



Chemifloc Ltd.

SAFETY DATA SHEET Sodium Chlorite 25%

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II

Section 1: Identification of the substance and of the company/undertaking

Identification of the substance or mixture

Product Name: Sodium Chlorite 25% w/w aqueous solution
Chemical Name: Sodium Chlorite
Registration Number: 01-2119529240-51-0000
Synonyms:
Date of first issue: 17 January 2011
Version number: 04
Revision date: 24-03-2016
Supersedes date: 04-03-2016

Relevant identified uses of the substance or mixture and uses advised against:

Identified uses

- Textile.
- Cellulose.
- Treatment for potable water, industrial water and residual water.
- Deodorization and purification.
- Production of chlorine dioxide.
- Feeding Industry.

Uses advised against None

Details of the supplier of the safety data sheet

Manufacturer: Chemifloc Ltd
Smithstown, Shannon,
Co. Clare,
Rep. of Ireland.
Tel: 00353 61 708699
Fax: 00353 61 708698
e-mail: info@chemifloc.ie

**Emergency Telephone Number: National Poison Information Centre,
00353 1 8379964**

Section 2: Hazards Identification

Classification of the substance

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classificatory applies.

Classification according to Regulation (EC) no 1272/2008 as amended

Health hazards

Oxidising Liquid: Category 1, H271
Acute toxicity - oral: Category 4, H302.
Irreversible effects on the eye: Category 1, H318
Specific target organ toxicity ó repeated exposure: Category 2, H373.
Hazardous to the aquatic environment: Aquatic acute, Category 1, H400.

H271: May cause fire or explosion; strong oxidiser.
H302: Harmful if swallowed.

H318: Causes serious eye damage.
H373: May cause damage to organs through prolonged or repeated exposure.
H400: Very toxic to aquatic life.

Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Sodium Chlorite



Signal word Danger
Hazard statements H271: May cause fire or explosion; strong oxidiser.
H302: Harmful if swallowed.
H318: Causes serious eye damage.
H373: May cause damage to organs through prolonged or repeated exposure.
H400: Very toxic to aquatic life.

Precautionary statements

P221: Take any precaution to avoid mixing with combustibles
P280: Wear protective gloves, protective clothing, eye protection and face protection.
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P371+P380+P375: In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Other hazards The substance does not meet the criteria for PBT or vPvB (see section 12).

Physicochemical hazards:

In contact with acids or acid substances, it generates chlorine dioxide (ClO₂), a toxic and explosive gas.
Contamination with reducing and combustible materials may give rise to reactions which generate chlorine dioxide. Not assigned.

Section 3: Composition/Information on Ingredients

Substance:

Name: Sodium chlorite (20 ó 35%).

Index number R. 1272/2008	EC number	CAS number	Name	Concentration	Classification Regulation (EC) 1272/2008	Specific concentration limits
Not available	231-836-6	7758-19-2	Sodium chlorite	20-35%	Ox. sol. 1, H271. Acute Tox. - oral: 3, H301. Acute Tox. - dermal: 2, H310. Skin Corr. 1B, H314. STOT RE 2, H373. Aquatic acute, 1, H400. M-factor = 1	M-factor = 1
--	231-791-2	7732-18-5	Water	Rest	--	--

Section 4: First Aid Measures

Description of first aid measures

General information:

Remove clothing immediately. Submerge in water to prevent the possibility of a fire. Wash shoes with water.

In case of inhalation:

In the event of formation of chlorine dioxide, move the patient to a well ventilated place, lying flat and at rest. If the affected person stops breathing, give artificial respiration. If breathing with difficulty, give oxygen. Always seek medical help.

After skin contact:

Wash the area affected with plenty of water for at least 15 minutes, removing soiled clothing and shoes. Seek immediate medical attention.

After eye contact:

Wash eyes with plenty of water for at least 30 minutes. Seek immediate medical attention.

In case of ingestion:

Do not induce vomit.

If conscious, give water on demand and seek immediate medical attention.

If unconscious, maintain the patient at rest and warm, and seek immediate medical attention.

Recommended personal protective equipment for first aid responders:

Self-contained breathing equipment. Individual protective equipment (gloves and suitable clothing).

Most important symptoms and effects, both acute and delayed

Inhalation: It can cause irritation of the respiratory tract and airways.

Skin contact: May cause skin irritation. With the impregnated clothes it may cause burns.

Eye contact: May cause burns in the eyes. It may cause ulceration of the conjunctiva and of the cornea.

Ingestion: It may cause burns in the mouth and oesophagus. It may cause intestinal perforation.

Indication of any immediate medical attention and special treatment needed

Need of urgent medical attention.

