

ARALDITE® 2047-1 ACTIVATOR

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	06.10.2015	400001015063	Date of first issue: 06.10.2015

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

1.1 Product identifier

Trade name : ARALDITE® 2047-1 ACTIVATOR

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

Use of the Substance/Mixture : Adhesives

1.3 Details of the supplier of the safety data sheet

Company : Huntsman Advanced Materials (Europe)BVBA
Address : Everslaan 45
3078 Everberg
Belgium
Telephone : +41 61 299 20 41
Telefax : +41 61 299 20 40
E-mail address of person responsible for the SDS : Global_Product_EHS_AdMat@huntsman.com

1.4 Emergency telephone number

Emergency telephone number : EUROPE: +32 35 75 1234
France ORFILA: +33(0)145425959
ASIA: +65 6336-6011
China: +86 20 39377888
+86 532 83889090
India: + 91 22 42 87 5333
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

Classification (REGULATION (EC) No 1272/2008)

Organic peroxides, Type E	H242: Heating may cause a fire.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Acute aquatic toxicity, Category 1	H400: Very toxic to aquatic life.

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

Hazard statements	:	H242 H319 H317 H400	Heating may cause a fire. Causes serious eye irritation. May cause an allergic skin reaction. Very toxic to aquatic life.
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Precautionary statements	:	Prevention: P280 P210 P220 P234 P273 Response: P305 + P351 + P338 Storage: P410 P235 P420 Disposal: P501	Wear protective gloves/ eye protection/ face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep/Store away from clothing/ combustible materials. Keep only in original container. Avoid release to the environment. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Protect from sunlight. Keep cool. Store away from other materials. Dispose of contents and container in accordance with all local, regional, national and international regulations.
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Hazardous components which must be listed on the label:
dibenzoyl peroxide

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
No information available.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

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Chemical Name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
Dibenzoyl peroxide	94-36-0 202-327-6 05-2117259750-41-0000	Org. Perox. B; H241 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Acute 1; H400	>= 13 - < 30

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
- If inhaled : Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion.
If symptoms persist, call a physician.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : No data is available on the product itself.
Alcohol-resistant foam
Carbon dioxide (CO₂)
- Unsuitable extinguishing media : High volume water jet

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No data is available on the product itself.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : No data is available on the product itself.

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Specific extinguishing methods : No data is available on the product itself.

Further information : Use water spray to cool unopened containers.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.
Evacuate personnel to safe areas.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

None

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid contact with skin and eyes.
For personal protection see section 8.

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Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Smoking, eating and drinking should be prohibited in the application area.

Container may be opened only under exhaust ventilation hood.

Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Avoid shock and friction. Keep away from sources of ignition - No smoking. Keep away from combustible material.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.

Advice on common storage : Acids
Reducing agents
Heavy metals
Bases
Iron
Copper
Rust

Other data : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
dibenzoyl peroxide	94-36-0	TWA	5 mg/m3	GB EH40
Further information	Where no specific short-term exposure limit is listed, a figure three times the			

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long-term exposure should be used

8.2 Exposure controls

Personal protective equipment

Eye protection	: Eye wash bottle with pure water Tightly fitting safety goggles
Hand protection	
Material	: butyl-rubber
Break through time	: > 8 h Solvent-resistant gloves (butyl-rubber) Nitrile rubber 10 - 480 min
Remarks	: Polyvinyl alcohol or nitrile- butyl-rubber gloves The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Before removing gloves clean them with soap and water.
Skin and body protection	: impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Respiratory protection	: In the case of vapour formation use a respirator with an approved filter.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	: paste
Colour	: red
Flash point	: No data is available on the product itself.
Density	: 1.15 g/cm ³ (20 °C)
Solubility(ies)	
Water solubility	: insoluble (20 °C)
Viscosity	
Viscosity, dynamic	: 15 - 45 Pas (20 °C)

9.2 Other information

Self-Accelerating decomposition temperature (SADT)	: 50 °C
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SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : Reacts violently in contact with acids, amines, driers, polymerisation accelerators and easily oxidized materials.

Stable under recommended storage conditions.
No decomposition if used as directed.

10.4 Conditions to avoid

Conditions to avoid : Do not expose to temperatures above:

Heat, flames and sparks.

10.5 Incompatible materials

10.6 Hazardous decomposition products

Burning produces noxious and toxic fumes.
Carbon oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Components:

dibenzoyl peroxide:

Acute oral toxicity : LD50 (Mouse, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 401

Components:

dibenzoyl peroxide:

Acute inhalation toxicity : LC50 (Rat, male): > 24.3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : No data available

Acute toxicity (other routes of administration) : No data available

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Skin corrosion/irritation

Components:

dibenzoyl peroxide:
Species: Rabbit
Assessment: No skin irritation
Method: OECD Test Guideline 404
Result: No skin irritation

Serious eye damage/eye irritation

Components:

dibenzoyl peroxide:
Species: Rabbit
Assessment: Irritant
Method: OECD Test Guideline 405
Result: Irritating to eyes.

Respiratory or skin sensitisation

Components:

dibenzoyl peroxide:
Exposure routes: Skin
Species: Mouse
Method: OECD Test Guideline 429
Result: Causes sensitisation.

