SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Supercedes date 23-Oct-2025 **Revision date** 05-May-2026 **Revision Number** 3.01

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

1.1. Product identifier

Product Code(s)	22961
Safety data sheet number	22961
Product Name	SODIUM BISULPHITE SOLUTION 15 - 45 %
Index No	016-064-00-8
EC Number	231-548-0
CAS No	7631-90-5
Synonyms	DECHLORINATION SOLUTION, VO-REDOX 9120, GENESYS RED, SODIUM BISULPHITE SOLUTION 15%, SOD BISULPHITE 20% SOL, SOD BISULPHITE 38/40% SOL, SODUIUM BISULPHITE SOLUTION 17%, SODIUM BISULPHITE 25% SOLUTION, SODIUM BISULPHITE 18% SOLUTION, SODIUM BISULPHITE SOLUTION 39%, SODIUM BISULPHITE SOLUTION 45%, SODIUM BISULPHITE SOLUTION 30%, SODIUM BISULPHITE 35 - 45%, SODIUM BISULPHITE 23% SOLUTION, SOD BISULPHITE FG 23% SOL, SODIUM BISULPHITE 23% FG, SOD BISULPHITE 20% FCC ED.7, COBALT CATALYSED SODIUM BISULPHITE SOLUTION, STEAMCARE B10, SODIUM BISULPHITE 40% FCC ED.7, SODIUM BISULPHITE 40%, SOD BISULFITE 20% SOL, HYDREX 9540, SOD BISULPHITE 27% SOL, SOD BISULPHITE 32%, BISULPHITE SODIUM 38-40 FG PVS, BISULFITE SDE FG
Pure substance/mixture	Substance

Contains SODIUM BISULPHITE ....%

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

Recommended use	Food/Feed additive Industrial application Reducing agents Professional use Whitening agent. For further information, see attached Exposure Scenario

1.3. Details of the supplier of the safety data sheet

Supplier
Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
GBR

For further information, please contact

E-mail address SDS.EMEA@univarsolutions.com

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone SGS - +32 (0)3 575 55 55 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Acute toxicity - Oral	Category 4 - (H302)

2.2. Label elements

Contains SODIUM BISULPHITE ....%

Signal word
Warning

Hazard statements
H302 - Harmful if swallowed
EUH031 - Contact with acids liberates toxic gas

Precautionary statements
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
P330 - Rinse mouth
P501 - Dispose of contents/ container to an approved waste disposal plant

Additional information
This product requires tactile warnings if supplied to the general public.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)

				amended)			
SODIUM BISULPHITE ....% 7631-90-5	>=30 - <40%	231-548-0 (016-064-00 -8)	-	Acute Tox. 4 (H302) (EUH031)	-	-	-

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration >= 0.1% (UK REACH Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation General first aid, rest, warmth and fresh air. Get medical attention if symptoms occur.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and shoes immediately. Get medical attention if symptoms occur.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a doctor.

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

Eyes May cause temporary eye irritation.

Dermal Prolonged contact may cause redness and irritation.

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

Note to doctors Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Carbon dioxide (CO2). Dry chemical. Water spray.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Sulfur dioxide. Oxides of sulphur.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Remove undamaged containers from fire area if it is safe to do so. Collect contaminated fire

extinguishing water separately. Do not allow it to enter drains or surface water. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear suitable protective clothing. Evacuate personnel to safe areas.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Do not allow to enter into soil/subsoil. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and material for containment and cleaning up

Methods for containment Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes and inhalation of vapours. Don't use empty container before they have been cleaned. Before making transfer operations, assure that there aren't any incompatible material residuals in the containers. Use personal protection recommended in Section 8.

General hygiene considerations Do not eat, drink or smoke when using the product. Remove contaminated clothing and protective equipment before entering eating areas. Take off all contaminated clothing and wash it before reuse. Wash hands and face before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep away from food, drink and animal feedingstuffs. Keep in properly labelled containers. Avoid contact with acids and oxidising substances. See section 10 for more information. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

7.3. Specific end use(s)

Specific use(s)
See section 1 for more information.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	United Kingdom
SODIUM BISULPHITE ....% 7631-90-5	TWA: 5 mg/m³

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

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
SODIUM BISULPHITE ....% 7631-90-5			246 mg/m³ [4] [6]

[4] Systemic health effects.
[6] Long term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
SODIUM BISULPHITE ....% 7631-90-5	9.5 mg/kg/day [4] [6]		73 mg/m³ [4] [6]

[4] Systemic health effects.
[6] Long term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
SODIUM BISULPHITE ....% 7631-90-5	1.09 mg/l		0.11 mg/l		

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
SODIUM BISULPHITE ....% 7631-90-5			82.5 mg/l		

8.2. Exposure controls

Engineering controls Ensure adequate ventilation.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Use eye protection according to EN 166.

