

O-Des Plus

Date of compilation: 2021-01-07

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

1.1 Product identifier

Tradename	O-Des Plus
Registration number (REACH)	not relevant (mixture)

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

Relevant identified uses	biocidal product professional uses
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1.3 Details of the supplier of the safety data sheet

NEVS BioTec UG (haftungsbeschränkt)
Kastanienallee 16
25560 Schenefeld

Website: www.nevs-biotec.de

1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Telefax	Opening hours
Toxicological Information			+491738940850		Mon - Fri 09:00 - 17:00

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

not required

SECTION 3: Composition/information on ingredients

3.1 Substances

not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	wt%	Classification acc. to 1272/2008/EC
hydrogen peroxide	CAS No 7722-84-1 EC No 231-765-0	1 - <5	Ox. Liq. 1 / H271 Acute Tox. 4 / H302 Acute Tox. 4 / H332 Skin Corr. 1A / H314 Eye Dam. 1 / H318 STOT SE 3 / H335 Aquatic Chronic 3 / H412

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Name of substance	Identifier	wt%	Classification acc. to 1272/2008/EC
peracetic acid	CAS No 79-21-0 EC No 201-186-8	<1	Flam. Liq. 3 / H226 Org. Perox. D / H242 Acute Tox. 4 / H302 Acute Tox. 4 / H312 Acute Tox. 2 / H330 Skin Corr. 1A / H314 STOT SE 3 / H335 Aquatic Acute 1 / H400 Aquatic Chronic 2 / H411
benzoic acid	CAS No 65-85-0 EC No 200-618-2	<1	Skin Irrit. 2 / H315 Eye Dam. 1 / H318 STOT RE 1 / H372
hexa-2,4-dienoic acid	CAS No 110-44-1 EC No 203-768-7	<1	Eye Irrit. 2 / H319 STOT SE 3 / H335

For full text of abbreviations: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In case of unconsciousness place person in the recovery position. Never give anything by mouth. In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. In all cases of doubt, or when symptoms persist, seek medical advice.

Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety. Ventilate affected area. Prevent skin contact. Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains.

Advices on how to clean up a spill

Collect spillage (sawdust, kieselgur (diatomite), sand, universal binder).

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

• Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

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- **Warning**

Solvent vapours are heavier than air and may spread along floors.

- **Handling of incompatible substances or mixtures**

- **Keep away from**

caustic solutions

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feed-stuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

Incompatible substances or mixtures

Observe hints for combined storage.

- **Protect against external exposure, such as**

high temperatures, frost, sunlight

Consideration of other advice

- **Packaging compatibilities**

Keep only in original container.

7.3 Specific end use(s)

See section 1.6 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Source
GB	hydrogen peroxide	7722-84-1	WEL	1	1.4	2	2.8	EH40/2005

Notation

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period unless otherwise specified

TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average

Relevant DNELs/DMELs/PNECs and other threshold levels

- **relevant DNELs of components of the mixture**

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
hydrogen peroxide	7722-84-1	DNEL	3 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
hydrogen peroxide	7722-84-1	DNEL	1.4 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
peracetic acid	79-21-0	DNEL	0.56 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
peracetic acid	79-21-0	DNEL	0.56 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects

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Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
peracetic acid	79-21-0	DNEL	0.56 mg/m ³	human, inhalatory	worker (industry)	acute-systemic effects
peracetic acid	79-21-0	DNEL	0.56 mg/m ³	human, inhalatory	worker (industry)	acute-local effects
benzoic acid	65-85-0	DNEL	0.1 mg/m ³	human, inhalatory	worker (industry)	chronic-local effects
benzoic acid	65-85-0	DNEL	62.5 mg/kg	human, dermal	worker (industry)	chronic-systemic effects
benzoic acid	65-85-0	DNEL	3 mg/m ³	human, inhalatory	worker (industry)	chronic-systemic effects
hexa-2,4-dienoic acid	110-44-1	DNEL	40 mg/kg	human, dermal	worker (industry)	chronic-systemic effects
hexa-2,4-dienoic acid	110-44-1	DNEL	17.63 mg/m ³	human, inhalatory	worker (industry)	chronic-systemic effects

