

Safety Data Sheet acc. to OSHA HCS

Printing date 04/30/2024

Reviewed on 04/30/2024

1 Identification

Product identifier

Trade name: **REVOPOINT - AB6**
Application of the substance / the mixture: Matting agent
Aerosol

Details of the supplier of the safety data sheet

Manufacturer/Supplier: Graichen
Produktions- und Vertriebs-GmbH
Darmstädter Str. 127 - 129
D-64625 Bensheim
Tel.: +49(0)6251/73103
Fax: +49(0)6251/77901
e-mail: info@graichen-bensheim.de
homepage: http://www.graichen.net
REVOPOINT 3D TECHNOLOGIES INC
902, 9/F, Tinno Building, Tongfa South Rd, Xili Street,
Nanshan District, Shenzhen, 518000, P.R.China

Information department: Emergency medical information for poisoning:
Product safety
Poison Information Center Mainz - 24h -
Tel.: +49 (0) 6131 19240
USA / CAN : 800-424-9300 (available 24 hrs)
Advice center for poisoning in Mainz Tel: +49(0)6131/19240 Poison information: +49(0) 700/GIFTINFO
Graichen: During business hours : +49(0)6251 7707880
Graichen: Outside business hours: +49(0)172 7478476

2 Hazard(s) identification

Classification of the substance or mixture

Flammable Aerosols 1 H222 Extremely flammable aerosol.
Gases under Pressure - Compressed gas H280 Contains gas under pressure; may explode if heated.
Eye Irritation 2A H319 Causes serious eye irritation.
Specific Target Organ Toxicity - Single Exposure 3 H336 May cause drowsiness or dizziness.

Label elements

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms



GHS02 GHS04 GHS07

Signal word

Danger

Hazard-determining components of labeling:

Hazard statements

propan-2-ol
Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
Causes serious eye irritation.
May cause drowsiness or dizziness.
Precautionary statements: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Do not spray on an open flame or other ignition source.
Pressurized container: Do not pierce or burn, even after use.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear eye protection / face protection.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a poison center/doctor if you feel unwell.
If eye irritation persists: Get medical advice/attention.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Protect from sunlight. Store in a well-ventilated place.
Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Information pertaining to particular dangers for man and environment:

NFPA ratings (scale 0 - 4)



Health = 2
Fire = 4
Reactivity = 0

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HMIS-ratings (scale 0 - 4)

HEALTH	2	Health = 2
FIRE	4	Fire = 4
REACTIVITY	3	Reactivity = 3

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Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3 Composition/information on ingredients**Chemical characterization: Mixtures**

Description: Active substance with propellant

Dangerous components:

CAS: 106-97-8	butane (containing $\leq 0,1$ % butadiene (106-99-0))	25 – 50%
	⚠ Flammable Gases 1, H220; ⚠ Gases under Pressure - Compressed gas, H280	
CAS: 67-63-0	propan-2-ol	10 – 25%
	⚠ Flammable Liquids 2, H225; ⚠ Eye Irritation 2A, H319; Specific Target Organ Toxicity - Single Exposure 3, H336	
CAS: 74-98-6	propane	10 – 25%
	⚠ Flammable Gases 1, H220; ⚠ Gases under Pressure - Compressed gas, H280	

Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures**Description of first aid measures**

- General information: Do not leave affected persons unattended.
Take affected persons out into the fresh air.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: Seek immediate medical advice.
- Information for doctor:
- Most important symptoms and effects, both acute and delayed: No further relevant information available.
- Indication of any immediate medical attention and special treatment needed: Medical supervision for at least 48 hours.

5 Fire-fighting measures**Extinguishing media**

Suitable extinguishing agents: CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

CO₂, sand, extinguishing powder. Do not use water.

For safety reasons unsuitable extinguishing agents: Water

Special hazards arising from the substance or mixture No further relevant information available.

Advice for firefighters

Protective equipment: Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.

6 Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Use respiratory protective device against the effects of fumes/dust/aerosol.
Ensure adequate ventilation
Keep away from ignition sources

Environmental precautions:

Keep contaminated washing water and dispose of appropriately.
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.