Hand protection Wear suitable gloves. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Gloves must conform to standard EN 374.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
Long term (repeated)	Nitrile/butadiene rubber ("nitrile" or "NBR").	0.4 mm	>480 minutes

Skin and body protection Wear appropriate clothing to prevent reasonably probable skin contact. EN 13034. Cotton protective clothing and shoes that cover the entire foot (EN 20345).

Respiratory protection In case of inadequate ventilation wear respiratory protection.
Recommended filter type: Filtering Half-face mask (DIN EN 149). Particulate filter, type P2. Dust filter P3 (for especially fine dust/powder).

General hygiene considerations Do not eat, drink or smoke when using the product. Remove contaminated clothing and protective equipment before entering eating areas. Take off all contaminated clothing and wash it before reuse. Wash hands and face before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace.

Environmental exposure controls Local authorities should be advised if significant spillages cannot be contained.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Liquid
Appearance Liquid
Colour light yellow yellow-orange
Odour Pungent.
Odour threshold No information available

Property	Values	Remarks • Method
Melting point / freezing point		No information available.
Initial boiling point and boiling range	98 - 105 °C	
Flammability		No information available.
Flammability Limit in Air		No information available.
Upper flammability or explosive limits		
Lower flammability or explosive limits		
Flash point		No information available.
Autoignition temperature		No information available.
Decomposition temperature		No information available.
pH	3.5 - 4.5	
pH (as aqueous solution)		No information available.
Kinematic viscosity		No information available.
Dynamic viscosity		
Water solubility	Soluble in water	
Solubility(ies)		No information available.
Partition coefficient		No information available.

Vapour pressure		No information available.
Relative density	1.30 - 1.35 Kg/dm3	
Bulk density		No information available
Liquid Density	No information available	No information available
Relative vapour density		No information available.
Particle characteristics		No information available.
Particle Size	No information available	
Particle Size Distribution	No information available	
Explosive properties	No information available	
Oxidising properties	No information available	

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Stable under normal conditions.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials Acids. Oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition can lead to release of irritating and toxic gases and vapours. Oxides of sulphur.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity

Numerical measures of toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
SODIUM BISULPHITE ....%	> 1540 mg/kg (Rat)	> 2000 mg/kg	> 5.5 mg/l

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Based on available data the classification criteria are not met.

Serious eye damage/eye irritation Based on available data the classification criteria are not met.

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.

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Not considered to be harmful to aquatic life.

SODIUM BISULPHITE ....% (7631-90-5)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
	Oncorhynchus mykiss (rainbow	LC50	149.5 mg/L	96 hours	

	trout)				
	Daphnia magna	EC50	74.9 mg/L	48 hours	
	Scenedesmus subspicatus	EC50	36.8 mg/L	72 hours	
	Daphnia magna	NOEC	8.41 mg/L	21 days	
	Scenedesmus subspicatus	EC10	28 mg/L	72 hours	
OECD Test No. 210: Fish, Early-Life Stage Toxicity Test	Brachydanio rerio	NOEC	50 mg/L	34 days	

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
SODIUM BISULPHITE ....%	-	-	-	EC50: =119mg/L (48h, Daphnia magna)

12.2. Persistence and degradability

Persistence and degradability Not readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
SODIUM BISULPHITE ....%	The substance is not PBT / vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards No

14.6 Special precautions for user
Special Provisions None

IMDG
14.1 UN number or ID number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards No
14.6 Special precautions for user
Special Provisions None
14.7 Maritime transport in bulk according to IMO instruments No information available

RID
14.1 UN number or ID number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards No
14.6 Special precautions for user
Special Provisions None

ADR
14.1 UN number or ID number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards No
14.6 Special precautions for user
Special Provisions None

SECTION 15: Regulatory information

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

National regulations

Authorisations and/or restrictions on use:
This product contains one or more substances subject to restriction (UK REACH - Annex XVII).
This product does not contain substances subject to authorisation (UK REACH - Annex XIV).
Product restricted per REACH Annex XVII: 3

Persistent Organic Pollutants
Not applicable

Export Notification requirements
Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)
Not applicable

