

SAFETY DATA SHEET

DOUSE Hard Water Booster

According to the REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577, as amended.

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

1.1. Product identifier

Product name	DOUSE Hard Water Booster
Product number	7635/21989
UFI	UFI: JG4P-P0JE-C00G-H3N4

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

Identified uses	Alkali Booster
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1.3. Details of the supplier of the safety data sheet

Supplier	Spectrum Cleaning Solutions Ltd Units 9-10 66 Londesborough Road Scarborough YO12 5AF T: 01723 373509 F: 01723 377726 E: sales@spectrumcleaningsolutions.co.uk
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1.4. Emergency telephone number

National emergency telephone number	NHS Direct 111 (GB) National Poisons Information Service Tel: +44 344 892 0111 (UK) - Medical Professionals Only National Poisons Information Centre Tel: +353 (01) 809 2566 (Ireland) - Healthcare Professionals only (24 hour service)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (SI 2019 No. 720)

Physical hazards	Met. Corr. 1 - H290
Health hazards	Skin Corr. 1A - H314 Eye Dam. 1 - H318
Environmental hazards	Not Classified

2.2. Label elements

Hazard pictograms



Signal word	Danger
Hazard statements	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage.
Precautionary statements	P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P501 Dispose of contents/ container in accordance with national regulations.
Contains	sodium hydroxide
Detergent labelling	< 5% phosphonates

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Supplementary precautionary statements

P234 Keep only in original packaging.
 P260 Do not breathe vapour/ spray.
 P264 Wash contaminated skin thoroughly after handling.
 P310 Immediately call a POISON CENTER/ doctor.
 P321 Specific treatment (see medical advice on this label).
 P363 Wash contaminated clothing before reuse.
 P390 Absorb spillage to prevent material damage.
 P405 Store locked up.
 P406 Store in a corrosion-resistant/... container with a resistant inner liner.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

SODIUM HYDROXIDE	15-30%
CAS number: 1310-73-2	EC number: 215-185-5
Classification Met. Corr. 1 - H290 Acute Tox. 4 - H302 Skin Corr. 1A - H314 Eye Dam. 1 - H318	

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Get medical attention if symptoms are severe or persist. Remove affected person from source of contamination.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.
Ingestion	Never give anything by mouth to an unconscious person. Do not induce vomiting. Promptly get affected person to drink large volumes of water to dilute the swallowed chemical. Give milk instead of water if readily available. Get medical attention immediately.
Skin contact	Remove affected person from source of contamination. Remove contaminated clothing and rinse skin thoroughly with water. Chemical burns must be treated by a physician. Get medical attention promptly if symptoms occur after washing.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Unlikely route of exposure as the product does not contain volatile substances. This is unlikely to occur but symptoms similar to those of ingestion may develop.
Ingestion	May cause chemical burns in mouth and throat. May cause stomach pain or vomiting.
Skin contact	This product is corrosive. May cause serious chemical burns to the skin.
Eye contact	This product is corrosive. Severe irritation, burning and tearing. May cause blurred vision and serious eye damage. Corneal damage.

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

Notes for the doctor	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards No unusual fire or explosion hazards noted.

Hazardous combustion products Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Avoid contact with skin and eyes.

6.2. Environmental precautions

Environmental precautions The product components are not classified as environmentally hazardous. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air). Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Do not touch or walk into spilled material. Absorb in vermiculite, dry sand or earth and place into containers. Provide adequate ventilation. Flush contaminated area with plenty of water. Neutralise with dilute acid where possible. Inform authorities if large amounts are involved.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid contact with: Acids. Avoid spilling. Avoid contact with skin and eyes. Wear suitable protective equipment for prolonged exposure and/or high concentrations of vapours, spray or mist.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep above the chemical's freezing point to avoid rupturing the container. Store in tightly-closed, original container.

Storage class Corrosive storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

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8.1. Control parameters

Occupational exposure limits

SODIUM HYDROXIDE

Short-term exposure limit (15-minute): WEL 2 mg/m³

WEL = Workplace Exposure Limit.

