Sodium Dithionite

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
SDS Ref.: Periodic review of SDS 08/9/2022
Date of issue: 1/14/2015 Revision date: 8/9/2019 Supersedes: 10/6/2017 Version: 1.4

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

1.1. Product identifier

Product form	: Substance
Trade name	: Sodium Dithionite
Chemical name	: sodium dithionite; sodium hydrosulphite
IUPAC name	: disodium dithionite
EC Index-No.	: 016-028-00-1
EC-No.	: 231-890-0
CAS-No.	: 7775-14-6
Formula	: $Na_2O_4S_2$

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial
For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Wessex Chemical Factors Ltd
9 Crane Way, Woolsbridge Industrial Park,
Three Legged Cross, Wimborne, Dorset
BH21 6FA - United Kingdom
T +44 (0) 1202 823 699 - F +44 (0) 1202 813 863
www.wessexchemicalfactors.co.uk
E-mail address of competent person responsible for the SDS : info@wessexchemicalfactors.co.uk

1.4. Emergency telephone number

Emergency number : +44 (0) 1202 823 699 (Office hours only 9am - 5pm Monday - Thursday, 9am - 4pm Friday.)
+44 (0) 7973629367 (Out of hours emergency number)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Self-Heating Substances and Mixtures, Category 1	H251
Acute toxicity (oral), Category 4	H302

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Self-heating: may catch fire. Harmful if swallowed.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS02 GHS07

Signal word (CLP) : Danger

Hazard statements (CLP) : H251 - Self-heating: may catch fire.
H302 - Harmful if swallowed.

Precautionary statements (CLP) : P235 - Keep cool.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear eye protection, face protection, protective clothing, protective gloves.
P301+P312 - IF SWALLOWED: Call a doctor, a POISON CENTER if you feel unwell.
P330 - Rinse mouth.
P407 - Maintain air gap between stacks or pallets.
P413 - Store bulk masses greater than 25 kg at temperatures not exceeding 30 °C.
P420 - Store separately.
P501 - Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

EUH-statements : EUH031 - Contact with acids liberates toxic gas.

2.3. Other hazards

PBT: not relevant – no registration required

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
sodium dithionite; sodium hydrosulphite	(CAS-No.) 7775-14-6 (EC-No.) 231-890-0 (EC Index-No.) 016-028-00-1	<= 100	Self-heat. 1, H251 Acute Tox. 4 (Oral), H302

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash skin with plenty of water.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists. Rinse eyes with water as a precaution.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER/doctor if you feel unwell. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after skin contact : Slight irritation.

Symptoms/effects after eye contact : Irritating to eyes.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. nausea, vomiting. Sore throat.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Sand. Dry powder. Smother all ignition sources. Use extinguishing media appropriate for surrounding fire. Foam.

Unsuitable extinguishing media : Do not use extinguishing media containing water.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Self-heating: may catch fire.

Hazardous decomposition products in case of fire : Thermal decomposition generates : Toxic fumes may be released. On combustion, forms: sulphur oxides. Hydrogen sulfide.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

Other information : Violent exothermic reaction with water (moisture): oxidation resulting in increased fire or explosion risk.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. No open flames, no sparks, and no smoking.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	: Stop leak without risks if possible.
Methods for cleaning up	: Mechanically recover the product. On land, sweep or shovel into suitable containers. Minimise generation of dust. Store away from other materials. Flush contaminated areas with plenty of water. Notify authorities if product enters sewers or public waters.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Provide local exhaust or general room ventilation. Avoid creating or spreading dust. Wear personal protective equipment.
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Maintain air gap between stacks/pallets.
Storage conditions	: Keep container closed when not in use. Store in dry protected location to prevent any moisture contact. Store away from other materials. Keep cool. Protect from sunlight. Store in a well-ventilated place.
Incompatible products	: Acids. combustible materials. oxidizing materials. Sodium chlorite.
Incompatible materials	: Sources of ignition. Direct sunlight.
Storage temperature	: ≤ 50 °C (Temperatures > 50°C cause evolution of gas in closed containers)
Special rules on packaging	: Keep only in original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Sodium Dithionite (7775-14-6)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, inhalation	206 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	7.9 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	61 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	1 mg/l
PNEC aqua (marine water)	0.1 mg/l
PNEC (STP)	
PNEC sewage treatment plant	8.98 mg/l

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protective equipment:

Avoid all unnecessary exposure. Protective goggles. Gloves. Insufficient ventilation: wear respiratory protection.

Materials for protective clothing:
Permeation time: minimum >480min long term exposure; material / thickness [mm]:

Hand protection:					
Wear protective gloves. EN 374					
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**	**Standard**
Reusable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0.4 mm		EN ISO 374
Reusable gloves	Butyl rubber	6 (> 480 minutes)	0.7 mm		EN ISO 374
Reusable gloves	Polyvinylchloride (PVC)	6 (> 480 minutes)	0.7 mm		EN ISO 374

Eye protection:			
Chemical goggles or safety glasses. Standard EN 166 - Personal eye-protection.			
Type	**Use**	**Characteristics**	**Standard**
Safety glasses	Dust, Fine dust	With side shields	EN 166

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:			
Wear appropriate mask			
Device	**Filter type**	**Condition**	**Standard**
Self-contained breathing apparatus (SCBA)	ABEK	Dust protection, Gas protection	EN 14387

Personal protective equipment symbol(s):

Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: White-grey. Crystalline powder.
Molecular mass	: 174.11 g/mol
Colour	: White-grey.
Odour	: characteristic.
Odour threshold	: No data available
pH	: 7 - 9 at 50 g/l
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: decomposes
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: > 80 °C
Flammability (solid, gas)	: Self-heating: may catch fire.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: Not applicable
Density	: 2.38 g/cm³
Solubility	: soluble in water. Water: 241 g/l

Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: Non oxidizing material according to EC criteria.
Explosive limits	: Not applicable

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity
10.1. Reactivity
Self-heating: may catch fire.
10.2. Chemical stability
Self-heating: may catch fire. May decompose on contact with moist air or water. Contact with water liberates toxic gas. sulphur dioxide.
10.3. Possibility of hazardous reactions
Highly reactive material. Contact with acids liberates toxic gas.
10.4. Conditions to avoid
Direct sunlight. Extremely high or low temperatures. Do not allow contact with water.
10.5. Incompatible materials
Strong oxidizing agents. Combustible materials. Acids. Sodium chlorite.
10.6. Hazardous decomposition products
Sulphur oxides.

SECTION 11: Toxicological information
11.1. Information on toxicological effects
Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Sodium Dithionite (7775-14-6)	
LD50 oral rat	~ 2500 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight

Skin corrosion/irritation	: Not classified pH: 7 - 9 at 50 g/l
Additional information	: Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Not classified pH: 7 - 9 at 50 g/l
Additional information	: Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-single exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Potential adverse human health effects and symptoms	: Harmful if swallowed.

SECTION 12: Ecological information
12.1. Toxicity
Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Acute aquatic toxicity : Not classified
Chronic aquatic toxicity : Not classified

Sodium Dithionite (7775-14-6)	
LC50 fish 1	62.3 mg/l Golden orfe (Leuciscus idus)
EC50 Daphnia 1	98.3 mg/l
EC50 72h algae (1)	206.2 mg/l
NOEC chronic fish	46.4 mg/l
NOEC chronic crustacea	10 mg/l
NOEC chronic algae	81.7 mg/l

12.2. Persistence and degradability

Sodium Dithionite (7775-14-6)	
Persistence and degradability	Biodegradable.

12.3. Bioaccumulative potential

Sodium Dithionite (7775-14-6)	
Bioaccumulative potential	No bioaccumulation.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Sodium Dithionite (7775-14-6)
PBT: not relevant – no registration required

12.6. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Additional information : Flammable dust. Handle uncleaned empty containers as full ones.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
UN 1384	UN 1384	UN 1384	UN 1384	UN 1384
14.2. UN proper shipping name				
SODIUM DITHIONITE (SODIUM HYDROSULPHITE)	SODIUM DITHIONITE (SODIUM HYDROSULPHITE)	Sodium dithionite	SODIUM DITHIONITE (SODIUM HYDROSULPHITE)	SODIUM DITHIONITE (SODIUM HYDROSULPHITE)
Transport document description				
UN 1384 SODIUM DITHIONITE (SODIUM HYDROSULPHITE), 4.2, II, (D/E)	UN 1384 SODIUM DITHIONITE (SODIUM HYDROSULPHITE), 4.2, II	UN 1384 Sodium dithionite, 4.2, II	UN 1384 SODIUM DITHIONITE (SODIUM HYDROSULPHITE), 4.2, II	UN 1384 SODIUM DITHIONITE (SODIUM HYDROSULPHITE), 4.2, II
14.3. Transport hazard class(es)				
4.2	4.2	4.2	4.2	4.2
				

14.4. Packing group

II	II	II	II	II

14.5. Environmental hazards

Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No

No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR) : S4
Limited quantities (ADR) : 0
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P410, IBC06
Mixed packing provisions (ADR) : MP14
Portable tank and bulk container instructions (ADR) : T3
Portable tank and bulk container special provisions (ADR) : TP33
Tank code (ADR) : SGAN
Vehicle for tank carriage : AT
Transport category (ADR) : 2
Special provisions for carriage - Packages (ADR) : V1
Hazard identification number (Kemler No.) : 40
Orange plates :

Tunnel restriction code (ADR) : D/E
EAC code : 1S

Transport by sea

Limited quantities (IMDG) : 0
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P410
Special packing provisions (IMDG) : PP31
IBC packing instructions (IMDG) : IBC06
IBC special provisions (IMDG) : B21
Tank instructions (IMDG) : T3
Tank special provisions (IMDG) : TP33
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-J
Stowage category (IMDG) : E
Stowage and handling (IMDG) : H1
Properties and observations (IMDG) : White or grey crystalline powder. Liable to heat and ignite spontaneously in air and to evolve sulphur dioxide, an irritating gas.

Air transport

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Forbidden
PCA limited quantity max net quantity (IATA) : Forbidden
PCA packing instructions (IATA) : 467
PCA max net quantity (IATA) : 15kg
CAO packing instructions (IATA) : 470
CAO max net quantity (IATA) : 50kg
ERG code (IATA) : 4L

Inland waterway transport

Classification code (ADN) : S4
Limited quantities (ADN) : 0
Excepted quantities (ADN) : E2

Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0

Rail transport

Classification code (RID)	: S4
Limited quantities (RID)	: 0
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P410, IBC06
Mixed packing provisions (RID)	: MP14
Portable tank and bulk container instructions (RID)	: T3
Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: SGAN
Transport category (RID)	: 2
Special provisions for carriage – Packages (RID)	: W1
Colis express (express parcels) (RID)	: CE10
Hazard identification number (RID)	: 40

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions
Sodium Dithionite is not on the REACH Candidate List
Sodium Dithionite is not on the REACH Annex XIV List
sodium dithionite; sodium hydrosulphite is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.
sodium dithionite; sodium hydrosulphite is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	Sewage treatment plant
SDS	Safety Data Sheet

vPvB	Very Persistent and Very Bioaccumulative

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Self-heat. 1	Self-Heating Substances and Mixtures, Category 1
H251	Self-heating: may catch fire.
H302	Harmful if swallowed.
EUH031	Contact with acids liberates toxic gas.

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.