The Ozone-Depleting Substances Regulations 2015
Not applicable

The Biocidal Products Regulations 2001 (as amended)
Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)
Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDSL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECI	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3
H302 - Harmful if swallowed

Legend
SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		

Revision Note ***Indicates updated data since last publication SDS sections updated 1 2 9 11 12

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method

Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Prepared By Amy Whitfield

Supercedes date 23-Oct-2025

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This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended) Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

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

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name	SODIUM BISULPHITE
Pure substance/mixture	Substance
REACH registration number	01-2119524563-42-XXXX
CAS No	7631-90-5
EC No (EU Index No)	231-548-0
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Industrial use
Type	Worker
Main user group	Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies)	ERC1 - Manufacture of substances ERC2 - Formulation of preparations (mixtures) ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles ERC5 - Industrial use resulting in inclusion into or onto a matrix ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates) ERC6b - Industrial use of reactive processing aids ERC6c - Industrial use of monomers for manufacture of thermoplastics ERC6d - Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers ERC7 - Industrial use of substances in closed systems ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8b - Wide dispersive indoor use of reactive substances in open systems ERC8e - Wide dispersive outdoor use of reactive substances in open systems ERC9a - Wide dispersive indoor use of substances in closed systems ERC9b - Wide dispersive outdoor use of substances in closed systems
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC7 - Industrial spraying PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10 - Roller application or brushing PROC12 - Use of blow agents in manufacture of foam PROC13 - Treatment of articles by dipping and pouring PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising PROC15 - Use as laboratory reagent PROC16 - Using material as fuel sources, limited exposure to unburned product to be expected PROC17 - Lubrication at high energy conditions and in partly open process PROC18 - Greasing at high energy conditions PROC19 - Hand-mixing with intimate contact and only PPE available
Product category(ies)	PC1 - Adhesives, sealants PC2 - Adsorbent(s) PC3 - Air care products PC4 - Anti-freeze and de-icing products PC7 - Base metals and alloys PC8 - Biocidal Products (e.g. disinfectants, pest control) PC9a - Coatings and paints, thinners, paint removers PC9b -

Sector(s) of use	Fillers, putties, plasters, modelling clay PC12 - Fertilisers PC13 - Fuels PC14 - Metal surface treatment products, including galvanic and electroplating products PC15 - Non-metal-surface treatment products PC17 - Hydraulic fluids PC18 - Ink and toners PC19 - Intermediate PC20 - Products such as pH-regulators, flocculants, precipitants, neutralization agents PC23 - Leather tanning, dye, finishing, impregnation and care products PC24 - Lubricants, greases, release products PC25 - Metal working fluids PC26 - Paper and board dye, finishing and impregnation products; including bleaches and other processing aids PC28 - Perfumes, fragrances PC30 - Photo-chemicals PC31 - Polishes and wax blends PC32 - Polymer preparations and compounds PC34 - Textile dyes, finishing and impregnating products PC35 - Washing and cleaning products (including solvent based products) PC37 - Water treatment chemicals PC38 - Welding and soldering products, flux products PC39 - Cosmetics, personal care products PC40 - Extraction agents SU1 - Agriculture, forestry, fishery SU2a - Mining (without offshore industries) SU2b - Offshore industries SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU4 - Manufacture of food products SU5 - Manufacture of textiles, leather, fur SU6a - Manufacture of wood and wood products SU6b - Manufacture of pulp, paper and paper products SU7 - Printing and reproduction of recorded media SU8 - Manufacture of bulk, large scale chemicals (including petroleum products) SU9 - Manufacture of fine chemicals SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU11 - Manufacture of rubber products SU12 - Manufacture of plastics products, including compounding and conversion SU13 - Manufacture of other non-metallic mineral products SU14 - Manufacture of basic metals, including alloys SU15 - Manufacture of fabricated metal products, except machinery and equipment SU16 - Manufacture of computer, electronic and optical products, electrical equipment SU17 - General manufacturing SU18 - Manufacture of furniture SU19 - Building and construction work SU20 - Health services SU23 - Recycling

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC1 - Manufacture of substances
- ERC2 - Formulation of preparations (mixtures)
- ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
- ERC5 - Industrial use resulting in inclusion into or onto a matrix
- ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
- ERC6b - Industrial use of reactive processing aids
- ERC6c - Industrial use of monomers for manufacture of thermoplastics
- ERC6d - Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers
- ERC7 - Industrial use of substances in closed systems
- ERC8a - Wide dispersive indoor use of processing aids in open systems
- ERC8b - Wide dispersive indoor use of reactive substances in open systems
- ERC8e - Wide dispersive outdoor use of reactive substances in open systems
- ERC9a - Wide dispersive indoor use of substances in closed systems
- ERC9b - Wide dispersive outdoor use of substances in closed systems