Methods and material for containment and cleaning up:

Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents

Reference to other sections

See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

Protective Action Criteria for Chemicals

PAC-1:		
CAS: 106-97-8	butane (containing $\leq 0,1$ % butadiene (106-99-0))	5500* ppm
CAS: 67-63-0	propan-2-ol	400 ppm
CAS: 74-98-6	propane	5500* ppm
CAS: 75-28-5	isobutane (containing $\leq 0,1$ % butadiene (106-99-0))	5500* ppm
CAS: 74-84-0	ethane	65000*** ppm

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. PAC-2:		
CAS: 106-97-8	butane (containing $\leq 0,1$ % butadiene (106-99-0))	17000** ppm
CAS: 67-63-0	propan-2-ol	2000* ppm
CAS: 74-98-6	propane	17000** ppm
CAS: 75-28-5	isobutane (containing $\leq 0,1$ % butadiene (106-99-0))	17000** ppm
CAS: 74-84-0	ethane	230000*** ppm
. PAC-3:		
CAS: 106-97-8	butane (containing $\leq 0,1$ % butadiene (106-99-0))	53000*** ppm
CAS: 67-63-0	propan-2-ol	12000** ppm
CAS: 74-98-6	propane	33000*** ppm
CAS: 75-28-5	isobutane (containing $\leq 0,1$ % butadiene (106-99-0))	53000*** ppm
CAS: 74-84-0	ethane	400000*** ppm

7 Handling and storage

. Handling:

- . Precautions for safe handling: Open and handle receptacle with care.
- . Information about protection against explosions and fires: Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
Do not spray on a naked flame or any incandescent material.

. Conditions for safe storage, including any incompatibilities

- . Requirements to be met by storerooms and receptacles: Store in a cool location.
Observe official regulations on storing packagings with pressurized containers.
- . Information about storage in one common storage facility: Store away from oxidizing agents.
- . Further information about storage conditions: Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- . Specific end use(s): No further relevant information available.

8 Exposure controls/personal protection

- . Additional information about design of technical systems: No further data; see section 7.

. Control parameters

- . Components with limit values that require monitoring at the workplace:

CAS: 106-97-8 butane (containing $\leq 0,1$ % butadiene (106-99-0))

REL	Long-term value: 1900 mg/m ³ , 800 ppm
TLV (EX)	Short-term value: 1000 ppm

CAS: 67-63-0 propan-2-ol

PEL	Long-term value: 980 mg/m ³ , 400 ppm
REL	Short-term value: 1225 mg/m ³ , 500 ppm
	Long-term value: 980 mg/m ³ , 400 ppm
TLV	Short-term value: 400 ppm
	Long-term value: 200 ppm
	BEI, A4

CAS: 74-98-6 propane

PEL	Long-term value: 1800 mg/m ³ , 1000 ppm
REL	Long-term value: 1800 mg/m ³ , 1000 ppm
TLV	see Appendix F Minimal oxygen content (D, EX)

- . Ingredients with biological limit values:

CAS: 67-63-0 propan-2-ol

BEI	40 mg/L
	Medium: urine
	Time: end of shift at end of workweek
	Parameter: Acetone (background, nonspecific)

- . Additional information: The lists that were valid during the creation were used as basis.
- . Exposure controls
- . Personal protective equipment:
- . General protective and hygienic measures: Wash hands before breaks and at the end of work.
- . Breathing equipment: Use suitable respiratory protective device in case of insufficient ventilation.

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. Protection of hands:	Protective gloves The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
. Material of gloves	The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
. Penetration time of glove material	Value for the permeation: Level $\leq$ 0,7 mm 480min (8h) EN374 The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
. Eye protection:	Tightly sealed goggles
. Body protection:	Protective work clothing

9 Physical and chemical properties

. Information on basic physical and chemical properties

. General Information

. Appearance:

Form:	Aerosol
Color:	White
. Odor:	Characteristic
. Odor threshold:	Not determined.

. pH-value at 20 °C (68 °F):	6.75
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. Change in condition	
Boiling point/Boiling range:	-44.5 °C (-48.1 °F)

. Flash point:	-97 °C (-142.6 °F)
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. Flammability (solid, gaseous):	Not applicable.
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. Auto igniting:	230 °C (446 °F)
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. Decomposition temperature:	Not determined.
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. Ignition temperature:	Product is not selfigniting.
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. Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
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. Explosion limits:	
Lower:	1.5 Vol %
Upper:	12 Vol %

. Vapor pressure at 20 °C (68 °F):	8,300 hPa (6.200 mm Hg)
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. Density at 20 °C (68 °F):	0.672 g/cm ³ (5.6078 lbs/gal)
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. Relative density	Not determined.
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. Vapor density	Not determined.
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. Evaporation rate	Not applicable.
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. Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.

