Do not absorb in sawdust or other combustible material. It may lead to a fire risk when it dries out. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Refer to special instructions/safety data sheet. 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 non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Keep away from combustible material. 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.

**7.2 Conditions for safe storage, including any incompatibilities** : Store between the following temperatures: 2 to 8°C (35.6 to 46.4°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Separate from reducing agents and combustible 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.

**Storage hazard class Huntsman Advanced Materials** : Storage class 5, Oxidizing substances

### 7.3 Specific end use(s)

**Recommendations** : Not available.



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## SECTION 7: Handling and storage

**Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
methyl methacrylate	<b>EH40/2005 WELs (United Kingdom (UK), 8/2007).</b> STEL: 416 mg/m <sup>3</sup> 15 minute(s). STEL: 100 ppm 15 minute(s). TWA: 208 mg/m <sup>3</sup> 8 hour(s). TWA: 50 ppm 8 hour(s).
methacrylic acid	<b>EH40/2005 WELs (United Kingdom (UK), 8/2007).</b> STEL: 143 mg/m <sup>3</sup> 15 minute(s). STEL: 40 ppm 15 minute(s). TWA: 72 mg/m <sup>3</sup> 8 hour(s). TWA: 20 ppm 8 hour(s).

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

#### Derived effect levels

No DELs available.

#### Predicted effect concentrations

No PECs available.

### 8.2 Exposure controls

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

#### 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 or dusts.

#### 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.

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## SECTION 8: Exposure controls/personal protection

**Material of gloves for long term application (BTT>480min):** : butyl rubber, Ethyl Vinyl Alcohol Laminate (EVAL)

**Material of gloves for short term/splash application (10min<BTT<480min):** : nitrile rubber

(BTT = Break Through Time)

Use gloves approved to relevant standards e.g. EN 374 (Europe), F739 (US). Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material and dexterity. Always seek advice from glove suppliers. Additional information can be found for instance at [www.gisbau.de](http://www.gisbau.de).

**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** : In case of inadequate ventilation wear respiratory protection. 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.

**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.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	: Liquid.
<b>Colour</b>	: Not available.
<b>Odour</b>	: Not available.
<b>Odour threshold</b>	: Not available.
<b>pH</b>	: Not available.
<b>Melting point/freezing point</b>	: Not available.
<b>Initial boiling point and boiling range</b>	: Not available.
<b>Flash point</b>	: Closed cup: >10°C
<b>Evaporation rate</b>	: Not available.
<b>Flammability (solid, gas)</b>	: Not available.
<b>Burning time</b>	: Not applicable.
<b>Burning rate</b>	: Not applicable.
<b>Upper/lower flammability or explosive limits</b>	: Not available.
<b>Vapour pressure</b>	: Not available.
<b>Vapour density</b>	: Not available.
<b>Relative density</b>	: Not available.
<b>Solubility(ies)</b>	
<b>Water solubility</b>	:

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## SECTION 9: Physical and chemical properties

<b>Partition coefficient: n-octanol/water (LogK<sub>ow</sub>)</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Not available.
<b>Explosive properties</b>	: Not available.
<b>Oxidising properties</b>	: Not available.

### 9.2 Other information

<b>Density</b>	: 1.11 g/cm <sup>3</sup> [25°C (77°F)]
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## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Hazardous reactions or instability may occur under certain conditions of storage or use.  
 Conditions may include the following:  
 contact with combustible materials  
 Reactions may include the following:  
 risk of causing or intensifying fire

**10.4 Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Drying on clothing or other combustible materials may cause fire.

