

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

### 1.1. Product identifier

Trade name: **LetterClear (activator)**  
UFI: VA00-C0F3-300K-QAXA

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

Relevant identified uses: an adhesive; industrial use.  
Uses advised against: not determined.

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

Supplier: **3D System**  
Address: ul. Paluch 24, 02-147 Warszawa, PL  
Telephone/fax: +48 22 652 60 11

E-mail address for a competent person responsible for SDS: reklama@3dsystem.pl

### 1.4. Emergency telephone number

112 (general emergency telephone number)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Org. Perox. G

**Skin Irrit. 2 H315, Skin Sens. 1 H317, Eye Irrit. 2 H319**

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.

### 2.2. Label elements

#### Hazard pictograms and signal words



#### Hazardous components placed on the label

Contains: 2,2-Bis(4-glycidylphenoxy)propane; dibenzoyl peroxide.

#### Hazard statements

H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.

#### Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P302+P352 IF ON SKIN: Wash with plenty of water and soap.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
P501 Dispose of contents/container to properly labelled waste containers according to national law.

#### Additional information

None.

### 2.3. Other hazards

Product does not contain components, which meet criteria for PBT or vPvB in accordance with Annex XIII of REACH Regulation.

The product does not contain substances included in the list established in accordance with Article 59(1) for having endocrine disrupting properties, or substances identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 % by weight.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable.

### 3.2. Mixtures

CAS number: 1675-54-3 EC number: 216-823-5 Index number: 603-073-00-2 Registration number: 01-2119456619-26-XXXX	<b>2,2-Bis(4-glycidyloxyphenyl)propane</b> Skin Irrit. 2 H315, Skin Sens. 1 H317, Eye Irrit. 2 H319 <u>Specific concentration limits:</u> Skin Irrit. 2 H315: C ≥ 5% Eye Irrit. 2 H319: C ≥ 5%	65 % ≤ C ≤ 90 %
CAS number: 94-36-0 EC number: 202-327-6 Index number: 617-008-00-0 Registration number: 01-2119511472-50-XXXX	<b>dibenzoyl peroxide</b> Org. Perox. B H241, Skin Sens. 1 H317, Eye Irrit. 2 H319	10 % ≤ C ≤ 15 %

Full text of each H phrase is given in section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### Contact with skin

Take off contaminated clothing. Wash the exposed parts of the skin thoroughly with water and soap. Consult a doctor if disturbing symptoms appear.

#### Contact with eyes

Protect non-irritated eye, remove contact lenses. Rinse contaminated eyes thoroughly with water for 10 - 15 minutes. Avoid powerful water stream – risk of cornea damage. Consult a ophthalmologist if disturbing symptoms appear.

#### Ingestion

Do not induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Consult a doctor, show the packaging or label.

#### After inhalation

Remove the victim to fresh air, keep warm and at rest. Consult a doctor if disturbing symptoms appear.

### 4.2. Most important symptoms and effects, both acute and delayed

#### Contact with skin

The product may cause redness, burning sensation, irritation, allergic reaction.

#### Contact with eyes

The product may cause burning sensation, irritation, tearing.

#### Ingestion

May cause nausea, vomiting, abdominal pains, diarrhea.

#### After inhalation

High concentration of vapours and mists may cause respiratory irritation.

## Effects of exposure

There are no known effects other than those mentioned above.

### 4.3. Indication of any immediate medical attention and special treatment needed

Physician makes a decision regarding further medical treatment after thoroughly examination of the injured. Symptomatic treatment.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media: extinguishing foam, carbon dioxide, water spray, sand, extinguishing powder.

Unsuitable extinguishing media: water jet – risk of the propagation of the flame.

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

During the fire may produce harmful gases containing e.g. carbon monoxides, other hazardous unidentified products of thermal decomposition. Do not inhale combustion products, they can be dangerous for human health.

### 5.3. Advice for firefighters

Personal protection typical in case of fire. Do not stay in the fire zone without self-contained breathing apparatus and protective clothing resistant to chemicals. Cool down the containers that are endangered by fire with a water spray from a safe distance. Collect used extinguishing media.