SODIUM HYDROXIDE (CAS: 1310-73-2)

DNEL	Consumer - Inhalation; Long term local effects: 1 mg/m ³ Workers - Inhalation; Long term local effects: 1 mg/m ³ Workers - Dermal; Short term local effects: 2 mg/kg/day Workers - Inhalation; Short term local effects: 2 mg/m ³
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Sodium salts of [[[phosphonomethyl]imino]bis[ethane-2,1-diylnitrolobis(methylene)]]tetrakisphosphonic acid (1-3 Na:1) (CAS: 68155-78-2)

DNEL	Industry - Oral; Long term systemic effects: 3.9 mg/kg bw/day Industry - Oral; Short term systemic effects: 3.9 mg/kg bw/day Consumer - Oral; Long term systemic effects: 1.9 mg/kg bw/day Consumer - Oral; Short term systemic effects: 1.9 mg/kg bw/day
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PNEC	- Fresh water; 0.52 mg/l - marine water; 0.052 mg/l - Sediment (Freshwater); 496 mg/kg sediment dw - Sediment (Marinewater); 49.6 mg/kg sediment dw - Soil; 174 mg/kg - STP; 20 mg/l
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1-Hydroxy Ethylidene-1,1 Diphosphonic Acid (CAS: 2809-21-4)

DNEL	Industry - Oral; Long term systemic effects: 13 mg/kg bw/day Consumer - Oral; Long term systemic effects: 6.5 mg/kg bw/day
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PNEC	- Fresh water; 0.136 mg/l - marine water; 0.0136 mg/l - Sediment (Freshwater); 59 mg/kg - Sediment (Marinewater); 5.9 mg/kg - Soil; 96 mg/kg - STP; 20 mg/l
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8.2. Exposure controls

Protective equipment



Appropriate engineering controls No specific ventilation requirements noted, except this product must not be used in a confined space without good ventilation.

Eye/face protection Wear tight-fitting, chemical splash goggles or face shield.

Hand protection Chemical resistant PVC/Nitrilrubber gloves (to European standard EN 374 or equivalent). Thickness: 0,4 mm. Penetration time: >480 min (level 6). The selection of specific gloves for a specific application and time of use in a working area, should also take into account other factors on the working space, such as (but not limited to): other chemicals that are possibly used, physical requirements (protection against cutting/drilling, skill, thermal protection), and the instructions/specification of the supplier of gloves.

Other skin and body protection Provide eyewash station and safety shower. Impervious footwear must be worn. Wear suitable protective clothing (EN 14605). Long sleeved protective clothing

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Hygiene measures	Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.
Respiratory protection	Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Odourless.
pH	pH (diluted solution): 12-13 1%
Relative density	1.25-1.31 @ 20°C
Solubility(ies)	Soluble in water.

9.2. Other information

Other information	Not available.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	The following materials may react with the product: Acids. May be corrosive to metals.
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10.2. Chemical stability

Stability	Avoid contact with acids.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	The following materials may react strongly with the product: Acids.
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10.4. Conditions to avoid

Conditions to avoid	Avoid contact with acids.
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10.5. Incompatible materials

Materials to avoid	Strong acids. May be corrosive to metals.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD ₅₀)	Based on available data the classification criteria are not met.
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ATE oral (mg/kg)	2,696.45
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Acute toxicity - dermal

Notes (dermal LD ₅₀)	Based on available data the classification criteria are not met.
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Acute toxicity - inhalation

Notes (inhalation LC ₅₀)	Based on available data the classification criteria are not met.
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Skin corrosion/irritation

Skin corrosion/irritation	Skin Corr. 1A - H314 Causes severe burns.
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Serious eye damage/irritation

Serious eye damage/irritation	Corrosivity to eyes is assumed.
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Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

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

IARC carcinogenicity

None of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

General information

The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation

This product is strongly corrosive. May cause damage to mucous membranes in nose, throat, lungs and bronchial system.

Ingestion

This product is strongly corrosive. Swallowing concentrated chemical may cause severe internal injury. May cause chemical burns in mouth, oesophagus and stomach.

Skin contact

This product is strongly corrosive. May cause serious chemical burns to the skin.

Eye contact

This product is strongly corrosive. Splashes from the mixture may cause permanent eye damage

Acute and chronic health hazards

This product is corrosive. EYE CONTACT: Causes - severe irritation and burns, possibly leading to permanent damage. Requires immediate medical attention. SKIN CONTACT: severe burns. INGESTION: burns to mouth and throat. Will attack tissue in the digestive system. ACUTE AND CHRONIC HEALTH EFFECTS: May cause chemical eye burns. Contact with concentrated chemical may cause severe skin damage. Swallowing concentrated chemical may cause severe internal injury.

Route of exposure

Ingestion Skin and/or eye contact

Toxicological information on ingredients.