**10.5 Incompatible materials** : Highly reactive or incompatible with the following materials:  
 oxidizing materials  
 combustible materials  
 reducing materials

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.  
 Decomposition products may include the following materials: Refer to SDS for individual components of the pack.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Endpoint	Species	Result	Exposure
methyl methacrylate	LC50 Inhalation Vapour	Rat	7093 ppm	4 hours
	LD50 Dermal	Rabbit - Male	>5000 mg/kg	-
	LD50 Oral	Rat	7872 mg/kg	-
dibenzoyl peroxide	LC50 Inhalation Dusts and mists	Rat - Male	>24.3 mg/L	4 hours
	LD50 Oral	Mouse - Male, Female	>2000 mg/kg	-
methacrylic acid	LC50 Inhalation Dusts and mists	Rat - Male, Female	7.1 ml/l	4 hours
	LD50 Dermal	Rat	500 to 1000 mg/kg	-
	LD50 Oral	Rat	1320 mg/kg	-

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## SECTION 11: Toxicological information

### Irritation/Corrosion

Product/ingredient name	Test	Species	Route of exposure	Result
dibenzoyl peroxide  2,4,6-tris(dimethylaminomethyl)phenol	OECD 405 Acute Eye Irritation/Corrosion	Rabbit	Eyes	Irritant
	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin	Non-irritant.
	EPA CFR	Rabbit	Eyes	Corrosive
	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin	Corrosive

### Conclusion/Summary

**Skin** : No additional information.  
**Eyes** : No additional information.  
**Respiratory** : No additional information.

### Sensitiser

Product/ingredient name	Test	Route of exposure	Species	Result
methyl methacrylate	-	skin	Not known	Sensitising
dibenzoyl peroxide	-	Respiratory	Not known	Sensitising
2,4,6-tris(dimethylaminomethyl)phenol	OECD 429 Skin Sensitisation: Local Lymph Node Assay	skin	Mouse	Sensitising
	OECD 406 Skin Sensitization	skin	Guinea pig	Sensitising

**Conclusion/Summary** : No additional information.

### Mutagenicity

Product/ingredient name	Test	Result
dibenzoyl peroxide	OECD 471 Bacterial Reverse Mutation Test	Negative
	OECD 476 In vitro Mammalian Cell Gene Mutation Test	Negative
	OECD 478 Genetic Toxicology: Rodent Dominant Lethal Test	Negative
	OECD 474 Mammalian Erythrocyte Micronucleus Test	Negative

**Conclusion/Summary** : 2,4,6-tris(dimethylaminomethyl)phenol: Not mutagenic in a standard battery of genetic toxicological tests.

### Carcinogenicity

Product/ingredient name	Test	Species	Exposure	Result	Route of exposure	Target organs
dibenzoyl peroxide	No official guidelines	Mouse	104 weeks	Negative	Dermal	-

### Reproductive toxicity

Product/ingredient name	Test	Species	Result/Result type	Target organs

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dibenzoyl peroxide	OECD 422 Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test	Rat	Oral	-
2,4,6-tris(dimethylaminomethyl)phenol	OECD 422 Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test	Rat	Oral: NOAEL	-

**Teratogenicity**

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

**Potential acute health effects**

- Inhalation** : Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Ingestion** : No known significant effects or critical hazards.
- Skin contact** : May cause skin irritation. May cause sensitisation by skin contact.
- Eye contact** : Severely irritating to eyes. Risk of serious damage to eyes.

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

- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- Ingestion** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

**Long term exposure**

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

**Potential chronic health effects**

Product/ingredient name	Test	Result type	Result	Target organs
dibenzoyl peroxide	OECD 422 Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test	NOAEL -	1000 mg/kg	-
2,4,6-tris(dimethylaminomethyl)phenol	OECD 422 Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test	NOEL : -	15 mg/kg	brain, liver, spleen

**Conclusion/Summary** : Not available.

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## SECTION 11: Toxicological information

<b>General</b>	: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.	
<b>Carcinogenicity</b>	: No known significant effects or critical hazards.	
<b>IARC</b>	: methyl methacrylate	3
<b>Mutagenicity</b>	: No known significant effects or critical hazards.	
<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>	: No known significant effects or critical hazards.	
<b>Other information</b>	: Not available.	