## SECTION 6: Accidental release measures

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

Limit the access for the outsiders into the breakdown area, until the suitable cleaning operations are completed. Ensure that only the trained personnel removes the effects of the accident. In case of large spills, isolate the exposed area. Use personal protective equipment. Do not breathe vapours. Caution: risk of slipping on the released product.

### 6.2. Environmental precautions

Do not allow the product to get into the sewage system, surface waters and soil. In case of release of large amounts of the product, it is necessary to take appropriate steps to prevent it from spreading into the environment. Notify relevant emergency services.

### 6.3. Methods and material for containment and cleaning up

Small leakage: collect the spilled product with incombustible absorbing materials (e.g. sand, earth, universal binding agents, silica etc.) and place it in waste containers. Treat the collected material as waste. Clean and ventilate the contaminated area.

Large leakage: isolate places where liquid accumulates; pump the collected liquid out.

### 6.4. Reference to other sections

Personal protective equipment – see section 8. Appropriate conduct with waste product – see section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Handle in accordance with good occupational hygiene and safety practices. Do not eat, drink and smoke during the work. Before break and after work wash hands carefully. Use personal protective equipment. Avoid eyes and skin contamination. Avoid vapor formation. Keep the unused containers tightly closed. Provide general and / or local ventilation in the workplace in order to maintain the concentration of the harmful agent in the air below the established limit values.

### 7.2. Conditions for safe storage, including any incompatibilities

Store in properly labeled, sealed packages in a dry, cool and well-ventilated place. Keep away from incompatible materials (see subsection 10.5). Keep away from, foodstuffs and animal feed. Container that is opened should be properly resealed and kept upright to prevent leakage. Avoid sources of heat and direct sunlight.

### 7.3. Specific end use(s)

No information about other uses than those mentioned in subsection 1.2.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational Exposure Limit Values

The product does not contain components subject to exposure controls in the workplace.

Legal Basis: 91/322/EEC as amended, 98/24/EC as amended, 2000/39/EC as amended, 2004/37/EC as amended.

#### Recommended control procedures

Not applicable.

#### DNEL and PNEC

2,2-Bis(4-glycidyoxyphenyl)propane [CAS 1675-54-3]			
Exposure route	Exposure scheme	DNEL	
		worker	consumer
inhalation	long-term systemic	4,93 mg/m <sup>3</sup>	0,87 mg/m <sup>3</sup>
skin	long-term systemic	0,75 mg/kg bw/day	89,3 µg/kg bw/day
oral	long-term systemic	—	0,5 mg/kg bw/day

2,2-Bis(4-glycidyoxyphenyl)propane [CAS 1675-54-3]	
PNEC	Value
marine water	0,001 mg/l
freshwater	0,006 mg/l
soil	0,065 mg/kg dry weight
freshwater sediment	0,341 mg/kg dry weight
marine water sediment	0,034 mg/kg dry weight
sewage treatment plant	10 mg/l
secondary poisoning	11 mg/kg food
marine water (intermittent release)	0,002 mg/l
freshwater (intermittent release)	0,018 mg/l

dibenzoyl peroxide [CAS 94-36-0]			
Exposure route	Exposure scheme	DNEL	
		worker	consumer
skin	long-term local	34 µg/cm <sup>2</sup>	—
inhalation	long-term systemic	39 mg/m <sup>3</sup>	—
skin	long-term systemic	13,3 mg/kg bw/day	—
oral	long-term systemic	—	2 mg/kg bw/day

dibenzoyl peroxide [CAS 94-36-0]	
PNEC	Value
marine water	0,002 µg/l
freshwater	0,02 µg/l
soil	0,003 mg/kg dry weight
freshwater sediment	0,013 mg/kg dry weight

dibenzoyl peroxide [CAS 94-36-0]	
PNEC	Value
marine water sediment	0,001 mg/kg
sewage treatment plant	0,35 mg/l
freshwater (intermittent release)	0,602 µg/l

## 8.2. Exposure controls

### Industrial hygiene

Use the product in accordance with good occupational hygiene and safety practices. Do not eat, drink and smoke during the work. Before break and after work wash hands carefully. Ensure adequate general and/or local ventilation at the workplace.