Section 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

A lot of water. Form curtains of water to absorb the gases that are generated in the combustion.

Keep containers and deposits cool, spraying them with water if exposed to the fire.

If feasible, remove the combustible agent.

Remove the containers from the area of fire, if this does not entail risk.

Unsuitable extinguishing media:

CO₂ powder (powdered dry ice), foam (organic products).

Special hazards arising from the substance or mixture

The product is not flammable or explosive. If it reaches 175 °C it decomposes to chlorine and chlorate.

Subsequent decomposition of the chlorate produces oxygen which may give rise to the explosion or bursting of closed containers.

Advice for firefighters

Self-contained breathing equipment. Individual protective equipment (gloves and suitable clothing).

Seek emplacement with your back against the wind.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid contact with the eyes, skin and clothing. Do not act without appropriate protective equipment (see section 8).

Environmental precautions

If the spill is small, absorb the product using non-combustible materials such as sand or clay.

If the spill is large, keep the product away from drains and surface waters and use contention methods, do not use combustible materials (wood, paper, clothing etc.). Recover the whole product that is possible in a clean dry plastic or metallic container. Following product recovery, flush area with water.

If the product reaches a natural water course, advise the Civil Protection authorities.

Methods and material for containment and cleaning up

Absorb any spillage using sand, earth or clay. Wash the area with plenty of water.

Take the absorbent products to a safe storage for treatment by expert personnel in handling the product or an authorised waste manager.

Reference to other sections

See protection measures in section 8.

Section 7: Handling and storage

Precautions for safe handling

Do not smoke, eat or drink when handling the product. Avoid the formation of sparks.

Maintain storage and work areas totally clean, devoid of any trace of foreign or incompatible products.

Before handling the product, make sure that the containers, vessels and tanks to be used are clean, dry and appropriate for the intended use. Do not return the product (nor samples) to containers or tanks (risk of decomposition).

Avoid mixing with incompatible products (acids, acid materials, reducers, combustible materials, oils, greases, rags, etc).

Containers shall be properly closed and appropriately labelled.

Avoid spills and if they occur rinse them thoroughly before they dry. Avoid contact with the skin, eyes and clothing.

Always use the recommended protective clothing.

Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.

Conditions for safe storage, including any incompatibilities

Recommended materials: For containers: Plastic (PP, PVC, PE), stainless steel tanks.

For tanks and silos: Stainless steel, Polyester coated carbon steel, FRP

Incompatible materials :

Wood, Rubber, Aluminium, Copper and Alloys.

Storage conditions: Keep in a dry place away from heat sources.

Temperature and humidity range/limits: Avoid temperatures below -10 °C (crystallizes)

Special conditions: Keep the product separated from flammables, combustibles, acids and organics. Avoid direct sunlight.

Specific end use(s)

In the generation of chlorine dioxide, its concentration shall be controlled, as it is explosive at concentrations greater than 8% by volume in air.

Section 8: Exposure controls / personal protection

Control parameters

VLA-ED: 0,1 ppm 0,28 mg/m³ VLA-EC 0,3 ppm 0.84 mg/m³ (INSHT) (as ClO₂)

TLV-TWA: 0,1 ppm 0,28 mg/m³ STEL-C 0,3 ppm (ACGIH) (as ClO₂)

WEL- Limit value - Eight hours: 0,1 ppm 0,28 mg/m³ WEL- Limit value 6 short-term: 0,3 ppm 0.84 mg/m³ (UK) (as ClO₂)

Dust:

Particulates, nor otherwise regulated:

TLV-TWA- Total dust 10 mg/m³

Respirable dust 3 mg/m³ (ACGIH 2005)

Human exposure:

Workers:

DNEL (systemic effects: acute and chronic): 0.58 mg/kg body weight/day (dermal; developmental toxicity / teratogenicity)

DNEL (systemic effects: acute and chronic): 0.41 mg/m³ (inhalation; developmental toxicity / teratogenicity)

General population:

DNEL (systemic effects: acute and chronic): 0.29 mg/kg body weight/day (dermal; developmental toxicity / teratogenicity)

DNEL (systemic effects: acute and chronic): 0.1 mg/m³ (inhalation; developmental toxicity / teratogenicity)

DNEL (systemic effects: acute and chronic): 0.029 mg/kg body weight/day (oral; developmental toxicity / teratogenicity)

PNEC (freshwater): 0.65 µg/L (based on the lowest short-term aquatic toxicity value LC50 = 0.65 mg/L and assessment factor 1000).

PNEC (saltwater): 0.065 µg/L (based on the lowest short-term aquatic toxicity value LC50 = 0.65 mg/L and assessment factor 10000).