Amounts used

Type	Daily amount per site
Value	94333
Units	kg/d

Other operational conditions of use affecting environmental exposure

Emission days	300
Release fraction to soil from process (initial release prior to RMM)	1%

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Removal efficiency (total)	99%

Environmental factors not influenced by risk management

Remarks	Receiving surface water flow is 18000 m3/d

Control measures to prevent releases

Air	Treat air emission to provide a typical removal efficiency of 99%
Water	Required removal efficiency (wastewater) 99%

Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations

Control of worker exposure	
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent	Avoid inhalation of the product

/limit releases, dispersion and exposure	Clean equipment and the work area every day

Process category(ies)	PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC7 - Industrial spraying
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	Local exhaust ventilation - efficiency of at least 78%
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).

Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC10 - Roller application or brushing
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC12 - Use of blow agents in manufacture of foam
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC15 - Use as laboratory reagent
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN

personal protection, hygiene and health evaluation	345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC16 - Using material as fuel sources, limited exposure to unburned product to be expected
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC17 - Lubrication at high energy conditions and in partly open process
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC18 - Greasing at high energy conditions
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC19 - Hand-mixing with intimate contact and only PPE available
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Section 3 - Exposure estimation

Environmental release category(ies) - ERC1 - Manufacture of substances
- ERC2 - Formulation of preparations (mixtures)
- ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
- ERC5 - Industrial use resulting in inclusion into or onto a matrix
- ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
- ERC6b - Industrial use of reactive processing aids
- ERC6c - Industrial use of monomers for manufacture of thermoplastics
- ERC6d - Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers
- ERC7 - Industrial use of substances in closed systems
- ERC8a - Wide dispersive indoor use of processing aids in open systems
- ERC8b - Wide dispersive indoor use of reactive substances in open systems
- ERC8e - Wide dispersive outdoor use of reactive substances in open systems
- ERC9a - Wide dispersive indoor use of substances in closed systems
- ERC9b - Wide dispersive outdoor use of substances in closed systems

Predicted No Effect Concentration (PNEC)

Freshwater	1.09 mg/l
Marine water	0.11 mg/l
Impact on Sewage Treatment	82.5 mg/l

Calculation method	Used EUSES model
Msafe	104814 kg/d
Remarks	Calculated as Sulphite ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

Environment	predicted exposure level	Risk characterisation ratio (RCR)
STP: Sewage Treatment Plant Freshwater	25.2 mg/L	0.4
STP: Sewage Treatment Plant Marine water	57.06 mg/L	0.9
Freshwater	2.52 mg/L	0.9
Marine water	0.57 mg/L	0.2

Derived No Effect Level (DNEL):

Inhalation	10 mg/m^3

Calculation method MEASE

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC1 - Use in closed process, no likelihood of exposure	Worker - inhalative, long-term - systemic	0.001 mg/m^3	<0.001
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - inhalative, long-term - systemic	0.001 mg/m^3	<0.001
PROC3 - Use in closed batch process (synthesis or formulation)	Worker - inhalative, long-term - systemic	0.01 mg/m^3	0.001
PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises	Worker - inhalative, long-term - systemic	0.05 mg/m^3	0.005
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)	Worker - inhalative, long-term - systemic	0.05 mg/m^3	0.005
PROC7 - Industrial spraying	Worker - inhalative, long-term - systemic	4.4 mg/m^3	0.44
PROC8a - Transfer of substance or preparation (charging/discharging)	Worker - inhalative, long-term - systemic	0.05 mg/m^3	0.005

from/to vessels/large containers at non dedicated facilities			
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - systemic	0.01 mg/m³	0.001
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - inhalative, long-term - systemic	0.01 mg/m³	0.001
PROC10 - Roller application or brushing	Worker - inhalative, long-term - systemic	0.05 mg/m³	0.005
PROC12 - Use of blow agents in manufacture of foam	Worker - inhalative, long-term - systemic	0.001 mg/m³	<0.001
PROC13 - Treatment of articles by dipping and pouring	Worker - inhalative, long-term - systemic	0.01 mg/m³	0.001
PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising	Worker - inhalative, long-term - systemic	0.01 mg/m³	0.001
PROC15 - Use as laboratory reagent	Worker - inhalative, long-term - systemic	0.01 mg/m³	0.001
PROC16 - Using material as fuel sources, limited exposure to unburned product to be expected	Worker - inhalative, long-term - systemic	0.01 mg/m³	0.001
PROC17 - Lubrication at high energy conditions and in partly open process	Worker - inhalative, long-term - systemic	0.1 mg/m³	0.01
PROC18 - Greasing at high energy conditions	Worker - inhalative, long-term - systemic	0.1 mg/m³	0.01
PROC19 - Hand-mixing with intimate contact and only PPE available	Worker - inhalative, long-term - systemic	0.05 mg/m³	0.005

Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For scaling see. http://www.ebrc.de/mease.html. http://www.arche-consulting.be/Metal-CSA-toolbox/du-scaling-tool.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name	SODIUM BISULPHITE
Pure substance/mixture	Substance
REACH registration number	01-2119524563-42-XXXX
CAS No	7631-90-5
EC No (EU Index No)	231-548-0
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Industrial use Manufacture of wood and wood products
Type	Worker
Main user group	Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies)	ERC5 - Industrial use resulting in inclusion into or onto a matrix ERC6b - Industrial use of reactive processing aids
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC6 - Calendaring operations PROC21 - Low energy manipulation of substances bound in materials and/or articles PROC24 - High (mechanical) energy work-up of substances bound in materials and/or articles
Sector(s) of use	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU6a - Manufacture of wood and wood products SU18 - Manufacture of furniture

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC5 - Industrial use resulting in inclusion into or onto a matrix
- ERC6b - Industrial use of reactive processing aids

Amounts used

Type	Daily amount per site
Value	94333
Units	kg/d

Other operational conditions of use affecting environmental exposure

Emission days	300
Release fraction to soil from process (initial release prior to RMM)	1%

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Removal efficiency (total)	99%

Environmental factors not influenced by risk management

Remarks	Receiving surface water flow is 18000 m3/d

Control measures to prevent releases

Air	Treat air emission to provide a typical removal efficiency of 99%
Water	Required removal efficiency (wastewater) 99%

Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations

Control of worker exposure	
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC6 - Calendaring operations
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC21 - Low energy manipulation of substances bound in materials and/or articles
Physical form of product	Solid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC24 - High (mechanical) energy work-up of substances bound in materials and/or articles
Physical form of product	Solid

Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Section 3 - Exposure estimation

Environmental release category(ies) - ERC5 - Industrial use resulting in inclusion into or onto a matrix - ERC6b - Industrial use of reactive processing aids

Predicted No Effect Concentration (PNEC)

Freshwater 1.09 mg/l
Marine water 0.11 mg/l
Impact on Sewage Treatment 82.5 mg/l

Calculation method Used EUSES model
Msafe 104814 kg/d
Remarks Calculated as Sulphite
ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

Environment	predicted exposure level	Risk characterisation ratio (RCR)
STP: Sewage Treatment Plant Freshwater	25.2 mg/L	0.4
STP: Sewage Treatment Plant Marine water	57.06 mg/L	0.9
Freshwater	2.52 mg/L	0.9
Marine water	0.57 mg/L	0.2

Derived No Effect Level (DNEL):

Worker - inhalative, long-term - systemic 10 mg/m³

Inhalation 10 mg/m³

Calculation method MEASE

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - systemic	0.01 mg/m³	0.001
PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises	Worker - inhalative, long-term - systemic	0.05 mg/m³	0.005
PROC6 - Calendaring operations	Worker - inhalative, long-term - systemic	5 mg/m³	0.5
PROC21 - Low energy manipulation of substances bound in materials and/or articles	Worker - inhalative, long-term - systemic	0.5 mg/m³	0.05
PROC24 - High (mechanical) energy work-up of substances bound in	Worker - inhalative, long-term - systemic	5.5 mg/m³	0.55