### Individual protection measures

The necessity to use and the selection of appropriate personal protective equipment should take into account the type of risk posed by the product, working conditions and the way of handling the product. The personal protective equipment used must meet the requirements of Regulation (EU) 2016/425 and the relevant standards. The employer is obliged to provide protection measures appropriate to the activities performed and meeting all quality requirements, including their maintenance and cleaning. Any contaminated or damaged PPE must be replaced immediately.

### Hand protection

Use protective gloves resistant to chemicals according to EN 374. In case of a short exposure, use protective gloves with 2nd or higher level of effectiveness (breakthrough time > 30 min). In case of a long exposure, use protective gloves with 6th level of effectiveness (breakthrough time > 480 min). Recommended material for gloves: nitrile rubber, thickness 0.35 mm. Select the material for the gloves individually at the workplace.

When using protective gloves during work with chemical products, it should be noted that the efficacy levels and corresponding breakthrough times do not indicate actual times of protection at a particular workplace, because the protection can be affected by many factors, e.g. temperature, other substances etc. If there are any signs of degradation, damage or change in appearance (colour, flexibility, shape), it is recommended to replace the gloves with a new pair. Please follow the manufacturer's instructions, not only in terms of gloves' usage, but also in terms of their cleaning, maintenance and storage. It is also important to know how to take off the gloves in order to avoid hands contamination.

### Body protection

Use skin protection measures adequate to the existing thermal, chemical or mechanical hazards.

### Eye protection

Use safety glasses in accordance with EN 166.

### Respiratory protection

Not required with adequate ventilation. In case of the formation of vapours and aerosols, use absorbing equipment or absorbing and filtering equipment with a suitable protection class (class 1/protection against gases or vapours with a concentration in the air volume not exceeding 0.1%, class 2 / protection against gases or vapours with a concentration in the air not exceeding 0.5%, class 3 / protect against gases or vapours at concentrations in the air volume to 1%). In cases where the oxygen concentration is ≤ 19% and / or maximum concentration of toxic substances in the air is ≥ 1.0% by volume, isolating equipment should be used. Recommended filter: P1.

### Thermal hazards

Not applicable.

### Environmental exposure controls

Prevent direct release to drains/ surface waters. Do not contaminate surface waters and drainage ditches with chemicals or used containers. Released product or uncontrolled spills to surface waters should be reported to appropriate authorities in accordance with local and national legislations. Dispose as chemical waste, in accordance with local and national legislation.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	acc. to the assortment
Odour:	characteristic
Melting point/freezing point:	> 100 °C
Boiling point or initial boiling point and boiling range:	> 300 °C
Flammability:	the product is not classified in terms of flammability
Lower and upper explosion limit:	not determined
Flash point:	252 °C
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH:	not determined
Kinematic viscosity:	not determined
Solubility:	not determined
Partition coefficient n-octanol/water (log value):	not applicable
Vapour pressure:	not determined
Density and/or relative density:	~1,168 g/cm <sup>3</sup>
Relative vapour density:	not determined
Particle characteristics:	not applicable

### 9.2. Other information

#### Other safety characteristics

Volatile organic compounds content:	< 50 g/l
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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Product is reactive. It does not go under hazardous polymerization. See also subsection 10.3-10.5.

### 10.2. Chemical stability

The product is stable under normal conditions of use and storage.

### 10.3. Possibility of hazardous reactions

Hazardous reactions are not known.

### 10.4. Conditions to avoid

Avoid heat sources, open flames, sparking tools and direct sunlight.

### 10.5. Incompatible materials

Avoid contact with following materials: strong oxidants, strong acids, strong bases, metals and their alloys, amines, alcohol.

### 10.6. Hazardous decomposition products

Not known.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute toxicity

<b>2,2-Bis(4-glycidyoxyphenyl)propane [CAS 1675-54-3]</b>	
LD <sub>50</sub> (oral, rabbit)	19800 mg/kg
LD <sub>50</sub> (skin, rabbit)	> 20 ml/kg

<b>dibenzoyl peroxide [CAS 94-36-0]</b>	
LD <sub>50</sub> (oral, rat)	> 950 mg/kg

<b>Mixture</b>
Based on available data, the classification criteria are not met.