PNEC (intermittent releases): 0.0065 mg/L (based on the lowest short-term aquatic toxicity value LC50 = 0.65 mg/L and assessment factor 100).

PNEC (sewage treatment plant): 1 mg/L (based on the lowest effect concentration on microorganisms EC50 (3 h) > 100 mg/L and assessment factor 100).

Exposure control

Appropriate engineering controls

Use adequate ventilation to keep a low concentration in air.

Individual protection measures

Respiratory protection:

For aerosols use respiratory protection mask (FPP2).

In the event of formation of chlorine dioxide use breathing protection mask with filter for inorganic gases (Chlorine) for low concentrations (EN 136), for higher concentrations use self-contained breathing equipment. (EN.137).

Hand protection:

Gloves for chemical hazards, PVC type (do not use leather or natural rubber) (EN 374)

Eye protection:

Use safety goggles or face shield if there is a risk of projection of liquids (EN 166).

Skin Protection:

Anti-acid suit. Do not use cotton, leather or natural rubber.

Wear suitable protective clothing. (EN13034)

Chemical resistant apron.

If splashes are likely to occur, wear: Rubber or plastic boots.

Environmental Exposure controls

Avoid the product from reaching drains and/or surface waters.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

General information (Appearance, odour)

Physical State	Liquid
Colour	Yellowish
Odour	Odourless

Important health safety and environmental information

pH	11/12 (Solution of 100 g/L H ₂ O)
Melting/freezing point	Crystallisation temperature: +10°C (34,5% solution) -10°C (25% solution) -2°C (7.5% solution)
Boiling point	112°C (300 g/l solution)
Flash point	Non flammable
Flammability (solid, gas)	not applicable
Explosive properties	
- Lower explosive limit	not applicable
- Upper explosive limit	
Oxidising Properties	Oxidising liquid: Category 1: May cause fire or explosion; strong oxidiser.

Vapour Pressure	No data available.
Density	25% solution approx. 1210 Kg/m ³ 31% solution approx. 1280 Kg/m ³ 34,5% solution approx. 1310 Kg/m ³
Viscosity	2.33 mPa.s (15-25%) 3.26 mPa.s (31%)
Solubility(ies)	
- Water solubility	miscible
Partition coefficient (n-octanol/water)	-2.7 at 25 °C (method EU A8 and OECD 107).
Thermal Decomposition	180 - 200° C (in solid state)
Other information	

Organic peroxide: Based on the available data, the classification criteria are not met.

Self-heating: Based on the available data, the classification criteria are not met.

Pyrophoric liquid/solid: Based on the available data, the classification criteria are not met (based on the structure).

Corrosive to metals: No data available.

Substance which in contact with water emits flammable gases: Based on the available data, the classification criteria are not met.

Section 10: Stability and reactivity

Reactivity

The reaction with acids produces the formation of chlorine and chlorine dioxide.

Chemical stability

The substance is stable under normal environmental conditions and foreseeable conditions of temperature and pressure during the storage and handling.

Possibility of hazardous reactions

Violent exothermic reaction, development of heat with reducing materials (sodium sulphite).

Potentially explosive reaction and fire with combustible materials (wood, cellulose, grease, cotton...)

Conditions to avoid

Keep away from direct sunlight. To avoid thermal decomposition, do not overheat. Freezing.

Incompatible materials

Acids, acid substances (aluminum sulphate, aluminum chloride, ferric chloride..), wood, cellulose, grease, cotton.

Hazardous decomposition products

The product decomposes into chloride and sodium chlorate under heating and direct sun-light. The subsequent decomposition of chlorate releases oxygen with risk of bursting of containers.

In contact with acid materials (Acids, aluminium polychloride, aluminum sulphate, ferric chloride, etc.) chlorine dioxide is formed, with risk of explosion.

Section 11: Toxicological information

Information on toxicological effects:

acute effects (acute toxicity, irritation and corrosivity):

LD50 oral (lethal dose, 50%)	390 mg/kg body weight (rat; 31% aqueous solution) (EPA 1978 40 CFR, Part 163)
LD50 dermal (lethal dose, 50%)	>2000 mg/kg body weight (rabbit; 31% aqueous solution) (EPA 8/22/78 40 CFR Part 163)
LC50 inhalation (lethal dose, 50%)	An acute inhalation toxicity study is not required since exposure of humans via inhalation is unlikely taking into account the vapour pressure of the substance and/or the possibility of exposure to aerosols, particles or droplets of an inhalable size.