materials and/or articles			

Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Used EUSES model. MEASE. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. http://www.ebrc.de/mease.html. http://www.arche-consulting.be/Metal-CSA-toolbox/du-scaling-tool.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name	SODIUM BISULPHITE
Pure substance/mixture	Substance
REACH registration number	01-2119524563-42-XXXX
CAS No	7631-90-5
EC No (EU Index No)	231-548-0
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Professional use
Type	Worker
Main user group	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental release category(ies)	ERC1 - Manufacture of substances ERC2 - Formulation of preparations (mixtures) ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles ERC5 - Industrial use resulting in inclusion into or onto a matrix ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates) ERC6c - Industrial use of monomers for manufacture of thermoplastics ERC6d - Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers ERC7 - Industrial use of substances in closed systems ERC8b - Wide dispersive indoor use of reactive substances in open systems ERC8e - Wide dispersive outdoor use of reactive substances in open systems ERC9a - Wide dispersive indoor use of substances in closed systems ERC9b - Wide dispersive outdoor use of substances in closed systems
Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10 - Roller application or brushing PROC11 - Non industrial spraying PROC12 - Use of blow agents in manufacture of foam PROC13 - Treatment of articles by dipping and pouring PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising PROC15 - Use as laboratory reagent PROC16 - Using material as fuel sources, limited exposure to unburned product to be expected PROC17 - Lubrication at high energy conditions and in partly open process PROC18 - Greasing at high energy conditions PROC19 - Hand-mixing with intimate contact and only PPE available PROC20 - Heat and pressure transfer fluids in dispersive, professional use but closed systems
Product category(ies)	PC1 - Adhesives, sealants PC2 - Adsorbent(s) PC7 - Base metals and alloys PC9a - Coatings and paints, thinners, paint removers PC9b - Fillers, putties, plasters, modelling clay PC12 - Fertilisers PC14 - Metal surface treatment products, including galvanic and

	electroplating products PC15 - Non-metal-surface treatment products PC17 - Hydraulic fluids PC18 - Ink and toners PC20 - Products such as pH-regulators, flocculants, precipitants, neutralization agents PC23 - Leather tanning, dye, finishing, impregnation and care products PC24 - Lubricants, greases, release products PC25 - Metal working fluids PC26 - Paper and board dye, finishing and impregnation products; including bleaches and other processing aids PC30 - Photo-chemicals PC31 - Polishes and wax blends PC34 - Textile dyes, finishing and impregnating products PC35 - Washing and cleaning products (including solvent based products) PC37 - Water treatment chemicals PC38 - Welding and soldering products, flux products PC39 - Cosmetics, personal care products PC40 - Extraction agents
Sector(s) of use	SU22 - Professional uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC1 - Manufacture of substances
- ERC2 - Formulation of preparations (mixtures)
- ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
- ERC5 - Industrial use resulting in inclusion into or onto a matrix
- ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
- ERC6c - Industrial use of monomers for manufacture of thermoplastics
- ERC6d - Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers
- ERC7 - Industrial use of substances in closed systems
- ERC8b - Wide dispersive indoor use of reactive substances in open systems
- ERC8e - Wide dispersive outdoor use of reactive substances in open systems
- ERC9a - Wide dispersive indoor use of substances in closed systems
- ERC9b - Wide dispersive outdoor use of substances in closed systems

Amounts used

Type	Daily amount per site
Value	94333
Units	kg/d

Other operational conditions of use affecting environmental exposure

Emission days	300
Release fraction to soil from process (initial release prior to RMM)	1%

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Removal efficiency (total)	99%

Environmental factors not influenced by risk management

Remarks	Receiving surface water flow is 18000 m3/d

Control measures to prevent releases

Air	Treat air emission to provide a typical removal efficiency of 99%
Water	Required removal efficiency (wastewater) 99%

Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations

Control of worker exposure

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC10 - Roller application or brushing
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC11 - Non industrial spraying
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment Wear a half-mask respirator, selected in accordance with EN 529 Filter type: P1
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC12 - Use of blow agents in manufacture of foam
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC15 - Use as laboratory reagent
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC16 - Using material as fuel sources, limited exposure to unburned product to be expected
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC17 - Lubrication at high energy conditions and in partly open process
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC18 - Greasing at high energy conditions
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC19 - Hand-mixing with intimate contact and only PPE available
Physical form of product	aqueous solution
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Section 3 - Exposure estimation

Environmental release category(ies) - ERC1 - Manufacture of substances
- ERC2 - Formulation of preparations (mixtures)
- ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
- ERC5 - Industrial use resulting in inclusion into or onto a matrix
- ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
- ERC6c - Industrial use of monomers for manufacture of thermoplastics
- ERC6d - Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers
- ERC7 - Industrial use of substances in closed systems
- ERC8b - Wide dispersive indoor use of reactive substances in open systems
- ERC8e - Wide dispersive outdoor use of reactive substances in open systems
- ERC9a - Wide dispersive indoor use of substances in closed systems
- ERC9b - Wide dispersive outdoor use of substances in closed systems

Predicted No Effect Concentration (PNEC)

