

Catalyst

PRODUCT

Powder hardener for all PMMA Drycoat products. It is not a binder or a resin, but an oxygen-rich chemical substance, which as an activator (initiator) causes the hardening (polymerization) of reactive pre-activated PMMA resins.

USE

Drycoat Catalyst is absolutely necessary as a hardener when processing pre-activated reactive PMMA products.

MIXING

The catalyst is added by mixing in order to obtain a homogeneous mixture. See the information of the individual products to which it is to be mixed.

CONSUMPTION

The dosage usually corresponds to the delivery form of the products. For a check it is however necessary to check it once again in the product information of the materials to be processed.

In case of lower or higher dosage the hardening reaction may not work completely and the product may not reach the chemical and mechanical properties ensured.

STORAGE

Keep in closed packages dry and away from sources of flame and heat, at temperatures below +30 ° C. Protect from direct solar radiation. (In case of strong heating it can catch fire!)

If the catalyst is stored at high temperatures, the free flowing powder sticks and is no longer usable.

Protect the catalyst from impurities! Even insignificant amounts of impurities such as dirt, ash, rust, metal dust, etc., can cause the catalyst to decompose rapidly. This can be dangerous and lead to a decrease in reactivity.



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1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING

1.1 PRODUCT IDENTIFIER	Commercial Product Name:	Drycoat Catalyst
1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST	Relevant identified uses	Hardener
1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET	Company:	Drytech International SA via Industrie 12 CH-6930 Bedano TI SVIZZERA
	T	+41 (0)91 960 23 49
	@	info@drytechinternational.com
1.4 EMERGENCY TELEPHONE NUMBER	Switzerland: 145 From abroad: +41 44 251 51	

2. HAZARDS IDENTIFICATION

2.1 SUBSTANCE OR MIXTURE CLASSIFICATION	Classification according to Regulation (EC) No. 1272/2008	Org. Perox. D; H242 Eye Irrit. 2; H319 Skin Sens. 1; H317 Repr. 1B; H360d Aquatic Acute 1; H400 Aquatic Chronic 1; H410	
2.2 LABEL ELEMENTS	Hazard pictogram		
		GHS02	GHS07
			
	GHS09		
	Signal word	Danger	
	Hazardous component (s) to report on the label:	Dibenzoyl peroxide,	

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<i>H-statement(s):</i>	H242: Risk of fire due to heating.
	H317: May cause an allergic skin reaction.
	H319: Causes serious eye irritation.
	H410: Very toxic to aquatic life with long lasting effects.
<i>P-statement(s):</i>	P210: Keep away from heat / sparks / open flames / heated surfaces. - Not smoking.
	P234: Keep only in the original container.
	P235: Keep in a cool place.
	P261: Avoid breathing dust.
	P273: Do not disperse in the environment.
	P280: Wear protective gloves / protective clothing / eye protection / face protection.
	P333+P313: If skin irritation or rash occurs: seek medical attention.
	P362+P364: Remove all contaminated clothing and wash it before wearing again.
	P337+P313: If eye irritation persists, consult a doctor.
	P391: Collect spilled material.
	P403: Store in a well-ventilated place.
P420: Keep away from other materials.	

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.2 MIXTURES

Chemical characterization

Benzoyl peroxide -
phlegmatized with plasticizer

DANGEROUS INGREDIENTS

Ingredient	Classification 1272/2008/EG		Concentration
DIBENZOYL PEROXIDE	No. CAS No. CE No. INDICE No. REACH	94-36-0 202-327-6 617-008-00-0 01-2119511472-50-XXXX	45.0 - 50.0 % by weight
		Org. Perox. B; H241 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	

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Ethylene dibenzoate	No. CAS No. CE No. REACH	94-49-45 202-338-6 01-2120759933-41-XXXX	Org. Perox. B; H241 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	45.0 - 50.0 % by weight
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4. FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES	<i>General advice:</i>	If symptoms persist, consult a doctor.
	<i>Inhalation:</i>	Remove victim to breathe fresh air and rest in a position that facilitates breathing.
	<i>Skin:</i>	Wash with plenty of soap and water. If skin irritation appears, seek medical advice / control.
	<i>Eyes</i>	Wash immediately with plenty of water and consult a doctor.
	<i>Ingestion:</i>	Rinse mouth. Do NOT induce vomiting. Call a physician immediately.

5. FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA	<i>Suitable extinguishing media</i>	Carbon dioxide (CO ₂), dry powder, dry sand, water spray, foam.
	<i>Extinguishing media which must not be used for safety reasons:</i>	Halon
5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE	<i>Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases</i>	Carbon dioxide (CO ₂), Carbon monoxide, Benzoic acid, Benzene
5.3 ADVICE FOR FIRE-FIGHTERS	<i>Special protective equipment for firefighting:</i>	In the event of fire, wear self-contained breathing apparatus

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES	<i>Personal precautions:</i>	Do not breathe the dust. Avoid contact with skin and eyes. Use personal protective equipment.
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6.2 ENVIRONMENTAL PRECAUTIONS	Environmental precautions:	Do not discharge the flushing stream into surface water or sanitary sewage systems.
6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP	Methods for cleaning up:	Contain the leak, collect it with an electrically protected vacuum cleaner or wet brush and transfer it to a waste container in compliance with local regulations (see section 13).
6.5 ADDITIONAL INFORMATION		Ignition risk.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING	Advice on safe handling:	Wear protective clothing. Do not breathe the dust. Avoid contact with skin and eyes.
7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES	Storage indications:	Store in original containers. Keep container tightly closed in a dry and well-ventilated place.
	Storage	Keep dry
	TRGS 510	5.2
	Storage temperatures recommended:	25 °C

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

DIBENZOYL PEROXIDE

DNEL

Value	Target group	Exposure via	Exposure frequency	Source
11,75 mg/m ³	Workers	Inhalation	Long term effects	100
6,6 mg/kg	Workers	Skin exposure	Long term effects	100
2,9 mg/m ³	Consumers	Inhalation	Long term effects	100
3,3 mg/kg	Consumers	Skin exposure	Long term effects	100
1,65 mg/kg	Consumers	Oral	Long term effects	100

Source: 100 - Company data

PNEC

Value	Exposure via	Source
0,000602 mg/l	Freshwater	100

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0,338 mg/kg	Freshwater sediment	100
0,0000602 mg/l	Sea water	100
0,0338 mg/kg	Marine sediment	100
0,35 mg/l	Pre-treatment of waste water	100
6,67 mg/kg	Oral	100

Source: 100 - Company data

DIBENZOATE ETHYLENE

DNEL

Value	Target group	Exposure via	Exposure frequency	Source
10,6 mg/m ³	Workers	Inhalation	Long term systemic effects	100
3 mg/kg ²	Workers	Skin	Long term systemic effects	100

Source: 100 - Company data

PNEC

Value	Exposure via	Source
0,0073 mg/l	Freshwater	100
0,00073 mg/kg	Sediment Freshwater	100
2,23 mg/l	Sea water	100
0,223 mg/kg	Marine sediment	100
128 mg/l	STP	100
0,44	Soil	100

Source: 100 - Company data

8.2 EXPOSURE CONTROLS

Respiratory protection

Use the recommended respiratory protection if the occupational exposure limit is exceeded and / or if the product (dust) is released.

Remarks:

Tipo di filtro suggerito: P 1

Hand protection

Suitable material:

Nitriles butyl rubber

Eye protection:

Tightly fitting safety goggles

Engineering measures:

Ensure adequate ventilation, especially in closed areas.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical state	solid
Form	In the form of a whitish powder
Odour	Characteristic

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<i>Physical state</i>	Solid
<i>Form</i>	In the form of a whitish powder
<i>Odour</i>	Characteristic
<i>Odour threshold</i>	Not determined
<i>pH</i>	Not applicable
<i>Melting point [°C] / Freezing point [°C]</i>	Not applicable
<i>Boiling point [°C]</i>	Not applicable
<i>Flash point [°C]</i>	Not applicable
<i>Evaporation rate [kg/(s*m²)]</i>	Not applicable
<i>Flammability (solid, gas)</i>	Heating can cause a fire.
<i>Explosion limits [Vol-%]</i>	Not determined
<i>Vapour pressure [kPa]</i>	Not applicable
<i>Vapour density</i>	Not applicable
<i>Density [g/cm³]</i>	1,23 g/cm ³
<i>Relative density</i>	Not determined
<i>Water solubility [g/l]</i>	Not determined
<i>Distribution coefficient (n-octanol / water) (log P O/W)</i>	
<i>Remarks:</i>	Not determined
<i>Self-flammability</i>	Not self-flammable
<i>Decomposition temperatures [°C]</i>	55 °C
<i>Dynamic viscosity [kg / (m * s)]</i>	Not applicable
<i>Risk of explosion.</i>	Dust Explosion Danger
9.2 OTHER INFORMATION	<i>Density apparente [kg/m³]</i> 650 kg/m ³