. Partition coefficient (n-octanol/water):	Not determined.
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. Viscosity:	
Dynamic:	Not determined.

. Solvent content:	
Organic solvents:	73.9 %
VOC content:	74.84 %
VOC (EU) (%)	74.9 %

Solids content:	13.4 %
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. Other information

No further relevant information available.

10 Stability and reactivity

. Reactivity	No further relevant information available.
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. Chemical stability

. Thermal decomposition / conditions to be avoided:	No decomposition if used according to specifications.
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. Possibility of hazardous reactions

No dangerous reactions known.

. Conditions to avoid

No further relevant information available.

. Incompatible materials:

No further relevant information available.

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Hazardous decomposition products:

No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification:

CAS: 67-63-0 propan-2-ol

Oral	LD50	5,840 mg/kg (rat) (Acute Oral Toxicity)
Dermal	LD50	12,870 mg/kg (rab) (Acute Dermal Toxicity)
Inhalative	LC50/4h	72.6 mg/l (rat)
	LC50/6h	> 25 mg/l (rat) (Acute Inhalation Toxicity)

Primary irritant effect:

on the skin:

CAS: 67-63-0 propan-2-ol

Ätz-/Reizwirkung auf die Haut (4h) (rabbit) (Acute Dermal Irritation/Corrosion)

on the eye:

Irritating effect.

CAS: 67-63-0 propan-2-ol

Schwere Augenschädigung/-reizung (rabbit) (Acute Eye Irritation/Corrosion)

Sensitization:

No sensitizing effects known.

Additional toxicological information:

CAS: 67-63-0 propan-2-ol

NOAEL, maternal	400 mg/kg KG/day (rat)
NOAEL, parents	500 mg/kg KG/day (Two-Generation Reproduction Toxicity)
	853 mg/kg KG/day (rat) (One-Generation Reproduction Toxicity Study)

Carcinogenic categories

IARC (International Agency for Research on Cancer)

CAS: 67-63-0 | propan-2-ol

3

NTP (National Toxicology Program)

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

Reproductive toxicity

CAS: 67-63-0 propan-2-ol

Oral | NOAEL, Parents | 500 mg/kg (rat) (Two-Generation Reproduction Toxicity)

Specific target organ toxicity - repeated exposure

CAS: 67-63-0 propan-2-ol

STOT RE | mg/kg/day (rat)

12 Ecological information

Toxicity

Aquatic toxicity:

CAS: 106-97-8 butane (containing ≤ 0,1 % butadiene (106-99-0))

EC50 (96h)	7.71 mg/l (Algae)
LC50 (96h)	27.98 mg/l (Fisch)

CAS: 67-63-0 propan-2-ol

EC50	> 100 mg/l (Bacteria)
EC50 (48h)	> 100 mg/l (daphnia magna/gr. Wasserfloh)
EC50 (72h)	> 100 mg/l (Scenedesmus subspicatus)
EC50 (96h)	> 1,000 mg/l (Scenedesmus subspicatus) (Freshwater Alga and Cyanobacteria, Growth Inhibiti)
LC50 (24h)	9,714 mg/l (daphnia magna/gr. Wasserfloh) (Daphnia sp. Acute Immobilisation Test)
	9,640 mg/l (Pimephales promelas (fettköpf. Ellritze)) (Fish, Acute Toxicity Test)
LC50 (48h)	> 100 mg/l (Leuciscus idus (Goldorfe))
LC50 (96h)	> 9,640 – 10,000 mg/l (Pimephales promelas (fettköpf. Ellritze)) (Fish, Acute Toxicity Test)
LOEC (8d)	1,000 mg/l (Algae)
EC50 (3h)	> 1,000 mg/l (activated sludge) (Mikroorganismen/Wirkung auf Belebtschlamm)
NOEC (21d)	30 mg/l (daphnia magna/gr. Wasserfloh) (Daphnia magna Reproduction Test)
NOEC (96h)	1,000 mg/l (Scenedesmus subspicatus) (Freshwater Alga and Cyanobacteria, Growth Inhibiti)

CAS: 74-98-6 propane

EC50 (96h)	7.71 mg/l (Algae)
LC50 (96h)	27.98 mg/l (Fisch)

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CAS: 75-28-5 isobutane (containing $\leq 0,1$ % butadiene (106-99-0))

EC50 (96h) 7.71 mg/l (Algae)
 LC50 (96h) 27.98 mg/l (Fisch)

Persistence and degradability**CAS: 67-63-0 propan-2-ol**

Biodegradability 30d 70 – 84 % (aerob) ((Derterm. of the "Ready" Biodegr. Closed Bottle))

Behavior in environmental systems:

Bioaccumulative potential

CAS: 67-63-0 propan-2-ol

Log Pow 0.05

Mobility in soil No further relevant information available.