Freshwater	1.09 mg/l
Marine water	0.11 mg/l
Impact on Sewage Treatment	82.5 mg/l

Calculation method	Used EUSES model
Msafe	104814 kg/d
Remarks	Calculated as Sulphite ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

Environment	predicted exposure level	Risk characterisation ratio (RCR)
STP: Sewage Treatment Plant Freshwater	25.2 mg/L	0.4
STP: Sewage Treatment Plant Marine water	57.06 mg/L	0.9
Freshwater	2.52 mg/L	0.9
Marine water	0.57 mg/L	0.2

Derived No Effect Level (DNEL):

Worker - inhalative, long-term - systemic 10 mg/m³

Inhalation 10 mg/m³

Calculation method MEASE

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - inhalative, long-term - systemic	0.001 mg/m³	<0.001
PROC3 - Use in closed batch process (synthesis or formulation)	Worker - inhalative, long-term - systemic	0.01 mg/m³	0.001
PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises	Worker - inhalative, long-term - systemic	0.1 mg/m³	0.01
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)	Worker - inhalative, long-term - systemic	0.1 mg/m³	0.01
PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities	Worker - inhalative, long-term - systemic	0.05 mg/m³	0.005
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Worker - inhalative, long-term - systemic	0.05 mg/m³	0.005
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Worker - inhalative, long-term - systemic	0.05 mg/m³	0.005
PROC10 - Roller application or brushing	Worker - inhalative, long-term - systemic	0.05 mg/m³	0.005
PROC11 - Non industrial spraying	Worker - inhalative, long-term - systemic	5 mg/m³	0.5
PROC12 - Use of blow agents in manufacture of foam	Worker - inhalative, long-term - systemic	0.001 mg/m³	<0.001
PROC13 - Treatment of articles by dipping and pouring	Worker - inhalative, long-term - systemic	0.05 mg/m³	0.005
PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising	Worker - inhalative, long-term - systemic	0.1 mg/m³	0.01
PROC15 - Use as laboratory reagent	Worker - inhalative, long-term - systemic	0.01 mg/m³	0.001
PROC16 - Using material as fuel sources, limited exposure to unburned product to be expected	Worker - inhalative, long-term - systemic	0.5 mg/m³	0.05
PROC17 - Lubrication at high energy conditions and in partly open process	Worker - inhalative, long-term - systemic	1 mg/m³	0.1
PROC18 - Greasing at high energy conditions	Worker - inhalative, long-term - systemic	0.5 mg/m³	0.05
PROC19 - Hand-mixing with intimate contact and only PPE available	Worker - inhalative, long-term - systemic	0.05 mg/m³	0.005
PROC20 - Heat and pressure transfer fluids in dispersive, professional use but closed systems	Worker - inhalative, long-term - systemic	0.001 mg/m³	<0.001

Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Used EUSES model. MEASE. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. http://www.ebrc.de/mease.html. http://www.arche-consulting.be/Metal-CSA-toolbox/du-scaling-tool.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name	SODIUM BISULPHITE
Pure substance/mixture	Substance
REACH registration number	01-2119524563-42-XXXX
CAS No	7631-90-5
EC No (EU Index No)	231-548-0
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Professional use Manufacture of wood and wood products
Type	Worker
Main user group	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental release category(ies)	ERC11a - Wide dispersive indoor use of long-life articles and materials with low release ERC11b - Wide dispersive indoor use of long-life articles and materials with high or intended release
Process category(ies)	PROC21 - Low energy manipulation of substances bound in materials and/or articles PROC24 - High (mechanical) energy work-up of substances bound in materials and/or articles
Sector(s) of use	SU22 - Professional uses SU6a - Manufacture of wood and wood products SU18 - Manufacture of furniture

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC11a - Wide dispersive indoor use of long-life articles and materials with low release - ERC11b - Wide dispersive indoor use of long-life articles and materials with high or intended release

Amounts used

Type	Daily amount per site
Value	94333
Units	kg/d

Other operational conditions of use affecting environmental exposure

Emission days	300
Release fraction to soil from process (initial release prior to RMM)	1%

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Removal efficiency (total)	99%