• relevant PNECs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
hydrogen peroxide	7722-84-1	PNEC	0.0126 mg/l	aquatic organisms	freshwater	short-term (single instance)
hydrogen peroxide	7722-84-1	PNEC	0.0126 mg/l	aquatic organisms	marine water	short-term (single instance)
hydrogen peroxide	7722-84-1	PNEC	4.66 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
hydrogen peroxide	7722-84-1	PNEC	0.047 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
hydrogen peroxide	7722-84-1	PNEC	0.047 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
hydrogen peroxide	7722-84-1	PNEC	0.0023 mg/kg	terrestrial organisms	soil	short-term (single instance)
hydrogen peroxide	7722-84-1	PNEC	0.0138 mg/l	aquatic organisms	water	intermittent release
peracetic acid	79-21-0	PNEC	0 mg/l	aquatic organisms	freshwater	short-term (single instance)
peracetic acid	79-21-0	PNEC	0 mg/l	aquatic organisms	marine water	short-term (single instance)
peracetic acid	79-21-0	PNEC	0.051 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
peracetic acid	79-21-0	PNEC	0 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
peracetic acid	79-21-0	PNEC	0 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
peracetic acid	79-21-0	PNEC	0.32 mg/kg	terrestrial organisms	soil	short-term (single instance)
peracetic acid	79-21-0	PNEC	0.002 mg/l	aquatic organisms	water	intermittent release

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Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
benzoic acid	65-85-0	PNEC	0.34 mg/l	aquatic organisms	freshwater	short-term (single instance)
benzoic acid	65-85-0	PNEC	0.034 mg/l	aquatic organisms	marine water	short-term (single instance)
benzoic acid	65-85-0	PNEC	100 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
benzoic acid	65-85-0	PNEC	1.75 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
benzoic acid	65-85-0	PNEC	0.175 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
benzoic acid	65-85-0	PNEC	0.151 mg/kg	terrestrial organisms	soil	short-term (single instance)
benzoic acid	65-85-0	PNEC	0.331 mg/l	aquatic organisms	water	intermittent release
hexa-2,4-dienoic acid	110-44-1	PNEC	0.129 mg/l	aquatic organisms	freshwater	short-term (single instance)
hexa-2,4-dienoic acid	110-44-1	PNEC	0.01294 mg/l	aquatic organisms	marine water	short-term (single instance)
hexa-2,4-dienoic acid	110-44-1	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
hexa-2,4-dienoic acid	110-44-1	PNEC	0.465 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
hexa-2,4-dienoic acid	110-44-1	PNEC	0.046 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
hexa-2,4-dienoic acid	110-44-1	PNEC	5 mg/l _{soil}	terrestrial organisms	soil	short-term (single instance)
hexa-2,4-dienoic acid	110-44-1	PNEC	0.241 mg/l	aquatic organisms	water	intermittent release

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

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• **other protection measures**

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Colour	clear
Odour	characteristic

Other physical and chemical parameters

pH (value)	3-4.5
Melting point/freezing point	-33 °C
Initial boiling point and boiling range	100 °C
Flash point	not determined
Evaporation rate	not determined
Flammability (solid, gas)	not relevant (fluid)
Explosive limits	not determined
Vapour pressure	32 hPa at 25 °C
Density	1.009-1.071 g/cm ³ at 20 °C
Solubility(ies)	
Water solubility	miscible in any proportion
Partition coefficient	
n-octanol/water (log KOW)	this information is not available
Auto-ignition temperature	not determined
Viscosity	not determined
Explosive properties	none
Oxidising properties	none

9.2 Other information

No further information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability

See below "Conditions to avoid".

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10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat. - UV-radiation/sunlight.

