

Safety Data Sheet

according to Regulation (EC) No 1907/2006



REVOLUTION-X

Compilation date: 30.10.2017
Revision date: 18.12.2017

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

1.1 Product identifier

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

Use of the substance/mixture

Inapplicable.

1.3 Details of the supplier of the safety data sheet

Company name: Arcora International GmbH
Street: Marsstraße 9
Place: 85609 Aschheim by Munich
Germany
Tel: +49 (0)89 / 14 33 29 3-0
Fax: +49 (0)89 / 14 33 29 3-29
E-Mail: info@arcora.de

1.4 Emergency telephone number + 49 (0) 89 / 14 33 29 3-10

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Hazard categories:
Aquatic Chronic 3, H412
Hazard Statements:
Harmful to aquatic life with long lasting effects.

Ingredients of unknown toxicity

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 27.4%
There is no toxicity data available for the polymer in this product, which is exempt and categorized in a low concern functional group under the EPA's Toxic Substances Control Act (TSCA).

Ingredients of unknown ecotoxicity

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 32.8%
There is no data for hazards to the aquatic environment available for the polymer in this product, which is exempt and categorized in a low concern functional group under the EPA's Toxic Substances Control Act (TSCA).

2.2 Label elements

The product is classified as dangerous according to Directive 1999/45/EC and it is not amendments.

Hazard statements

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

General: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits (TRGS 900)

Product/ingredient name	Exposure limit values
Zinc oxide	Arbejdstilsynet (Denmark, 10/2012). TWA: 4 mg/m ³ , (calculated as Zn) 8 hours. TWA: 4 mg/m ³ , (calculated as Zn) 8 hours. Form: fume

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 monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

8.2 Exposure controls

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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. 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: safety glasses with side-shields.

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.

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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

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.

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

Physical state: liquid
Colour: opaque white
Odour: bland

pH-value (at 20 °C): 7,5 **Test method**

Changes in the physical state

Melting point: approx. 0 °C
Initial boiling point and boiling range: approx. 100 °C
Flash point: Closed cup: > 93,334 °C
Flash point: Closed cup: 62.77°C

Flammability

Solid: not applicable
Gas: not applicable
Lower explosion limits: not determined
Upper explosion limits: not determined

Auto-ignition temperature

Solid: not applicable
Gas: not applicable
Decomposition temperature: not determined

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

CAS-No.	Chemical name				
	Exposure way	Method	Dose	Species	Source
	2-(2-Ethoxyethoxy)ethanol				
	oral	LD50	7500 mg/kg	Rat	
	Tris(2-butoxyethyl)phosphate				
	oral	LD50	3 g/kg	Rat	
	Zinc oxide				
	oral	LD50	7950 mg/kg	Rat	
	Octylphenol, ethoxylated				
	oral	LD50	4190 mg/kg	Rat	

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Obsevation
2-(2-Ethoxyethoxy)ethanol	Eyes - Moderate irritan	Rabbit	-	125 mg	-
	Eyes - Moderate irritan	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Tris(2-butoxyethyl)phosphate	Eyes Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Zinc oxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Octylphenol, ethoxylated	Eyes – Mild irritant	Rabbit	-	15 mg	-
	Eyes – Severe irritant	Rabbit	-	1 %	-

Symptoms related to the physical, chemical and toxicological characteristic

Inhalation	No specific data.
Skin contact	No specific data
Eye contact	No specific data
Ingestion	No specific data.

