

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Printing date 15.05.2024

Version number 3 (replaces version 2)

Revision: 15.05.2024

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

- **1.1 Product identifier**
- **Trade name:** **Benamin Blau**
- **UFI:** GA21-R0TE-900T-GU45
- **1.2 Relevant identified uses of the substance or mixture and uses advised against -**
- **Application of the substance / the mixture** Disinfectant
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
BWT Holding GmbH
Walter-Simmer-Straße 4
A - 5310 Mondsee
AUSTRIA
Tel.: +43/6232/5011-0
Fax: +43/6232/4058
email: office@bwt.at
- **Further information obtainable from:**
Abteilung F&E - Chemikalienbeauftragte(r)
Tel.: +43/6232/5011-1893
+43/6232/5011-1427
email: msds-info@bwt-group.com
- **1.4 Emergency telephone number:**
Poison center Vienna
Tel.: +43/1-406 43 43

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS05 corrosion

Met. Corr. 1 H290 May be corrosive to metals.
 Skin Corr. 1B H314 Causes severe skin burns and eye damage.
 Eye Dam. 1 H318 Causes serious eye damage.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.
 Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05



GHS09

- **Signal word** Danger
- **Hazard-determining components of labelling:**
sodium hypochlorite, solution
- **Hazard statements**
H290 May be corrosive to metals.

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H314 Causes severe skin burns and eye damage.

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P102 Keep out of reach of children.

P260 Do not breathe mist/vapours/spray.

P273 Avoid release to the environment.

P280 Wear protective gloves / eye protection / face protection.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P310 Immediately call a POISON CENTER/doctor.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**

EUH031 Contact with acids liberates toxic gas.

EUH206 Warning! Do not use together with other products. May release dangerous gases (chlorine).

Contains biocidal products: sodium hypochlorite, solution

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Mixture: consisting of the following components.

· **Dangerous components:**

CAS: 7681-52-9 EINECS: 231-668-3 Reg.nr.: 01-2119488154-34-xxxx	sodium hypochlorite, solution Met. Corr. 1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410 (M=1) STOT SE 3, H335 EUH031 Specific concentration limit: EUH031: C ≥ 5 %	≥5-<10%
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SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:**

Advice for first aiders: First aiders should pay attention to self-protection and wear the recommended protective clothing.

Immediately remove any clothing soiled by the product.

· **After inhalation:**

Supply fresh air; consult doctor in case of complaints.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

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· **After eye contact:**

Rinse immediately with plenty of water for at least 15 minutes, also under the eyelids. Consult an ophthalmologist immediately. If possible, visit an eye clinic.

· **After swallowing:**

Rinse mouth with water and drink plenty of water. Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting - seek medical attention. Place a vomiting person lying on their back in the recovery position.

· **4.2 Most important symptoms and effects, both acute and delayed**

Symptoms: For more information on symptoms and health hazards, see point 11.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

Use fire extinguishing methods suitable to surrounding conditions.

The product itself does not burn.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **5.2 Special hazards arising from the substance or mixture**

In case of fire, hazardous decomposition products may be formed.

Chlorine (g)

Chlorine dioxide

Hydrogen chloride gas

· **5.3 Advice for firefighters**

· **Protective equipment:**

In case of fire, wear self-contained breathing apparatus.

Wear suitable protective clothing (full protective suit).

· **Additional information**

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Cool closed containers near the source of the fire with water spray; heating leads to an increase in pressure - risk of bursting.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment.

Keep unprotected persons away.

Ensure adequate ventilation.

Risk of slipping if product is spilt.

Avoid contact with eyes and skin.

Do not inhale vapours.

· **6.2 Environmental precautions:**

Do not allow to penetrate the ground/soil.

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in case of seepage into water course or sewage system.

In case of seepage into the ground inform responsible authorities.

· **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Place in suitable and sealed containers for disposal. Do not seal containers gas-tight.

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

· **6.4 Reference to other sections**

For information on emergency information, see section 1.

