

Revision Date 05-Sep-2019

Revision Number 2

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identification

Product Description: BLOTTO in TBS, with 0.02% sodium azide
Cat No. : J62235

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

Recommended Use Laboratory chemicals.
Uses advised against No Information available

1.3. Details of the supplier of the safety data sheet

Company Thermo Fisher (Kandel) GmbH
Erlenbachweg 2
76870 Kandel
Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300

E-mail address tech@alfa.com
www.alfa.com
Product safety Tel + +049 (0) 7275 988687-0

1.4. Emergency telephone number

Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)
Poison Information Center Mainz
www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

Exclusively for customers in Austria:
Poison Information Center (VIZ)
Emergency call 0-24 clock: +43 1 406 43 43
Office hours: Monday to Friday, 8am to 4pm, tel: +43 1 406 68 98

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards

Based on available data, the classification criteria are not met

Health hazards

Based on available data, the classification criteria are not met

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Environmental hazards

Based on available data, the classification criteria are not met

2.2. Label elements

None required

EUH210 - Safety data sheet available on request

2.3. Other hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Component	CAS-No	EC-No.	Weight %	CLP Classification - Regulation (EC) No 1272/2008
Water	7732-18-5	231-791-2	93.77	-
Non-fat dried milk	N/A		5.0	-
Sodium chloride	7647-14-5	231-598-3	0.8	-
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	1185-53-1	EEC No. 214-684-5	0.39	-
Sodium azide	26628-22-8	247-852-1	0.02	Acute Tox. 2 (H300) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032)
Potassium chloride	7447-40-7	231-211-8	0.02	-

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.
Inhalation	Move to fresh air. Get medical attention immediately if symptoms occur.
Self-Protection of the First Aider	No special precautions required.

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

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None reasonably foreseeable.

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

Notes to Physician Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media which must not be used for safety reasons

No information available.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

Nitrogen oxides (NO_x), Sulfur oxides, Hydrogen chloride, Potassium oxides, Sodium oxides.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required.

6.2. Environmental precautions

Should not be released into the environment. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do

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not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities

Store in freezer.

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

List source(s): **EU** - Commission Directive 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC on the protection of the health and safety of workers from the risks related to chemical agents at work. **UK** - EH40/2005 Containing the workplace exposure limits (WELs) for use with the Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended). Updated by September 2006 official press release and October 2007 Supplement. **IRE** - 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority.

Component	European Union	The United Kingdom	France	Belgium	Spain
Sodium azide	Skin TWA: 0.1 mg/m ³ STEL 0.3 mg/m ³	Skin TWA: 0.1 mg/m ³ STEL 0.3 mg/m ³	TWA / VME: 0.1 mg/m ³ (8 heures). restrictive limit STEL / VLCT: 0.3 mg/m ³ . restrictive limit Peau	Skin TWA: 0.1 mg/m ³ STEL 0.3 mg/m ³	STEL / VLA-EC: 0.3 mg/m ³ (15 minutos). TWA / VLA-ED: 0.1 mg/m ³ (8 horas) Piel

Component	Italy	Germany	Portugal	The Netherlands	Finland
Sodium azide	TWA: 0.1 mg/m ³ 8 ore. Media Ponderata nel Tempo STEL: 0.3 mg/m ³ 15 minuti. Breve termine Pelle	MAK 0.2 mg/m ³ (inhalable)	STEL: 0.3 mg/m ³ 15 minutos Ceiling: 0.29 mg/m ³ Ceiling: 0.11 ppm TWA: 0.1 mg/m ³ 8 horas Pele	huid STEL: 0.3 mg/m ³ 15 minuten TWA: 0.1 mg/m ³ 8 uren	TWA: 0.1 mg/m ³ 8 tunteina STEL: 0.3 mg/m ³ 15 minuutteina Iho

Component	Austria	Denmark	Switzerland	Poland	Norway
Sodium azide	Haut MAK-KZW: 0.3 mg/m ³ 15 Minuten MAK-TMW: 0.1 mg/m ³ 8 Stunden	TWA: 0.1 mg/m ³ 8 timer Hud	STEL: 0.4 mg/m ³ 15 Minuten TWA: 0.2 mg/m ³ 8 Stunden	STEL: 0.3 mg/m ³ 15 minutach TWA: 0.1 mg/m ³ 8 godzinach	TWA: 0.1 mg/m ³ 8 timer STEL: 0.3 mg/m ³ 15 minutter. value from the regulation