Skin corrosion /irritation	Non- irritant (rabbit; 34.5% aqueous solution) (OECD 404).
Serious eye damage/irritation	Irreversible effects in the eye: Category 1: H318: Causes serious eye damage. Irreversible effects in the eye (rabbit; 31% aqueous solution). (Guidelines for Hazardous Evaluation for Humans and Domestic Animals, Federal Register, Vol. 43, No. 163, 1978; section 163.81-5)
Specific target organ toxicity ó single exposure	No data available.

Sensitisation:

Respiratory sensitisation: No data available.

Skin sensitisation: Based on available data, the classification criteria are not met. Non sensitising (guinea pig; male and female) (OECD 406 and method EU B.6).

Repeated dose toxicity:

Specific target organ toxicity – repeated exposure: Category 2.

Minor clinical signs and histopathological abnormalities in the stomach mucosa were observed at 25 mg/kg/day. At the lowest dose level there were no changes considered to be treatment-related and it was therefore, concluded that the no observed effect level was 10 mg/kg/day.

Oral route: NOAEL: 10 mg/kg body weight/day (rat; male and female; subchronic; 90 days) (EPA OPP 82-1)

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):

Carcinogenicity: Based on available data, the classification criteria are not met.

Oral route: NOEL: >= 32.1 mg/kg body weight/day (85 weeks)

Dermal route: NOEL: >= 57.14 mg/kg body weight/day (51 weeks)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Positive results in *in vitro* gene mutation studies in bacteria (method equivalent to OECD 471) and positive results in *in vitro* gene mutation studies in mammalian cells (method equivalent to OECD 476).

Negative results in *in vivo* chromosome aberration studies (method equivalent to OECD 474 and OECD 475)

Reproductive toxicity: Based on available data, the classification criteria are not met.

Oral route: A two-generation reproduction and development neurotoxicity study with sodium chlorite in the rat was conducted and no evidence of reproductive toxicity was observed.

NOAEL (F1 and F2)= 2.9 mg/kg body weight/day (EPA OPPTS 870.3800).

Reproductive toxicity, effects on or via lactation: No data available.

Aspiration hazard:

No data available.

Section 12: Ecological information

Toxicity

Acute toxicity to fish	Sodium chlorite: Species: <i>Oncorhynchus mykiss</i> . 106 mg/L (96 h; freshwater; semi-static system)
LC50 (lethal concentration, 50%):	Species: <i>Cyprinodon variegates</i> . 105 mg/L (96 h; saltwater; flow-through system) (EPA OPP 72-1)
Chronic toxicity to fish	

NOEC (no observed effect concentration):	The study does not need to be conducted since the chemical safety assessment indicates that there is no need to investigate further the effects on aquatic organisms.
Acute toxicity to crustaceans	
EC50 (effect concentration, 50%):	Sodium chlorite: Species: <i>Daphnia magna</i> . <1 mg/L (48 h; freshwater; static system) (OECD 202 and method EU C.2) Species: <i>Mysidopsis bahia</i> (<i>Americamysis bahia</i>). 0.65 mg/L (96 h; saltwater; flow-through system; based on mobility) (EPA OPP 72-3)
Chronic toxicity to crustaceans	
NOEC (no observed effect concentration):	The study does not need to be conducted since the chemical safety assessment indicates that there is no need to investigate further the effects on aquatic organisms.
Acute toxicity to algae and other aquatic plants	
EC50 (effect concentration, 50%):	Sodium chlorite: Species: <i>Selenastrum capricornutum</i> (<i>Pseudokirchnerella subcapitata</i>) 1 mg/L (96 h; freshwater; static system) (EPA OPP 122-2)

Toxicity data on soil micro- and macro-organisms and other environmentally relevant organisms, such as birds, bees and plants

Direct and indirect exposure of the soil compartment is unlikely. Two routes of entry to the soil compartment are possible: via deposition of chlorite present in aerosols from cooling towers or via deposition of sewage sludge. The substance chlorine dioxide is highly reactive and it will readily react with organic matter and microorganisms present in sewage sludge or in soil and will be reduced to chloride via the transient intermediate chlorite. Hence there will be no exposure to soil. Chlorite in aerosols deposited in soil would also be expected to degrade to chloride on contact with soil.

Persistence and degradability

Readily biodegradable

Not applicable (inorganic substance). Sodium chlorite is expected to be rapidly reduced to sodium chloride in the environment, especially in anaerobic conditions.

Other relevant information

Irradiation of sodium chlorite solutions indicated a photodegradation half-life of about 30 minutes with a steady increase in pH (pH 8 to 12.6) and major products identified as hydroxide, chlorine dioxide and chloride with chlorate and hypochlorite as minor products and trace amounts of chlorine.