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

- Remove contaminated clothing immediately.
- Wash hands before breaks and at the end of work.
- Do not eat, drink or smoke in the application area.
- If vapours and aerosols are present, use a respirator with a suitable filter.
- Do not inhale vapours.
- Open and handle receptacle with care.
- Avoid contact with skin and eyes.
- Ensure adequate ventilation.
- Use personal protective equipment.
- Do not seal receptacles gas-tight.
- Keep away from heat and direct sunlight.
- Emergency eye showers should be available in the immediate vicinity.
- Keep away from food, drink and animal feed.

· Information about fire - and explosion protection:

- This product is not flammable. Usual fire prevention measures.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

· Requirements to be met by storerooms and receptacles:

- Unsuitable container materials: iron; copper; aluminium; stainless steel.
- Suitable container materials: polyethylene; polyvinyl chloride.
- Store in a place with an alkali-proof floor.
- Store only in the original receptacle.
- Store in a container with ventilation.

· Information about storage in one common storage facility:

- Do not store together with acids and ammonium salts.
- Store away from foodstuffs.

· Further information about storage conditions:

- Protect from exposure to the light.
- Store receptacle in a well ventilated area.
- Store in a cool place.

· Storage class: 8 B

· 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

- The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· DNELs

CAS: 7681-52-9 sodium hypochlorite, solution

Oral	DNEL oral	0,26 mg/kg bw/day (general population) Long term exposure - repeated dose toxicity
Inhalative	DNEL inhalativ	1,55 mg/m ³ (general population) Long term exposure - repeated dose toxicity 1,55 mg/m ³ (worker) Long term exposure - repeated dose toxicity

· Additional information: The lists valid during the making were used as basis.

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- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
Do not eat, drink, smoke or sniff while working.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Respiratory protection according to EN141.
If vapours and aerosols are present, use a respirator with a suitable filter.
Recommended filter type:
Filter B-P2
Filter B-P3
- **Hand protection**



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**
Fluorkautschuk (0.4 mm)
Nitrile rubber (0.35 mm)
Natural rubber, NR
Chloroprene rubber, CR
PVC gloves
Butyl rubber, BR
Recommended thickness of the material: $\geq 0,5 \text{ mm}$
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.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
 $\geq 8h$
- **Eye/face protection**



Tightly sealed goggles

- **Body protection:** Alkaline resistant protective clothing
- **Environmental exposure controls**
In the event of contamination of water bodies, sewage systems and/or ingress into the ground, inform the relevant authorities.
Do not allow to enter surface water or sewage system.
Avoid penetration into the subsoil.

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SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Physical state	Fluid
· Colour:	Yellowish
· Odour:	Like chlorine
· Odour threshold:	Not determined.
· Melting point/freezing point:	< 0 °C
· Boiling point or initial boiling point and boiling range	>100 °C
· Flammability	Not applicable.
· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	Not applicable.
· Decomposition temperature:	Decomposes when heated.
· pH at 20 °C	12-13
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic at 20 °C:	2,8 mPas
· Solubility	
· water:	Fully miscible.
· Partition coefficient n-octanol/water (log value) at 20 °C	-3,42 log POW
· Vapour pressure:	Not determined.
· Density and/or relative density	
· Density at 20 °C:	1,12-1,17 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.

· 9.2 Other information

· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Not determined.
· Explosive properties:	Product does not present an explosion hazard.
· Solvent content:	
· Water:	32,0 %
· VOC (EC)	0,00 %
· Change in condition	
· Softening point/range	
· Oxidising properties	Oxidising agent
· Evaporation rate	Not determined.

· Information with regard to physical hazard classes

· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void

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- | | |
|--|-----------------------------|
| · Substances and mixtures, which emit flammable gases in contact with water | Void |
| · Oxidising liquids | Void |
| · Oxidising solids | Void |
| · Organic peroxides | Void |
| · Corrosive to metals | May be corrosive to metals. |
| · Desensitised explosives | Void |