10.5 Incompatible materials

bases

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

Acute toxicity

Shall not be classified as acutely toxic.

• Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	ATE
hydrogen peroxide	7722-84-1	oral	1,026 mg/kg
hydrogen peroxide	7722-84-1	inhalation: vapour	11 mg/l/4h
peracetic acid	79-21-0	oral	1,780 mg/kg
peracetic acid	79-21-0	dermal	1,147 mg/kg
peracetic acid	79-21-0	inhalation: vapour	0.5 mg/l/4h
peracetic acid	79-21-0	inhalation: dust/mist	0.204 mg/l/4h

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant.

Specific target organ toxicity (STOT)

Shall not be classified as a specific target organ toxicant.

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Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
hydrogen peroxide	7722-84-1	LC50	16.4 mg/l	fish	96 h
hydrogen peroxide	7722-84-1	ErC50	1.38 mg/l	algae	72 h
peracetic acid	79-21-0	LC50	11 mg/l	fish	96 h
peracetic acid	79-21-0	EC50	0.73 mg/l	aquatic invertebrates	48 h
peracetic acid	79-21-0	ErC50	0.16 mg/l	algae	72 h
benzoic acid	65-85-0	LC50	44.6 mg/l	fish	96 h
benzoic acid	65-85-0	ErC50	>33.1 mg/l	algae	72 h
hexa-2,4-dienoic acid	110-44-1	LC50	75 mg/l	fish	96 h
hexa-2,4-dienoic acid	110-44-1	EC50	70 mg/l	aquatic invertebrates	48 h
hexa-2,4-dienoic acid	110-44-1	ErC50	77 mg/l	algae	72 h

Aquatic toxicity (chronic)

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
hydrogen peroxide	7722-84-1	EC50	466 mg/l	microorganisms	30 min
peracetic acid	79-21-0	EC50	38.6 mg/l	microorganisms	3 h
benzoic acid	65-85-0	EC50	>120 mg/l	fish	28 d
hexa-2,4-dienoic acid	110-44-1	LC50	>50 mg/l	aquatic invertebrates	21 d
hexa-2,4-dienoic acid	110-44-1	EC50	>50 mg/l	aquatic invertebrates	21 d

Biodegradation

The relevant substances of the mixture are readily biodegradable.

12.2 Persistence and degradability

Data are not available.

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Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time
peracetic acid	79-21-0	DOC removal	98 %	28 d
benzoic acid	65-85-0	carbon dioxide generation	89.5 %	35 d
hexa-2,4-dienoic acid	110-44-1	oxygen depletion	74.9 %	28 d

12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
peracetic acid	79-21-0		-1.2-1.3 (25 °C)	
benzoic acid	65-85-0		1.88	
hexa-2,4-dienoic acid	110-44-1		1.33 (25 °C)	

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1	UN number	(not subject to transport regulations)
14.2	UN proper shipping name	not relevant
14.3	Transport hazard class(es) Class	-
14.4	Packing group	not relevant
14.5	Environmental hazards	none (non-environmentally hazardous acc. to the dangerous goods regulations)

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- 14.6** Special precautions for user
There is no additional information.
- 14.7** Transport in bulk according to Annex II of MARPOL and the IBC Code
The cargo is not intended to be carried in bulk.

SECTION 15: Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Relevant provisions of the European Union (EU)**

• **Seveso Directive**

No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes
	not assigned		

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
COD	Chemical oxygen demand
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
logKOW	n-Octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")

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Abbr.	Descriptions of used abbreviations
NLP	No-Longer Polymer
Org. Perox.	Organic peroxide
Ox. Liq.	Oxidising liquid
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)
- Regulation (EU) No 528/2012 (BPR)

Classification procedure

Physical and chemical properties, Health hazards/environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H226	Flammable liquid and vapour.
H242	Heating may cause a fire.
H271	May cause fire or explosion; strong oxidiser.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H372	Causes damage to organs through prolonged or repeated exposure.



Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

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Code	Text
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.