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Test	Endpoint	Exposure	Species	Result
dibenzoyl peroxide	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute EC50	30 minutes Static	Bacteria	35 mg/L
	OECD 202 <i>Daphnia</i> sp. Acute Immobilisation Test	Acute EC50	48 hours Static	Daphnia	0.11 mg/L
	OECD 201 Alga, Growth Inhibition Test	Acute EbC50 (biomass)	72 hours Static	Algae	0.0422 mg/L
	OECD 203 Fish, Acute Toxicity Test	Acute LC50	96 hours Semi-static	Fish	0.0602 mg/L
2,4,6-tris(dimethylaminomethyl)phenol	OECD 201 Alga, Growth Inhibition Test	Acute EC50	72 hours Static	Algae	84 mg/L
	-	Acute LC50	96 hours Static	Daphnia	718 mg/L
	-	Acute LC50	96 hours Static	Fish	175 mg/L

### 12.2 Persistence and degradability

Product/ingredient name	Test	Period	Result
dibenzoyl peroxide	OECD 301D Ready Biodegradability - Closed Bottle Test	28 days	68 %
2,4,6-tris(dimethylaminomethyl)phenol	OECD 301D Ready Biodegradability - Closed Bottle Test	28 days	4 %

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
dibenzoyl peroxide	-	-	Readily
2,4,6-tris(dimethylaminomethyl)phenol	-	-	Not readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
dibenzoyl peroxide	3.2	-	high
2,4,6-tris(dimethylaminomethyl)phenol	0.219	-	low

### 12.4 Mobility in soil

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

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## SECTION 12: Ecological information

### 12.5 Results of PBT and vPvB assessment

Not applicable.

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

### 12.7 Other ecological information

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. 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. Vapor 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.

**Hazardous waste** : Yes.

#### European waste catalogue (EWC)

Waste code	Waste designation
07 02 08*	other still bottoms and reaction residues

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special 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. Vapor 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

	14.1 UN number	14.2 UN proper shipping name
<b>ADR/RID</b>	UN3108	ORGANIC PEROXIDE TYPE E, SOLID DIBENZOYL PEROXIDE METHYL METHACRYLATE
<b>IMDG</b>	UN3108	ORGANIC PEROXIDE TYPE E, SOLID (DIBENZOYL PEROXIDE) (METHYL METHACRYLATE). Marine pollutant (dibenzoyl peroxide, oxydipropyl-dibenzoate R36 R51/53)







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**SECTION 14: Transport information**

<b>IATA</b>	UN3108	ORGANIC PEROXIDE TYPE E, SOLID (DIBENZOYL PEROXIDE) (METHYL METHACRYLATE)
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	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards	14.6 Special precautions for user	Additional information
<b>ADR/RID</b>	5.2  	-	Yes.	Not available.	<b>Special provisions</b> 122 274  <b>Tunnel code</b> D
<b>IMDG</b>	5.2  	-	Yes.	Not available.	<b>Emergency schedules (EmS)</b> F-J, S-R
<b>IATA</b>	5.2  	-	Yes.	Not available.	<b>Passenger and Cargo Aircraft</b> Quantity limitation: 10 kg Packaging instructions: 570 <b>Cargo Aircraft Only</b> Quantity limitation: 25 kg Packaging instructions: 570

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** : Not applicable.

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
**EU Regulation (EC) No. 1907/2006 (REACH)**

**Annex XIV - List of substances subject to authorisation**

**Substances of very high concern**

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Other EU regulations**

**Europe inventory** : All components are listed or exempted.

**Black List Chemicals** : Not listed

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## SECTION 15: Regulatory information

**Priority List Chemicals** : Listed

**Integrated pollution prevention and control list (IPPC) - Air** : Not listed

**Integrated pollution prevention and control list (IPPC) - Water** : Not listed

### National regulations

**References** : The provision of Safety Data Sheets comes under Regulation 6 of CHIP (CHIP is the recognised abbreviation for the Chemicals Hazard Information and Packaging Regulations). This is an addition to the Health and Safety at Work Act 1974.