The results obtained show that the pH and the initial concentration of sodium chlorite have no significant effect on the rate of photodecomposition of chlorite. These results also indicate that the radiation dose (9000 j/m²) needed to produce a 50% reduction in chlorite concentration suggests that the doses (200-250 j/m²) used for drinking water disinfection would not result in a significant reduction in chlorite concentrations.

Bioaccumulative potential

Bioconcentration factor (BCF): experimental data:

Sodium chlorite is highly water soluble with an extremely low Log Pow. Therefore, the substance has a low potential for bioaccumulation. Due to its extremely low lipophilicity and high instability in water, sodium chlorite and hence chlorine dioxide are not expected to bioaccumulate.

Mobility in soil

No data available.

Results of PBT (persistent, bioaccumulative and toxic) and vPvB (very persistent and very bioaccumulative) assessment

Persistence assessment (P):

Sodium chlorite is a strong oxidizing agent and under proper reducing conditions is readily reduced to chloride, and to a lesser extent, chlorate.

Irradiation of sodium chlorite solutions indicated a photodegradation half-life of about 30 minutes with a steady increase in pH (pH 8 to 12.6) and major products identified as hydroxide, chlorine dioxide and chloride with chlorate and hypochlorite as minor products and trace amounts of chlorine. The available half-life data indicate that the assessed substance is not a P.

Bioaccumulation assessment (B):

Sodium chlorite is highly water soluble with an extremely low Log Pow. There is therefore no concern for potential bioaccumulation from either chlorine dioxide or chlorite.

Toxicity assessment (T):

Sodium Chlorite is classified as acute oral tox 3, acute dermal tox 2, skin corrosive 1B, eye damage 1, STOT Rep Exp 2 and acute aquatic 1.

The substance is not considered as PBT / vPvB.

Other adverse effects

No data available.

Section 13: Disposal considerations

Waste treatment methods

Spent containers shall be rinsed to remove all remaining product.

Dilute the product with abundant water avoiding the presence of solids which it may ignite (clothing, paper, wood, etc).

Take into account considerations stated in previous sections regarding incompatibilities.

The product will be disposed of in accordance with the regulation currently in force and specifically with:

- Directive 2008/98/EC, of 19 November 2008 on waste and the corresponding national regulations which transpose this Directive.
- Directive 94/62/EC, of 20 December 1994 on packaging and packaging waste and its modifications and corresponding national regulations which transpose this Directive.
- Commission Decision 2001/118/EC of 16 January 2001 amending Decision 2000/532/EC as regards the list of wastes and any other regulation currently in force in the European Community, National and Local with regard to the correct disposal of this material and its empty containers.

Section 14: Transport information

ADR/RID:

UN Number:	1908
Proper Shipping Name:	CHLORITE SOLUTION
Transport hazard class(es)	8
Subsidiary class(es)	-
Packing group	II
Environmental hazards	Yes
Labels required	8

IATA

UN Number:	1908
UN Proper Shipping Name:	CHLORITE SOLUTION
Transport hazard class(es)	8
Packing group	II
Environmental hazards	Yes

IMDG

UN number	1908
UN proper shipping name	CHLORITE SOLUTION

Transport hazard class(es) 8
Packing group II
Marine pollutant No
EmS No. F-A, S-B



ADR



IATA



IMDG

Special precautions for user

It is necessary to attend to the same information described in the previous epigraphs: ADR, RID, IMDG, ICAO / IATA.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

Section 15: Regulatory information

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

EU Regulations

Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances.

Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work.

Chemical Safety Assessment

A Chemical Safety Assessment has been carried out for the components of this substance.

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances(PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

Section 16: Other information

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

- H302: Harmful if swallowed.
- H318: Causes serious eye damage.
- H373: May cause damage to organs through prolonged or repeated exposure.
- H400: Very toxic to aquatic life.

Information sources used in the elaboration of this Safety Data Sheet:

- HANDBOOK OF REACTIVE CHEMICALS HAZARDS. BREThERIC 4th Ed. 1990
- DANGEROUS PROPERTIES INDUSTRIAL MATERIALS (TENTH EDITION) SAX
- HAZARDOUS CHEMICALS DATA BOOK (2nd EDITION) G.WEIS.
- IARC (International Agency for Research on Cancer).
- NIOSH (National Institute for Occupational Safety and Health).
- NTP (National Toxicology Program).
- ACGIH (American Conference of Governmental Industrial Hygienist).
- OSHA (Occupational Health and Safety Assessment)
- INSHT (Instituto Nacional de Seguridad e Higiene en el Trabajo).
- IUCLID DATA SET

Further information

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.

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