#### Skin corrosion/irritation

Causes skin irritation.

#### Serious eye damage/irritation

Causes serious eye irritation.

#### Respiratory or skin sensitisation

May cause an allergic skin reaction.

#### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

#### Carcinogenicity

Based on available data, the classification criteria are not met.

#### Reproductive toxicity

Based on available data, the classification criteria are not met.

#### STOT-single exposure

Based on available data, the classification criteria are not met.

#### STOT-repeated exposure

Based on available data, the classification criteria are not met.

#### Aspiration hazard

Based on available data, the classification criteria are not met.

#### Information on likely routes of exposure

Exposure route: eye exposure, skin exposure, inhalation, ingestion. For more information on the impact of each possible route of exposure, see subsection 4.2.

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

See subsection 4.2 of the SDS.

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

See subsection 4.2 of the SDS.

### 11.2. Information on other hazards

#### Endocrine disrupting properties

The product does not contain substances included in the list established in accordance with Article 59(1) for having endocrine disrupting properties, or substances identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 % by weight.

#### Other information

No data on other hazards.

## SECTION 12: Ecological information

### 12.1. Toxicity

2,2-Bis(4-glycidyoxyphenyl)propane [CAS 1675-54-3]		
LC <sub>50</sub> (fish)	1,5 mg/l / 96 h / <i>Oncorhynchus mykiss</i>	method: OECD 203
EC <sub>50</sub> (invertebrates)	1,7 mg/l / 48 h / <i>Daphnia magna</i>	method: OECD 202
NOEC (invertebrates)	0,3 mg/l / 21 days / <i>Daphnia magna</i>	method: OECD 211
EC <sub>50</sub> (algae)	9,4 mg/l / 72 h / <i>Scenedesmus capricornutum</i>	method: EPA-660/3-75-009
EC <sub>10</sub> (microorganisms)	100 mg/l / 3 h / —	method: —

dibenzoyl peroxide [CAS 94-36-0]		
LC <sub>50</sub> (fish)	0,06 mg/l / 96 h / <i>Oncorhynchus mykiss</i>	method: EU C.1 / OECD 203
EC <sub>50</sub> (invertebrates)	0,11 mg/l / 48 h / <i>Daphnia magna</i>	method: EU C.2 / OECD 202
EC <sub>50</sub> (algae)	0,042 mg/l / 72 h / <i>Raphidocelis subcapitata</i>	method: EU C.3 / OECD 201
EC <sub>50</sub> (microorganisms)	35 mg/l / 30 min / —	method: OECD 209

#### Mixture

The product is not classified as hazardous to the aquatic environment.

### 12.2. Persistence and degradability

dibenzoyl peroxide CAS 94-36-0	Easily biodegradable	71%/28 days	method: OECD 301 D
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### 12.3. Bioaccumulative potential

dibenzoyl peroxide CAS 94-36-0	log Po/w = 3,2	method: OECD 117
	BCF = —	method: —

### 12.4. Mobility in soil

Mobility of components of the mixture in soil depends on the hydrophilic and hydrophobic properties and biotic and abiotic conditions of soil, including its structure, climatic conditions, seasons and soil organisms.

### 12.5. Results of PBT and vPvB assessment

Product does not contain components, which meet criteria for PBT or vPvB in accordance with Annex XIII of REACH Regulation.

### 12.6. Endocrine disrupting properties

The product does not contain substances included in the list established in accordance with Article 59(1) for having endocrine disrupting properties, or substances identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 % by weight.

### 12.7. Other adverse effects

The mixture is not classified as hazardous to the ozone layer. Consider other harmful effects of individual components of the mixture on the environment (eg, global warming potential).



## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Recommendations for the product

The waste product should be recovered or disposed of in authorized incineration plants or waste disposal / neutralization plants, in accordance with applicable regulations. Do not empty into drains.

#### Recommendations for used packaging

Reuse / recycle / eliminate empty containers in accordance with the local legislation. Only completely empty containers can be reused.