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Sodium azide	TWA: 0.1 mg/m ³ STEL : 0.3 mg/m ³ Skin notation	kože TWA-GVI: 0.1 mg/m ³ 8 satima. STEL-KGVI: 0.3 mg/m ³ 15 minutama.	TWA: 0.1 mg/m ³ 8 hr. STEL: 0.3 mg/m ³ 15 min Skin	Skin-potential for cutaneous absorption STEL: 0.3 mg/m ³ TWA: 0.1 mg/m ³	TWA: 0.1 mg/m ³ 8 hodinách. Potential for cutaneous absorption Ceiling: 0.3 mg/m ³
Potassium chloride	TWA: 5.0 mg/m ³				

Component	Estonia	Gibraltar	Greece	Hungary	Iceland
Sodium azide	Nahk TWA: 0.1 mg/m ³ 8 tundides. STEL: 0.3 mg/m ³ 15 minutites.	Skin notation TWA: 0.1 mg/m ³ 8 hr STEL: 0.3 mg/m ³ 15 min	STEL: 0.1 ppm STEL: 0.3 mg/m ³ TWA: 0.1 ppm TWA: 0.3 mg/m ³	STEL: 0.3 mg/m ³ 15 percekben. CK TWA: 0.1 mg/m ³ 8 órában. AK	STEL: 0.3 mg/m ³ TWA: 0.1 mg/m ³ 8 klukkustundum. Skin notation

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Sodium chloride	TWA: 5 mg/m ³	TWA: 5 mg/m ³ IPRD			
Sodium azide	skin - potential for	TWA: 0.1 mg/m ³ IPRD	Possibility of significant	possibility of significant	Skin notation

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	cutaneous exposure STEL: 0.3 mg/m ³ TWA: 0.1 mg/m ³	Oda STEL: 0.3 mg/m ³	uptake through the skin TWA: 0.1 mg/m ³ 8 Stunden STEL: 0.3 mg/m ³ 15 Minuten	uptake through the skin TWA: 0.1 mg/m ³ STEL: 0.3 mg/m ³ 15 minuti	TWA: 0.1 mg/m ³ 8 ore STEL: 0.3 mg/m ³ 15 minute
Potassium chloride	TWA: 5 mg/m ³	TWA: 5 mg/m ³ IPRD			

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Sodium chloride	MAC: 5 mg/m ³				
Sodium azide		Ceiling: 0.3 mg/m ³ Potential for cutaneous absorption TWA: 0.1 mg/m ³	TWA: 0.1 mg/m ³ 8 urah Koža STEL: 0.3 mg/m ³ 15 minutah	Binding STEL: 0.3 mg/m ³ 15 minuter TLV: 0.1 mg/m ³ 8 timmar. NGV	Deri TWA: 0.1 mg/m ³ 8 saat STEL: 0.3 mg/m ³ 15 dakika
Potassium chloride	MAC: 5 mg/m ³				

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

Derived No Effect Level (DNEL) No information available

<u>Route of exposure</u>	Acute effects (local)	Acute effects (systemic)	Chronic effects (local)	Chronic effects (systemic)
Oral Dermal Inhalation				

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Measures

None under normal use conditions.

Personal protective equipment

Eye Protection

Safety glasses with side-shields (European standard - EN 166)

Hand Protection

Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Natural rubber	See manufacturers	-	EN 374	(minimum requirement)
Nitrile rubber	recommendations			
Neoprene				
PVC				

Skin and body protection Long sleeved clothing

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

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Respiratory Protection	No protective equipment is needed under normal use conditions.
Large scale/emergency use	Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced Recommended Filter type: Particle filter
Small scale/Laboratory use	Maintain adequate ventilation
Environmental exposure controls	No information available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance		
Physical State	Liquid	
Odor	No information available	
Odor Threshold	No data available	
pH	No information available	
Melting Point/Range	No data available	
Softening Point	No data available	
Boiling Point/Range	No information available	
Flash Point	No information available	Method - No information available
Evaporation Rate	No data available	
Flammability (solid,gas)	Not applicable	Liquid
Explosion Limits	No data available	
Vapor Pressure	No data available	
Vapor Density	No data available	(Air = 1.0)
Specific Gravity / Density	No data available	
Bulk Density	Not applicable	Liquid
Water Solubility	Miscible	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Autoignition Temperature	No data available	
Decomposition Temperature	No data available	
Viscosity	No data available	
Explosive Properties	No information available	
Oxidizing Properties	No information available	

9.2. Other information

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity	None known, based on information available
10.2. Chemical stability	Stable under normal conditions.
10.3. Possibility of hazardous reactions	
Hazardous Polymerization	No information available.