SECTION 10: Stability and reactivity

- **10.1 Reactivity** Develops toxic gases on contact with acid.
- **10.2 Chemical stability**
Decomposes when exposed to light.
Decomposes when heated.
- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
- **10.3 Possibility of hazardous reactions**
Reacts with heavy metals.
Reacts with acids.
Reacts with oxidising agents.
Reacts with acids releasing chlorine.
Contact with acids releases toxic gases.
- **10.4 Conditions to avoid** Heat exposure
- **10.5 Incompatible materials:**
Substances to avoid: Acids, ammonium compounds, acetic anhydride, organic materials, hydrogen peroxide, metal salts, copper, nickel, iron.
- **10.6 Hazardous decomposition products:**
Chlorine oxides
Chlorine
Hydrogen chloride gas

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:**
- **CAS: 7681-52-9 sodium hypochlorite, solution**

Oral	LD50	1.100 mg/kg (mouse)
Dermal	LD50	>2.000 mg/kg (rabbit)
Inhalative	LC50/4 h	>10,5 mg/l (rat)

- **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **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.
- **11.2 Information on other hazards**

- **Endocrine disrupting properties**
- None of the ingredients is listed.

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· **Other information**

If swallowed, strong corrosive effect on the mouth and throat and risk of perforation of the oesophagus and stomach.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

CAS: 7681-52-9 sodium hypochlorite, solution

EC50	0,141 mg/L (daphnia)
LC50/96h	0,06 mg/l (fish)
NOEC	0,0021 mg/l /7 days (algae)
	0,04 mg/l /28 days (fish)

· **12.2 Persistence and degradability**

The product can be degraded by abiotic, e.g. chemical or photolytic processes. Decomposition by hydrolysis. Aquatic half-life < 1 day

· **12.3 Bioaccumulative potential**

log Kow -3.42 (20 °C)
non-bioaccumulative

· **12.4 Mobility in soil**

The product is water soluble.
Highly mobile in soils.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

· **12.7 Other adverse effects**

· **Remark:** Very toxic for fish

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Danger to drinking water if even small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

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

Dispose of in compliance with official regulations.

· **European waste catalogue**

06 02 05*	other bases
HP8	Corrosive
HP12	Release of an acute toxic gas
HP14	Ecotoxic

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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water

SECTION 14: Transport information

· 14.1 UN number or ID number · ADR, IMDG, IATA	UN1791
· 14.2 UN proper shipping name · ADR · IMDG · IATA	1791 HYPOCHLORITE SOLUTION, ENVIRONMENTALLY HAZARDOUS HYPOCHLORITE SOLUTION (sodium hypochlorite, solution), MARINE POLLUTANT HYPOCHLORITE SOLUTION
· 14.3 Transport hazard class(es) · ADR, IMDG   · Class · Label	8 Corrosive substances. 8
· IATA  · Class · Label	8 Corrosive substances. 8
· 14.4 Packing group · ADR, IMDG, IATA	II
· 14.5 Environmental hazards: · Marine pollutant: · Special marking (ADR):	Product contains environmentally hazardous substances: sodium hypochlorite, solution No Symbol (fish and tree) Symbol (fish and tree)
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Segregation groups · Stowage Category · Segregation Code	Warning: Corrosive substances. 80 F-A,S-B (SGG8) Hypochlorites B SG20 Stow "away from" SGG1-acids
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

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· Transport category	2
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1791 HYPOCHLORITE SOLUTION, 8, II, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05 GHS09

- **Signal word** Danger
- **Hazard-determining components of labelling:**
sodium hypochlorite, solution
- **Hazard statements**
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.
- **Precautionary statements**
P102 Keep out of reach of children.
P260 Do not breathe mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection / face protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 Immediately call a POISON CENTER/doctor.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category** E1 Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

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· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

· **National regulations:**

· **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 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.

· **Relevant phrases**

H290 May be corrosive to metals.
 H314 Causes severe skin burns and eye damage.
 H318 Causes serious eye damage.
 H335 May cause respiratory irritation.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.
 EUH031 Contact with acids liberates toxic gas.

· **Date of previous version:** 06.05.2024

· **Version number of previous version:** 2

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 ICAO: International Civil Aviation Organisation
 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
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 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)
 VOC: Volatile Organic Compounds (USA, EU)
 DNEL: Derived No-Effect Level (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Met. Corr. 1: Corrosive to metals – Category 1
 Skin Corr. 1B: Skin corrosion/irritation – Category 1B
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
 Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· *** Data compared to the previous version altered.**