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SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
2-(2-Ethoxyethoxy)ethanol	Acute LC50 3340000 µg/l fresh water	Daphnie - Daphnia magna Neonate	48 hours
	Acute LC50 6010000 µg/l fresh water	Fish - Ictalurus punctatus	96 hours
Tris(2-butoxyethyl)phosphate	Acute LC50 11200 µg/l fresh water	Fish - Pimephales promelas	96 hours
Zinc oxide	Acute IC50 1.85 mg/l Marine water	Algea - Skeletonema costatum	96 hours
	Acute IC50 46 µg/l fresh water	Algea - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute LC50 98 µg/l fresh water	Daphnie - Daphnia magna Neonate	48 hours
	Acute LC50 1.1 ppm fresh water	Fish - Oncorhynchus mykiss	96 hours
Octylphenol, ethoxylated	Acute EC50 210 µg/l fresh water	Algea - Pseudokirchneriella subcapitata	96 hours
	Acute LC50 10800 µg/l marine water	Crustaceans - Pandalus montagui - Adultus	48 hours
	Acute LC50 8600 µg/l fresh water	Daphnie - Daphnia magna Neonate	48 hours
	Acute LC50 7200 µg/l fresh water	Fish - Oncorhynchus mykiss	96 hours

12.2 Persistence and degradability

Not available

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
2-(2-Ethoxyethoxy)ethanol	-0.54	-	Low
Tris(2-butoxyethyl)phosphate	3,75	5,8	Low
Zinc oxide	-	60960	High

12.4 Mobility in soil

Not available

12.5 Results of PBT and vPvB assessment

Not available

12.6 Other adverse effects

No known significant effects or critical hazards.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

The generation of waste should be avoided or minimized 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 nonrecyclable 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.

Hazardous waste

The classification of the product may meet the criteria for a hazardous waste.

Packaging

The generation of waste should be avoided or minimized 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1 UN-number No dangerous good in sense of these transport regulations.

14.2 UN proper shipping name

14.3 The transport hazard class

14.4 Packing group

Other relevant information about land transport

lapse

Inland waterways transport (ADN)

14.1 UN-number No dangerous good in sense of these transport regulations.

14.2 UN proper shipping name

14.3 The transport hazard class

14.4 Packing group

Other relevant information about Inland waterways transport

lapse

Marine transport (IMDG)

14.1 UN-number No dangerous good in sense of these transport regulations.

14.2 UN proper shipping name

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14.3 The transport hazard class

14.4 Packing group

Other relevant information about marine transport

lapse

Air transport (ICAO)

14.1 UN-number

No dangerous good in sense of these transport regulations.

14.2 UN proper shipping name

14.3 The transport hazard class

14.4 Packing group

Other relevant information about air transport

lapse

14.5 Environmental hazards

no

14.6 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.

14.7 Transport in bulk according to Annex II of MARPOL73/78 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 regulatory information (EG) No. 1907/2006 (REACH)

Annex XIV the list of substances subject to authorisation.

Annex XIV

None of the components are listed.

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-Community regulations

All components are listed or exempted.

Seveso Directive

This product is controlled under the Seveso Directive.

National regulations

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MAL-code: 00-3

Protection based on MAL:

According to the regulations on work involving coded products, the following stipulations apply to the use of personal protective equipment:

General: Gloves must be worn for all work that may result in soiling. Apron/ coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. A face shield must be worn in work involving spattering if a full mask is not required. In this case, other recommended use of eye protection is not required.

In all spraying operations in which there is return spray, the following must be worn: respiratory protection and arm protectors/apron/coveralls/protective clothing as appropriate or as instructed.

MAL-code: 00-3

Application: During downtimes, cleaning and repair of closed facilities, spray booths or cabins, if there is a risk of contact with wet paint or organic solvents. When using scraper or knife, brush, roller, etc. for pre- and post-treatments in cabins or booths of the existing* facility type, if the operator is inside the spray zone.

- Coveralls must be worn.

When spraying in existing* spray booths, if the operator is outside the spray zone.

- Arm protectors and apron must be worn.

During all spraying where atomization occurs in cabins or spray booths where the operator is inside the spray zone and during spraying outside a closed facility, cabin or booth.

-Air-supplied full mask, coveralls and hood must be worn.

Drying: Items for drying/drying ovens that are temporarily placed on such things as rack trolleys, etc. must be equipped with a mechanical exhaust system to prevent fumes from wet items from passing through workers' inhalation zone.

Polishing: When polishing treated surfaces, a mask with dust filter must be worn. When machine grinding, eye protection must be worn. Work gloves must always be worn.

Caution:

The regulations contain other stipulations in addition to the above.

*See Regulations.