10. STABILITY AND REACTIVITY

10.1 REACTIVITY

Self-accelerated decomposition temperatures (TDAA / SADT) 55 °C

10.4 CONDITIONS TO AVOID

Avoid impact and rubbing.
Temperatures above 25 °C can alter the characteristics of the product.

10.5 Incompatible materials

Rust, Iron, Copper, Acids, Reducing agents.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Benzoic acid, Benzol

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11. TOXICOLOGICAL
INFORMATION11.1 TOXICOLOGICAL
INFORMATION

Hazardous ingredients

DIBENZOYL PEROXIDE	Inhalative toxicity [mg/l]	Test	Duration of administration	Test species	Notano	Source
	24.3 mg/l	LC50	4h	Rat	OECD TG 403	2

Source: 2 - SimChem

LC50 Inhalation 4h for dusts and mists [mg / l]	Test criterion	Test species	Source
>24,3 mg/l	LC0	Rat	100

Source: 100 - Company data

<i>Irritant effect on skin</i>	No skin irritation
<i>Measuring method</i>	OECD TG 404
<i>Test species</i>	Rabbit
<i>Irritant effect on eyes</i>	Irritating to eyes, reversible within 21 days
<i>Measuring method</i>	OECD TG 405
<i>Test species</i>	Rabbit
<i>Awareness raising</i>	Skin sensitizing
<i>Measuring method</i>	OECD TG 429
<i>Test species</i>	Mouse
<i>Carcinogenic effects</i>	It showed no carcinogenic effects in animal experiments.
<i>Mutagenicity</i>	It showed no mutagenic effects in animal experiments.
<i>Reproduction toxicity</i>	Not toxic to reproduction

Specific target organ toxicity (single exposure) [mg/kg]	Source
No data available	2

Source: 2 - SimChem

Specific target organ toxicity (repeated exposure) [mg/kg]	Source
Animal testing did not reveal any harmful effects	2

Source: 2 - SimChem

ETILENDIBENZOATO	Oral toxicity [mg/kg]	Test criterion	Test species	Source
	>2001	DL50	Rat	100

Source: 100 - Company data

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<i>Irritant effect on skin:</i>	<i>No skin irritation</i>
<i>Measuring method:</i>	<i>OECD TG 404</i>
<i>Irritant effect on eyes:</i>	<i>No eye irritation</i>
<i>Measuring method:</i>	<i>OECD TG 405</i>
<i>Test species:</i>	<i>Rabbit</i>
<i>Awareness raising pelle:</i>	<i>No known effect</i>
<i>Mutagenicity:</i>	<i>No known effect</i>
<i>Reproduction toxicity:</i>	<i>No known effect.</i>

<i>Specific target organ toxicity (single exposure) [mg/kg]</i>	<i>Source</i>
No data available	100

Source: 100 - Company data

12. ECOLOGICAL INFORMATION

12.1 TOXICITY

DIBENZOYL PEROXIDE

<i>Toxicity to fish[mg/l]</i>	<i>Test criterion</i>	<i>Test species</i>	<i>Exposure duration</i>	<i>Kind of measurement</i>	<i>Source</i>
0,0602	LC50	Oncorhynchus mykiss (Rainbow trout)	96 h	OECD TG 203	100

Source: 100 - Company data

<i>Toxicity for Daphnia [mg/l]</i>	<i>Test criterion</i>	<i>Test species</i>	<i>Exposure duration</i>	<i>Measuring method</i>	<i>Source</i>
0,0602	EC50	Daphnia magna (Water flea)	48 h	OECD TG 202	100

Source: 100 - Company data

<i>Toxicity to algae [mg/l]</i>	<i>Test criterion</i>	<i>Test species</i>	<i>Exposure duration</i>	<i>Measuring method</i>	<i>Source</i>
0,0711	EC50	Pseudokirchneriella subcapitata	72 h	OECD TG 201	100

Source: 100 - Company data

<i>Biodegradability</i>	<i>Biodegradabile 68 %</i>
<i>Measuring method</i>	<i>OECD 301D/ EEC 92/69/V, C.4-E</i>
<i>Durata</i>	<i>28 days</i>

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Toxicity to algae [mg/l]	Test criterion	Test species	Exposure duration	Kind of measurement	Source
(>0.87)	EC50	Pseudokichneriella subcapitata	72 h	OECD TG 201	100

Source: 100 - Company data

NOEC (Daphnia) [mg/l]	Test species	Duration of exposure	Source
1,4	Daphnia magna (Water flea)	21 days	100

Source: 100 - Company data

<i>Rapid degradability</i>	Readily biodegradable.
<i>Bioaccumulation</i>	Bioaccumulation is unlikely
<i>The result of the PBT properties detection</i>	The substance is not considered to be persistent, bioaccumulating or toxic (PBT).

12.6. OTHER EFFECTS ADVERSE

Environmental Risks:

No information available.

13. CONSIDERATIONS ON DISPOSAL

13.1 WASTE TREATMENT METHODS

Disposal considerations:

According to the European waste catalog, waste codes are not specific to the product, but specific to the placement. The waste codes indicated below are only suggestions:

Waste Code:

160903 - peroxides, for example hydrogen peroxide

14. TRANSPORT INFORMATION







*Land transport ADR/RID**Marine transport IMDG**Air transport ICAO/IATA*

14.1 UN-NO	3106	3106	3106
14.3 TRANSPORT HAZARD CLASS(ES)	5.2	5.2	5.2
14.2 DESCRIPTION OF THE GOODS	ORGANIC PEROXIDE OF TYPE D, SOLID	ORGANIC PEROXIDE OF TYPE D, SOLID	ORGANIC PEROXIDE OF TYPE D, SOLID
14.2 UN PROPER SHIPPING NAME		ORGANIC PEROXIDE TYPE D, SOLID	ORGANIC PEROXIDE TYPE D, SOLID

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HAZARDOUS COMPONENTS	Dibenzoyl peroxide	Dibenzoyl peroxide	Dibenzoyl peroxide
Labels	3  	3  	3 - Flammable liquid  
Category	2		
Factor	3		
Classification Code	P1		
Tunnel restriction code	D		
14.5 PERICOLI PER L'AMBIENTE	U - Dangerous for the environment	U - Marine pollutant	U - Dangerous for the environment
EMS NO		F-J;S-R	
Stowage category		D	

14.7 TRANSPORT IN BULK
ACCORDING TO ANNEX
II OF MARPOL AND THE
IBC CODE

Not relevant

HS-Code

32081090

15. REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND
ENVIRONMENTAL REGU-
LATIONS/LEGISLATION
SPECIFIC FOR THE SUB-
STANCE OR MIXTURE

Additional regulations:

Furthermore, national laws must be considered!

16. OTHER INFORMATION

Relevant H-phrases

H241: Risk of fire or explosion due to heating.
H242: Risk of fire due to heating.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H400: Very toxic to aquatic organisms.
H410: Very toxic to aquatic organisms with long lasting effects.
H411: Toxic to aquatic life with long lasting effects.

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Text of the hazard classes

Org. Perox.: Organic peroxide
 Eye Irrit.: Eye irritation
 Skin Sens.: Skin awareness raising
 Aquatic Acute: Dangerous for the aquatic environment
 Aquatic Chronic: Dangerous for the aquatic environment

Classification of mixtures and evaluation methods adopted in accordance with Regulation (EC) No. 1207/2008 [CLP]

<i>Classification</i>	<i>Evaluation</i>
Org. Perox. D; H242	
Eye Irrit. 2; H319	
Skin Sens. 1; H317	
Aquatic Acute 1; H400	
Aquatic Chronic 1; H410	

This information is provided in accordance with the current status of our knowledge and experience. The Safety Data Sheet describes products with a view to relevant safety requirements. This information does not constitute a warranty of properties, features or qualities.