Assessment: No data available

Germ cell mutagenicity

Components:

dibenzoyl peroxide:
Genotoxicity in vitro : Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

: Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Components:

dibenzoyl peroxide:
Genotoxicity in vivo : Cell type: Germ
Application Route: Intraperitoneal injection
Exposure time: 8 Weeks
Method: OECD Test Guideline 478
Result: negative

Cell type: Somatic

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Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

Components:

dibenzoyl peroxide:
Species: Mouse, (male and female)
Application Route: Dermal
Exposure time: 104 weeks
Result: negative

Carcinogenicity - : No data available
Assessment

Reproductive toxicity

Components:

dibenzoyl peroxide:
Effects on fertility : Species: Rat, male and female
Application Route: Oral
Method: OECD Test Guideline 422

Effects on foetal : No data available
development

Reproductive toxicity - : No data available
Assessment

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Repeated dose toxicity

Components:

dibenzoyl peroxide:
Species: Rat, male and female
No observed adverse effect level: 1000 mg/kg
Application Route: Ingestion
Exposure time: 696 h Number of exposures: 7 d
Method: Subacute toxicity

Repeated dose toxicity - : No data available
Assessment

Aspiration toxicity

No data available

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Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information

Product:

Remarks: No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

dibenzoyl peroxide:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.0602 mg/l
Exposure time: 96 h
Test Type: semi-static test
Test substance: Fresh water
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 0.11 mg/l
aquatic invertebrates Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 202

Toxicity to algae : EbC50 (Selenastrum capricornutum (green algae)): 0.0422 mg/l

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Exposure time: 72 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 10

: 10

Toxicity to bacteria : EC50 (activated sludge): 35 mg/l
Exposure time: 0.5 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 209

12.2 Persistence and degradability

Components:

dibenzoyl peroxide:

Biodegradability : Inoculum: activated sludge
Concentration: 4 mg/l
Result: Readily biodegradable
Biodegradation: 68 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

12.3 Bioaccumulative potential

Components:

dibenzoyl peroxide:

Partition coefficient: n-octanol/water : log Pow: 3.2 (22 °C)
pH: 7.02
Method: OECD Test Guideline 117

12.4 Mobility in soil

Components:

dibenzoyl peroxide:

Distribution among environmental compartments : Koc: 6309.57 Method: OECD Test Guideline 121

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Other adverse effects

Product:

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Additional ecological information	: Remarks: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic organisms.
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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	: The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging	: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

IATA

14.1 UN number	: UN 3108
14.2 UN proper shipping name	: Organic peroxide type E, solid (DIBENZOYL PEROXIDE)
14.3 Transport hazard class(es)	: 5.2
Labels	: Not assigned by regulation
Packing instruction (cargo aircraft)	: Organic Peroxides, Keep Away From Heat
Packing instruction (passenger aircraft)	: 570

IMDG

14.1 UN number	: UN 3108
14.2 UN proper shipping name	: ORGANIC PEROXIDE TYPE E, SOLID (DIBENZOYL PEROXIDE)
14.3 Transport hazard class(es)	: 5.2
14.4 Packing group	: Not assigned by regulation
Labels	: 5.2
EmS Code	: F-J, S-R
14.5 Environmental hazards	
Marine pollutant	: yes

ADR

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14.1 UN number : UN 3108
14.2 UN proper shipping name : ORGANIC PEROXIDE TYPE E, SOLID
(DIBENZOYL PEROXIDE)
14.3 Transport hazard class(es) : 5.2
14.4 Packing group : Not assigned by regulation
Labels : 5.2
14.5 Environmental hazards
Marine pollutant : no

RID
14.1 UN number : UN 3108
14.2 UN proper shipping name : ORGANIC PEROXIDE TYPE E, SOLID
(DIBENZOYL PEROXIDE)
14.3 Transport hazard class(es) : 5.2
14.4 Packing group : Not assigned by regulation
Labels : 5.2
14.5 Environmental hazards
Marine pollutant : yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Not applicable

EU Voluntary monitoring list for non-scheduled substances : Not applicable

Seveso II - Directive 2003/105/EC amending Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances

		Quantity 1	Quantity 2
3	Oxidising	50 t	200 t
9a	Dangerous for the environment	100 t	200 t

The components of this product are reported in the following inventories:

TSCA : On TSCA Inventory

DSL : All components of this product are on the Canadian DSL.

AICS : Not in compliance with the inventory

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NZIoC	: Not in compliance with the inventory
ENCS	: Not in compliance with the inventory
ISHL	: Not in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

15.2 Chemical Safety Assessment

SECTION 16: Other information

Full text of H-Statements

H241	: Heating may cause a fire or explosion.
H317	: May cause an allergic skin reaction.
H319	: Causes serious eye irritation.
H400	: Very toxic to aquatic life.

Full text of other abbreviations

Aquatic Acute	: Acute aquatic toxicity
Eye Irrit.	: Eye irritation
Org. Perox.	: Organic peroxides
Skin Sens.	: Skin sensitisation

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE. THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards,

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toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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