Additional ecological information:

General notes: Water hazard class 1 (Self-assessment): slightly hazardous for water
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects No further relevant information available.

13 Disposal considerations**Waste treatment methods**

Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

14 Transport information**UN-Number**

DOT, ADR, IMDG, IATA UN1950

UN proper shipping name

DOT Aerosols, flammable
 ADR 1950 AEROSOLS
 IMDG AEROSOLS
 IATA AEROSOLS, flammable

Transport hazard class(es)

DOT



Class 2.1 Gases
 Label 2.1

ADR



Class 2.5F Gases
 Label 2.1

IMDG, IATA



Class 2.1 Gases
 Label 2.1

Packing group

DOT, ADR, IMDG, IATA Void

Environmental hazards:

Not applicable.

Special precautions for user

Hazard identification number (Kemler code): -
 EMS Number: F-D,S-U
 Stowage Code SW1 Protected from sources of heat.
 SW22 For AEROSOLS with a maximum capacity of 1 litre:
 Category A. For AEROSOLS with a capacity above 1 litre:
 Category B. For WASTE AEROSOLS: Category C, Clear of

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. Segregation Code	living quarters. SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
. Transport/Additional information:	
. ADR . Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
. IMDG . Limited quantities (LQ) . Excepted quantities (EQ)	1L Code: E0 Not permitted as Excepted Quantity
. UN "Model Regulation":	UN 1950 AEROSOLS, 2.1

15 Regulatory information

- . Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.
. Sara

. Section 355 (extremely hazardous substances):	None of the ingredients is listed.
. Section 313 (Specific toxic chemical listings):	CAS: 67-63-0 propan-2-ol
. TSCA (Toxic Substances Control Act):	All components have the value ACTIVE.
. Hazardous Air Pollutants	None of the ingredients is listed.
. Proposition 65	
. Chemicals known to cause cancer:	None of the ingredients is listed.
. Chemicals known to cause reproductive toxicity for females:	None of the ingredients is listed.
. Chemicals known to cause reproductive toxicity for males:	None of the ingredients is listed.
. Chemicals known to cause developmental toxicity:	None of the ingredients is listed.
. Carcinogenic categories	
. EPA (Environmental Protection Agency)	None of the ingredients is listed.
. TLV (Threshold Limit Value)	CAS: 67-63-0 propan-2-ol A4
. MAK (German Maximum Workplace Concentration)	None of the ingredients is listed.
. NIOSH-Ca (National Institute for Occupational Safety and Health)	None of the ingredients is listed.

- . GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

- . Hazard pictograms



GHS02 GHS04 GHS07

- . Signal word

Danger

- . Hazard-determining components of labeling:

- . Hazard statements

propan-2-ol
Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
Causes serious eye irritation.
May cause drowsiness or dizziness.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

- . Precautionary statements

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Do not spray on an open flame or other ignition source.
 Pressurized container: Do not pierce or burn, even after use.
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Wash thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 Wear eye protection / face protection.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Call a poison center/doctor if you feel unwell.
 If eye irritation persists: Get medical advice/attention.
 Store in a well-ventilated place. Keep container tightly closed.
 Store locked up.
 Protect from sunlight. Store in a well-ventilated place.
 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS: Environment protection department.

Contact:

Date of preparation / last revision 04/30/2024 / 2201

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 VOC: Volatile Organic Compounds (USA, EU)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 NIOSH: National Institute for Occupational Safety
 OSHA: Occupational Safety & Health
 TLV: Threshold Limit Value
 PEL: Permissible Exposure Limit
 REL: Recommended Exposure Limit
 BEI: Biological Exposure Limit
 Flammable Gases 1: Flammable gases – Category 1
 Flammable Aerosols 1: Aerosols – Category 1
 Gases under Pressure - Compressed gas: Gases under pressure – Compressed gas
 Flammable Liquids 2: Flammable liquids – Category 2
 Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
 Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

* Data compared to the previous version altered.

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