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Hazardous Reactions None under normal processing.

10.4. Conditions to avoid Incompatible products. Excess heat.

10.5. Incompatible materials None known.

10.6. Hazardous decomposition products Nitrogen oxides (NOx). Sulfur oxides. Hydrogen chloride. Potassium oxides. Sodium oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Product Information

(a) acute toxicity;

Oral Based on available data, the classification criteria are not met
Dermal Based on available data, the classification criteria are not met
Inhalation Based on available data, the classification criteria are not met

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	-		
Sodium chloride	LD50 = 3 g/kg (Rat)	LD50 > 10 g/kg (Rabbit)	LC50 > 42 g/m ³ (Rat) 1 h
Sodium azide	LD50 = 27 mg/kg (Rat)	-	
Potassium chloride	LD50 = 2600 mg/kg (Rat)		

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;

Respiratory No data available
Skin No data available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs None known.

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(j) aspiration hazard; No data available

Symptoms / effects, both acute and delayed No information available

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Sodium chloride	Pimephals prome: LC50: 7650 mg/L/96h	EC50: 1000 mg/L/48h	
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride		EC50 >100 mg/L/48h	
Sodium azide	LC50: = 0.8 mg/L, 96h (Oncorhynchus mykiss) LC50: = 0.7 mg/L, 96h (Lepomis macrochirus) LC50: = 5.46 mg/L, 96h flow-through (Pimephales promelas)		
Potassium chloride	Lepomis macrochirus: LC50: 1060 mg/L /96h Pimephales promelas: LC50: 750 - 1020 mg/L /96h	EC50: 825 mg/L/48h	EC50: 2500 mg/L/72h

12.2. Persistence and degradability

Persistence

Miscible with water, Persistence is unlikely, based on information available.

12.3. Bioaccumulative potential

Bioaccumulation is unlikely

12.4. Mobility in soil

The product is water soluble, and may spread in water systems Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

12.5. Results of PBT and vPvB assessment

No data available for assessment.

12.6. Other adverse effects

Endocrine Disruptor Information
Persistent Organic Pollutant
Ozone Depletion Potential

This product does not contain any known or suspected endocrine disruptors
This product does not contain any known or suspected substance
This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues/Unused Products

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Contaminated Packaging

Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use

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empty containers.

European Waste Catalogue (EWC) According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.

Other Information Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO Not regulated

- 14.1. UN number
- 14.2. UN proper shipping name
- 14.3. Transport hazard class(es)
- 14.4. Packing group

ADR Not regulated

- 14.1. UN number
- 14.2. UN proper shipping name
- 14.3. Transport hazard class(es)
- 14.4. Packing group

IATA Not regulated

- 14.1. UN number
- 14.2. UN proper shipping name
- 14.3. Transport hazard class(es)
- 14.4. Packing group

14.5. Environmental hazards No hazards identified

14.6. Special precautions for user No special precautions required

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION

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

International Inventories

X = listed, Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), China (IECSC), Japan (ENCS), Australia (AICS), Korea (ECL).

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	IECSC	AICS	KECL
Water	231-791-2	-		X	X	-	X	X	X	X	KE-3540 0
Sodium chloride	231-598-3	-		X	X	-	X	X	X	X	KE-3138 7
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	214-684-5	-		X	X	-	X	X	X	X	KE-3481 9
Sodium azide	247-852-1	-		X	X	-	X	X	X	X	KE-3135 7
Potassium chloride	231-211-8	-		X	X	-	X	X	X	X	KE-2908 6

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National Regulations

WGK Classification

Water endangering class = 1 (self classification)

Component	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Sodium chloride	WGK1	
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	WGK1	
Sodium azide	WGK2	
Potassium chloride	WGK1	

Component	France - INRS (Tables of occupational diseases)
Sodium chloride	Tableaux des maladies professionnelles (TMP) - RG 78
Potassium chloride	Tableaux des maladies professionnelles (TMP) - RG 67

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment.

15.2. Chemical safety assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H300 - Fatal if swallowed

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

EUH032 - Contact with acids liberates very toxic gas

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

DNEL - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

PNEC - Predicted No Effect Concentration

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

ATE - Acute Toxicity Estimate

VOC (volatile organic compound)

Key literature references and sources for data

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Physical hazards

On basis of test data

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Health Hazards	Calculation method
Environmental hazards	Calculation method

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Prepared By	Health, Safety and Environmental Department
Revision Date	05-Sep-2019
Revision Summary	SDS authoring systems update, replaces ChemGes SDS No. 45,113.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet