

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.12.2023

Version number 5 (replaces version 4)

Revision: 12.07.2023

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

· **1.1 Product identifier**

· **Trade name:** *butanol*

· **Chemical Identification:**

2-methylpropan-1-ol

butyl alcohol (except tert-butyl alcohol)

iso-butanol

Isobutyl alcohol

1-Propanol, 2-methyl-

Isobutanol

Isopropyl carbinol

· **Article number:** 0209

· **CAS Number:**

78-83-1

· **EC number:**

201-148-0

· **Index number:**

603-108-00-1

· **Registration number** *01-2119484609-23-XXXX*

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

Only for the use of professionals users

· **Life cycle stages IS** *Use at industrial Sites*

· **Sector of Use**

SU9 Manufacture of fine chemicals

SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

SU24 Scientific research and development

· **Product category**

PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents

PC21 Laboratory chemicals

PC29 Pharmaceuticals

PC40 Extraction agents

· **Process category**

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC4 Chemical production where opportunity for exposure arises

PROC5 Mixing or blending in batch processes

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

PROC15 Use as laboratory reagent

· **Environmental release category**

ERC1 Manufacture of the substance

ERC2 Formulation into mixture

ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)

ERC6a Use of intermediate

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· **Application of the substance / the mixture**

Chemical for research, development, manufacturing, laboratory chemical for analysis.

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Biosolve Chimie

20 Rue Roger Husson, 57260 Dieuze, France

Tel: +33 3 878 675 80/81/82/83/84/85

Email: info@biosolvechimie.com

Biosolve B.V.

Leenderweg 78, 5555 CE Valkenswaard, the Netherlands.

Tel: +31-(0)40-2071300

Fax: +31-(0)40-2048537

Email: info@biosolve-chemicals.com

· **Further information obtainable from:** Product safety department.

· **1.4 Emergency telephone number:**

Contact list of appointed bodies for information relating to emergency health response, according to Art. 45(1) Reg. (EC) No 1272/2008.

See below section 16 or at <https://poisoncentres.echa.europa.eu/home>.

Help desk: <http://echa.europa.eu/web/guest/support/helpdesks/national-helpdesks/list-of-national-helpdesks>).

Data from: ECHA - EUROPEAN CHEMICALS AGENCY

For more information see section 16.

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 3 H226

Flammable liquid and vapour.



GHS05 corrosion

Eye Dam. 1 H318

Causes serious eye damage.



GHS07

Skin Irrit. 2 H315

Causes skin irritation.

STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

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



GHS02 GHS05 GHS07

- **Signal word** *Danger*
- **Hazard statements**
H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
- **Precautionary statements**
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P362+P364 Take off contaminated clothing and wash it before reuse.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description**
CAS: 78-83-1 butanol
- **Identification number(s)**
- **EC number:** 201-148-0
- **Index number:** 603-108-00-1

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

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- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **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:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Avoid contact with skin and eyes.
Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.

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- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **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:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **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:**
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 skin.
Avoid contact with the eyes and skin.
- **Respiratory protection:** Not required.
- **Hand protection**
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
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.
- **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.
- **Eye/face protection**



Tightly sealed goggles

EU

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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:	Colourless
· Odour:	Sweetish
· Odour threshold:	No data available.
· Melting point/freezing point:	-108 °C
· Boiling point or initial boiling point and boiling range	108 °C
· Flammability	Flammable.
· Lower and upper explosion limit	
· Lower:	1.7 Vol %
· Upper:	12 Vol %
· Flash point:	24 °C
· Auto-ignition temperature:	390 °C
· Decomposition temperature:	No data available
· pH	7
· Viscosity:	
· Dynamic at 20 °C:	3.95 mPas
· Solubility	
· water at 20 °C:	100 g/l
· Partition coefficient n-octanol/water (log value)	No data available
· Vapour pressure at 20 °C:	12 hPa
· Density and/or relative density	
· Density at 20 °C:	0.8 g/cm ³
· Relative density	No data available
· Vapour density	No data available

· 9.2 Other information

· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	No data available
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Molecular weight	74.12 g/mol
· Change in condition	
· Evaporation rate	No data available

· Information with regard to physical hazard classes

· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void

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- | | |
|--|-------------------------------------|
| · Flammable liquids | <i>Flammable liquid and vapour.</i> |
| · Flammable solids | <i>Void</i> |
| · Self-reactive substances and mixtures | <i>Void</i> |
| · Pyrophoric liquids | <i>Void</i> |
| · Pyrophoric solids | <i>Void</i> |
| · Self-heating substances and mixtures | <i>Void</i> |
| · Substances and mixtures, which emit flammable gases in contact with water | <i>Void</i> |
| · Oxidising liquids | <i>Void</i> |
| · Oxidising solids | <i>Void</i> |
| · Organic peroxides | <i>Void</i> |
| · Corrosive to metals | <i>Void</i> |
| · Desensitised explosives | <i>Void</i> |

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

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:**

Oral	LD50	2,460 mg/kg (rat)
Dermal	LD50	3,400 mg/kg (rabbit)

- **Skin corrosion/irritation** Causes skin irritation.
- **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** May cause respiratory irritation. May cause drowsiness or dizziness.
- **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.

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- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **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**
- **Additional ecological information:**
- **General notes:**
- Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
- Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- Must not reach sewage water or drainage ditch undiluted or unneutralised.

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.

· **European waste catalogue**

HP3	Flammable
HP4	Irritant - skin irritation and eye damage
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN number or ID number**
- **ADR, IMDG, IATA** UN1212
- **14.2 UN proper shipping name**
- **ADR** UN1212 ISOBUTANOL (ISOBUTYL ALCOHOL)

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· IMDG, IATA	<i>ISOBUTANOL (ISOBUTYL ALCOHOL)</i>
· 14.3 Transport hazard class(es)	
· ADR	
	
· Class	3 (F1) Flammable liquids.
· Label	3
· IMDG, IATA	
	
· Class	3 Flammable liquids.
· Label	3
· 14.4 Packing group	
· ADR, IMDG, IATA	III
· 14.5 Environmental hazards:	
· Marine pollutant:	No
· 14.6 Special precautions for user	Warning: Flammable liquids.
· Hazard identification number (Kemler code):	30
· EMS Number:	F-E,S-D
· Stowage Category	A
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	5L

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· **Exempted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

SECTION 15: Regulatory information

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

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** Substance is not listed.

· **Seveso category P5c FLAMMABLE LIQUIDS**

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 40

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

Substance is not listed.

· **REGULATION (EU) 2019/1148**

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

Substance is not listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.

· **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.

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

Substance is not listed.

· **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.

· **Department issuing SDS:** Product safety department

· **Contact:**

Austria German Vergiftungsinformationszentrale 01 406 43 43 <http://www.goeg.at/de/VIZ>

Belgium French Centre antipoison 070 245 245 <http://www.centreantipoisons.be>

Dutch Antigif centrum 070 245 245 <http://www.antigifcentrum.be>

German Giftinformationszentrum 070 245 245 <http://www.poissoncentre.be>

Bulgaria* Bulgarian Токсикологични центрове 02 9154 411 <https://pirogov.eu/bg>

Croatia* Croatian Centar za kontrolu otrovanja +385 1 2348 342 <https://www.imi.hr/en/jedinica/poison-control-centre>

Czech Rep Czech Toxikologické informační středisko +420 224 91 92 93; +420 224 91 54 02 <http://www.tis-cz.cz>

Denmark Danish Giftlinien +45 8212 1212 <https://www.bispebjerghospital.dk/giftlinien>

Estonia Estonian Mürgistusteabekeskus 16662; +372 7943 794 <https://www.16662.ee>

Finland Finnish Myrkytystietokeskus 0800 147 111; +358 9 471 977 <http://www.hus.fi/sairaanhoito/>

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sairaanhoitopalvelut/myrkytystietokeskus/Sivut/default.aspx

France French Angers +33 2 41 48 21 21 <http://www.centres-antipoison.net/angers/index.html>
Bordeaux +33 5 56 96 40 80 <http://www.centres-antipoison.net/bordeaux/index.html>
Lille +33 0800 59 59 59 <http://www.centres-antipoison.net/lille/index.html>
Lyon +33 4 72 11 69 11 <http://www.centres-antipoison.net/lyon/index.html>
Marseille +33 4 91 75 25 25 <http://www.centres-antipoison.net/marseille/index.html>
Nancy +33 3 83 22 50 50 <http://www.centres-antipoison.net/nancy/index.html>
Paris +33 1 40 05 48 48 <http://www.centres-antipoison.net/paris/index.html>
Strasbourg +33 3 88 37 37 37 <http://www.centres-antipoison.net/strasbourg/index.html>
Toulouse +33 5 61 77 74 47 <http://www.centres-antipoison.net/toulouse/index.html>

Germany German Berlin +49 30 19240 <https://giftnotruf.charite.de>
Bonn +49 228 19240 <http://www.gizbonn.de/index.php?id=272>
Erfurt +49 361 730730 <https://www.ggiz-erfurt.de/home.html>
Freiburg +49 761 19240 <https://www.uniklinik-freiburg.de/giftberatung.html>
Göttingen +49 551 19240 <https://www.giz-nord.de/cms/index.php>
Homburg/Saar +49 6841 19240 http://www.uniklinikumsaarland.de/de/einrichtungen/kliniken_institute/kinder_und_jugendmedizin/informations_und_behandlungszentrum_fuer_vergiftungen_des_saarlandes
Mainz +49 6131 19240 <http://www.giftinfo.uni-mainz.de/index.php?id=24807>
München +49 89 19240 <http://www.toxinfo.med.tum.de>

Greece Greek κέντρο δηλητηριάσεων +30 213 200 9000 <http://www.aglaiakyriakou.gr/>; <http://0317.syzefxis.gov.gr>

Hungary Hungarian Egészségügyi Toxikológiai Tájékoztató Szolgálat +36 6 80 20 11 99; +36 06 1 476 6464 <http://www.okbi.hu/page.php?trid=1&dz=103>

Italy Italian Bergamo +39 800 88 33 00 http://www.asst-pg23.it/section/259/Tossicologia_-_Centro_antiveneni
Firenze +39 55 794 78 19 <http://www.antiveneni.altervista.org>
Milano +39 2 661 01 029 <http://www.centroantiveneni.org>
Pavia +39 382 244 44 <http://www-3.unipv.it/reumatologia-tossicologia/cav>
Napoli +39 81 747 28 70
Foggia +39 881 732 326
Roma +39 6 685 93 726 / +39 6 499 78 000 / +39 6 305 43 43 <http://www.corso-primo-soccorso-roma.it/centri/antiveneno-lazio.html>

Ireland English Poisons information Centre of Ireland +353 1 809 21 66 <http://www.poisons.ie/Public>

Latvia* Latvian Saindēšanās informācijas centri +371 670 00 610 <https://www.aslimnica.lv/lv>

Russian Латвия +371 67000610 <https://www.aslimnica.lv/lv>

Lithuania Lithuanian Apsinuodijimų informacijos biuras + 370 5 236 20 52 <http://www.apsinuodijau.lt>

Luxembourg German Giftinformationszentrum +49 800 255 00 <http://www.poisoncentre.be>
French Centre antipoison +352 800 255 00 <http://www.centreantipoisons.be>

Netherlands Dutch 31 (0)88 755 8 <https://www.productnotificatie.nl>

Norway Norwegian Giftinformasjonen +47 22 59 13 00 <https://helsenorge.no/Giftinformasjon>

Poland Polish Kraków +48 12 411 99 99 <http://www.oit.cm.uj.edu.pl>
Gdansk +48 58 682 04 04 <http://www.pctox.pl/news.php>
Poznań +48 61 847 69 46 http://www.raszeja.poznan.pl/oddzialy/oddzial_toksykologiczny
Warszawa +48 607 218 174 okzit@burdpi.pol.pl

Portugal Portuguese Centro de Informação Antivenenos +351 808 250 143 <http://www.inem.pt>

Romania Romanian CNMRMC +40 213 183 606 infotox@insp.gov.ro
Spitalul Clinic de Urgenta Bucuresti +40 215 992 300 int. 291

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spital@urgentaflorasca.ro

Spitalul Clinic Judetean de Urgenta Targu Mures +40 265.212.111

secretariat@spitjudms.ro

Russia Russian Горячая линия Министерства здравоохранения +7 495 628 4453; +7 495 627 2944

http://rosпотреbnadzor.ru

Serbia Serbian Nacionalni centar za kontrolu trovanja +381 11 3608 440 <http://www.vma.mod.gov.rs/sr-lat/specijalnosti/centri/nacionalni-centar-za-kontrolu-trovanja>

Slovak Rep Slovak Národné toxikologické informačné centrum +421 2 5477 4166 <http://www.ntic.sk>

Spain Spanish Servicio de Información Toxicológica +34 91 562 04 20 https://www.administraciondejusticia.gob.es/paj/publico/ciudadano/informacion_institucional/organismos/instituto_nacional_de_toxicologia_y_ciencias_fo/renses/servicios/info_toxicologica/que_es_sit/ut/p/c5/04_SB8K8xLLM9MSSzPy8xBz9CP0os3g_A1cjCydDRwMDUwNLA08nwwAvM0czA_8gM6B8pFm8maeqrWdQsImJcaiLiYGncViYa4CHR4GBiQExuglwAEdCusNBrsWpwsLUACKPy3WuRvjlg83wy5sQ0G8CtRP__w88nNT9QtYQyMMmj0zA9IVFQH Y 1 8 1 4 / d 1 3 / d 3 / L2dJQSEvUUt3QS9ZQnZ3LzZfTjBFMjhCMUEwMDUwOTBJQjFWSjZBNjBPTjA!/?itemId=45381

Sweden Swedish Giftinformationscentralen +46 10 456 6700 <https://giftinformation.se>

Switzerland German Giftinformationszentrum 145 <http://toxinfo.ch>

French Centre antipoison 145 <http://toxinfo.ch>

Italian Centro Antiveleni 145 <http://toxinfo.ch>

United Kingdom English NHS Helpline 111 NHS Helpline - England and Wales: <http://www.nhs.uk/NHSEngland/AboutNHSservices/Emergencyandurgentcareservices/Pages/NHS-111.aspx>

• **Date of previous version:** 19.10.2022

• **Version number of previous version:** 4

• **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)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

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

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 3: Flammable liquids – Category 3

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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