EU legal acts: directives of the European Parliament and of the Council: 2008/98 / EC as amended and 94/62 / EC as amended.

#### Recommended waste codes

08 04 09*:	waste adhesives and sealants containing organic solvents or other hazardous substances
15 01 10*:	packaging containing residues of or contaminated by hazardous substances

## SECTION 14: Transport information

### 14.1. UN number or ID number

Not applicable, the product is not dangerous during transport.

### 14.2. UN proper shipping name

Not applicable.

### 14.3. Transport hazard class(es)

Not applicable.

### 14.4. Packing group

Not applicable.

### 14.5. Environmental hazards

Not applicable.

### 14.6. Special precautions for user

Not applicable.

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable.

#### Additional data

Not applicable.

## SECTION 15: Regulatory information

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

ADR Agreement concerning the International Carriage of Dangerous Goods by Road.

IMDG Code International Maritime Dangerous Goods Code

IATA Dangerous Goods Regulations

1907/2006/EC REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (as amended).

1272/2008/EC REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (as amended).

2020/878/EU COMMISSION REGULATION of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals.. 2008/98/EC DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 November 2008 on waste and repealing certain Directives (as amended).

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste as amended 2016/425/EU REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC.

The components of the mixture are not included in Annex XVII of the REACH Regulation.

The components of the mixture are not included in Annex XIV of the REACH Regulation.

## 15.2. Chemical safety assessment

A Chemical Safety Assessment is not required for mixtures.

## SECTION 16: Other information

### Full text of H phrases mentioned in section 3

H241	Heating may cause a fire or explosion.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

### Clarification of abbreviations and acronyms

ADR	Agreement concerning the International Carriage of Dangerous Goods by Road.
DNEL	Derived No-Effect Level.
EC <sub>10</sub>	A statistically calculated concentration of a chemical substance in an environmental medium that can cause specific effects in 10% of the tested organisms of a given population under certain conditions.
EC <sub>50</sub>	(median effective concentration) - statistically calculated concentration of a chemical substance in an environmental medium that can cause specific effects in 50% of the tested organisms of a given population under certain conditions.
EN	European standard
IATA	The International Air Transport Association.
IMDG	International Maritime Dangerous Goods Code.
LC <sub>50</sub>	Concentration of a substance that is lethal to 50 percent of the organisms in a toxicity test.
LD <sub>50</sub>	Dose of a substance that is lethal to 50 percent of the organisms in a toxicity test.
NOEC	The highest concentration that does not cause a statistically significant adverse effect in the exposed population, when compared with its appropriate control.
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent, bioaccumulative and toxic substance.
PNEC	Predicted no-effect concentration.
RID	The Regulation concerning the International Carriage of Dangerous Goods by Rail.
UFI	Unique Formula Identifier
vPvB	Very persistent and very bioaccumulative substance.
Eye Irrit. 2	Eye irritation - category 2
Org. Perox. B	Organic peroxide type B
Skin Irrit. 2	Skin irritation - category 2
Skin Sens. 1	Skin sensitization - category 1

### Trainings

Before commencing working with the product, the user should learn the Health & Safety regulations, regarding handling chemicals, and in particular, undergo a proper workplace training.

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## Key literature references and sources of data

This SDS was prepared on the basis of the safety data sheet provided by the manufacturer, literature data, online databases (e.g. ECHA, TOXNET, COSING), our knowledge and experience, taking into account the current legislation.

## Procedures used for the mixture classification according with Regulation 1272/2008/EC as amended

Skin Irrit. 2 H315 calculation method

Skin Sens. 1 H317 calculation method

Eye Irrit. 2 H319 calculation method

Org. Perox. G based on tests

## Additional information

Changes: —

SDS issued by: THETA Consulting Sp. z o.o.

The information above is based on a current available data concerning the product, but also on the experience and knowledge in this field of the producer. They are neither a quality description of the product nor a guarantee of particular features. They are to be treated as aid to safety in transport, storage and usage of the product. That does not free the user from the responsibility of improper usage of the information above and also of improper compliance with the law norms in the field.