Environmental factors not influenced by risk management

Remarks	Receiving surface water flow is 18000 m3/d

Control measures to prevent releases

Air	Treat air emission to provide a typical removal efficiency of 99%

Water	Required removal efficiency (wastewater) 99%

Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations

Control of worker exposure	
Process category(ies)	PROC21 - Low energy manipulation of substances bound in materials and/or articles
Physical form of product	Solid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Process category(ies)	PROC24 - High (mechanical) energy work-up of substances bound in materials and/or articles
Physical form of product	Solid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable working clothes Long sleeved clothing Safety shoes according to EN 345-347. Wear suitable gloves tested to EN 374 See Section 8 for information on appropriate personal protective equipment
Organisational measures to prevent /limit releases, dispersion and exposure	Avoid inhalation of the product Clean equipment and the work area every day

Section 3 - Exposure estimation

Environmental release category(ies) - ERC11a - Wide dispersive indoor use of long-life articles and materials with low release
- ERC11b - Wide dispersive indoor use of long-life articles and materials with high or intended release

Predicted No Effect Concentration (PNEC)

Freshwater 1.09 mg/l
Marine water 0.11 mg/l
Impact on Sewage Treatment 82.5 mg/l

Calculation method Used EUSES model
Msafe 104814 kg/d
Remarks Calculated as Sulphite
ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

Environment	predicted exposure level	Risk characterisation ratio (RCR)
STP: Sewage Treatment Plant Freshwater	25.2 mg/L	0.4
STP: Sewage Treatment Plant Marine water	57.06 mg/L	0.9
Freshwater	2.52 mg/L	0.9
Marine water	0.57 mg/L	0.2

Derived No Effect Level (DNEL):

Worker - inhalative, long-term - systemic 10 mg/m³

Inhalation 10 mg/m³

Calculation method MEASE

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PROC21 - Low energy manipulation of substances bound in materials and/or articles	Worker - inhalative, long-term - systemic	0.5 mg/m³	0.05
PROC24 - High (mechanical) energy work-up of substances bound in materials and/or articles	Worker - inhalative, long-term - systemic	5.5 mg/m³	0.55

Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Used EUSES model. MEASE. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. http://www.ebrc.de/mease.html. http://www.arche-consulting.be/Metal-CSA-toolbox/du-scaling-tool.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name	SODIUM BISULPHITE
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EC No (EU Index No)	231-548-0
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Consumer use
Type	Consumer
Main user group	Consumer uses: Private households (= general public = consumers)
Environmental release category(ies)	ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8b - Wide dispersive indoor use of reactive substances in open systems
Product category(ies)	PC0 - Other Products UCN: B2500 UCN: 25300
Sector(s) of use	SU21 - Consumer uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
- ERC8b - Wide dispersive indoor use of reactive substances in open systems

Amounts used

Type	Daily amount per site
Value	84.82
Units	kg/d

Other operational conditions of use affecting environmental exposure

Emission days	365
Release fraction to air from wide dispersive use (regional only)	100%
Release fraction to wastewater from wide dispersive use	100%
Release fraction to soil from wide dispersive use (regional only)	0%

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Removal efficiency (total)	99%

Environmental factors not influenced by risk management

Remarks	Receiving surface water flow is 18000 m3/d

Control measures to prevent releases

Air	Treat air emission to provide a typical removal efficiency of 99%

Water	Required removal efficiency (wastewater) 99%

Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations

Control of consumer exposure	
Covers concentrations up to	20-50 %
Physical form of product	Liquid
Exposure duration	Avoid carrying out operation for more than 15 minutes
Use frequency	1 events per day
Risk management measures	No other specific measures identified
Covers skin contact area up to	420 cm2
Operational conditions	Assumes activities are at room temperature

Section 3 - Exposure estimation

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems - ERC8b - Wide dispersive indoor use of reactive substances in open systems

Predicted No Effect Concentration (PNEC)

Freshwater 1.09 mg/l
Marine water 0.11 mg/l
Impact on Sewage Treatment 82.5 mg/l

Calculation method Used EUSES model
Msafe 104814 kg/d
Remarks Calculated as Sulphite
ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

Environment	predicted exposure level	Risk characterisation ratio (RCR)
STP: Sewage Treatment Plant Freshwater	0.33 mg/L	0.01
STP: Sewage Treatment Plant Marine water	0.033 mg/L	0.01
Freshwater	32.6 mg/L	0.01
Marine water	3.26 mg/L	<0.01

Derived No Effect Level (DNEL):

Oral 9.5 mg/kg/d

Remarks Inhalation , Dermal : Qualitative approach used to conclude safe use

Product category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
PC0 - Other Products	Consumer - oral, long-term - systemic	25 ug/kg/d	<0.01

Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to

define appropriate site-specific risk management measures. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Used EUSES model. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. http://www.arche-consulting.be/Metal-CSA-toolbox/du-scaling-tool.