### International regulations

**Chemical Weapons Convention List Schedule I Chemicals** : Not listed

**Chemical Weapons Convention List Schedule II Chemicals** : Not listed

**Chemical Weapons Convention List Schedule III Chemicals** : Not listed

**15.2 Chemical Safety Assessment** : This product contains substances for which Chemical Safety Assessments are still required.

## SECTION 16: Other information

📌 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number

### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 2, H225  
 Org. Perox. E, H242  
 Eye Dam. 1, H318  
 Skin Sens. 1, H317  
 STOT SE 3, H335  
 Aquatic Acute 1, H400  
 Aquatic Chronic 2, H411

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Flam. Liq. 2, H225	Expert judgment
Org. Perox. E, H242	Expert judgment
Eye Dam. 1, H318	Expert judgment
Skin Sens. 1, H317	Expert judgment
STOT SE 3, H335	Expert judgment
Aquatic Acute 1, H400	Expert judgment
Aquatic Chronic 2, H411	Expert judgment

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- Full text of abbreviated H statements** : H225 Highly flammable liquid and vapour.  
 H241 Heating may cause a fire or explosion.  
 H242 Heating may cause a fire.  
 H302 Harmful if swallowed.  
 H311 Toxic in contact with skin.  
 H312 Harmful in contact with skin.  
 H314 Causes severe skin burns and eye damage.  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H318 Causes serious eye damage.  
 H319 Causes serious eye irritation.  
 H332 Harmful if inhaled.  
 H335 May cause respiratory irritation.  
 H400 Very toxic to aquatic life.  
 H411 Toxic to aquatic life with long lasting effects.  
 H412 Harmful to aquatic life with long lasting effects.
- Full text of classifications [CLP/GHS]** : Acute Tox. 3, H311 ACUTE TOXICITY: SKIN - Category 3  
 Acute Tox. 4, H302 ACUTE TOXICITY: ORAL - Category 4  
 Acute Tox. 4, H312 ACUTE TOXICITY: SKIN - Category 4  
 Acute Tox. 4, H332 ACUTE TOXICITY: INHALATION - Category 4  
 Aquatic Acute 1, H400 AQUATIC TOXICITY (ACUTE) - Category 1  
 Aquatic Chronic 2, H411 AQUATIC TOXICITY (CHRONIC) - Category 2  
 Aquatic Chronic 3, H412 AQUATIC TOXICITY (CHRONIC) - Category 3  
 Eye Dam. 1, H318 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1  
 Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2  
 Flam. Liq. 2, H225 FLAMMABLE LIQUIDS - Category 2  
 Org. Perox. B, H241 ORGANIC PEROXIDES - Type B  
 Org. Perox. E, H242 ORGANIC PEROXIDES - Type E  
 Skin Corr. 1A, H314 SKIN CORROSION/IRRITATION - Category 1A  
 Skin Corr. 1B, H314 SKIN CORROSION/IRRITATION - Category 1B  
 Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2  
 Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1  
 STOT SE 3, H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] - Category 3
- Full text of abbreviated R phrases** : R3- Extreme risk of explosion by shock, friction, fire or other sources of ignition.  
 R7- May cause fire.  
 R11- Highly flammable.  
 R22- Harmful if swallowed.  
 R21/22- Harmful in contact with skin and if swallowed.  
 R34- Causes burns.  
 R35- Causes severe burns.  
 R41- Risk of serious damage to eyes.  
 R36- Irritating to eyes.  
 R37- Irritating to respiratory system.  
 R37/38- Irritating to respiratory system and skin.  
 R43- May cause sensitisation by skin contact.  
 R50- Very toxic to aquatic organisms.  
 R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
 R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
 R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- Full text of classifications [DSD/DPD]** : E - Explosive  
 O - Oxidising  
 F - Highly flammable  
 C - Corrosive  
 Xn - Harmful  
 Xi - Irritant  
 N - Dangerous for the environment

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**SECTION 16: Other information**

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