SODIUM HYDROXIDE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 501.0

Species Rabbit

ATE oral (mg/kg) 501.0

Alanine, N,N-bis(carboxymethyl)-, trisodium salt

Acute toxicity - oral

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Acute toxicity oral (LD₅₀
mg/kg) 2,001.0

Species Rat

ATE oral (mg/kg) 2,001.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀
mg/kg) 2,001.0

Species Rat

ATE dermal (mg/kg) 2,001.0

Sodium salts of [[[phosphonomethyl]imino]bis[ethane-2,1-diylnitrilobis(methylene)]]tetrakisphosphonic acid (1-3 Na:1)

Acute toxicity - oral

Acute toxicity oral (LD₅₀
mg/kg) 5,839.0

Species Rat

ATE oral (mg/kg) 5,839.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀
mg/kg) 5,839.0

Species Rat

ATE dermal (mg/kg) 5,839.0

1-Hydroxy Ethylidene-1,1 Diphosphonic Acid

Acute toxicity - oral

Acute toxicity oral (LD₅₀
mg/kg) 2,400.0

Species Rat

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀
mg/kg) 6,001.0

Species Rabbit

ATE dermal (mg/kg) 6,001.0

SECTION 12: Ecological information

Ecotoxicity

Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Toxicity

Based on available data the classification criteria are not met.

Ecological information on ingredients.

SODIUM HYDROXIDE

Acute aquatic toxicity

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Acute toxicity - fish LC₅₀, 96 hours: 35-189 mg/l, Fish
 LC₅₀, 96 hours: 45.5 mg/l, Oncorhynchus mykiss (Rainbow trout)
 LC₅₀, 96 hours: 125 mg/l, Freshwater fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 40-240 mg/l, Daphnia magna

Alanine, N,N-bis(carboxymethyl)-, trisodium salt

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: >100 mg/l, Brachydanio rerio (Zebra Fish)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: >100 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: >100 mg/l, Scenedesmus subspicatus

Acute toxicity - microorganisms EC₂₀, 0.5 hour: >1000 mg/l, Activated sludge

Acute toxicity - terrestrial LC₅₀, 14 days: 142 mg/kg, Eisenia Fetida (Earthworm)

Chronic aquatic toxicity

Chronic toxicity - fish early life stage NOEC, 28 days: >=100 mg/l, Oncorhynchus mykiss (Rainbow trout)

Chronic toxicity - aquatic invertebrates NOEC, : >=100 mg/l, Daphnia magna

Sodium salts of [[[phosphonomethyl]imino]bis[ethane-2,1-diyl]nitrolobis(methylene)]tetrakisphosphonic acid (1-3 Na:1)

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 573 mg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: >250 mg/l, Acartia tonsa (Copepod)

Acute toxicity - aquatic plants EC₅₀, 69 hours: 1.5 mg/l, Skeletonema costatum

1-Hydroxy Ethylidene-1,1 Diphosphonic Acid

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 368 mg/l, Oncorhynchus mykiss (Rainbow trout)
 LC₅₀, 96 hours: 868 mg/l, Lepomis macrochirus (Bluegill)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 527 mg/l, Daphnia magna

Acute toxicity - aquatic plants ErC₅₀, 96 hours: 3 mg/l, Scenedesmus quadricauda (Green algae)

12.2. Persistence and degradability

Persistence and degradability The product contains mainly inorganic substances which are not biodegradable. The methods for determining biodegradability are not applicable to inorganic substances. The other substances in the product are expected to be readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

12.4. Mobility in soil

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

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Results of PBT and vPvB assessment

This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Dispose of in accordance with Local Authority regulations as special waste according to The Control of Special Waste Regulations 1996.

EURAL Code

SECTION 14: Transport information

Road transport notes TREM CARD: C2

14.1. UN number

UN No. (ADR/RID)	1824
UN No. (IMDG)	1824
UN No. (ICAO)	1824
UN No. (ADN)	1824

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	SODIUM HYDROXIDE SOLUTION
Proper shipping name (IMDG)	SODIUM HYDROXIDE SOLUTION
Proper shipping name (ICAO)	SODIUM HYDROXIDE SOLUTION
Proper shipping name (ADN)	SODIUM HYDROXIDE SOLUTION

14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID classification code	C5
ADR/RID label	8
IMDG class	8
ICAO class/division	8
ADN class	8

Transport labels



14.4. Packing group

ADR/RID packing group	II
IMDG packing group	II
ICAO packing group	II
ADN packing group	II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

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14.6. Special precautions for user

EmS	F-A, S-B
ADR transport category	2
Hazard Identification Number (ADR/RID)	80
Tunnel restriction code	(E)

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
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SECTION 15: Regulatory information

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

Drug Precursors Regulation (273/2004)

Danish product registration number

Danish national regulations

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

None of the ingredients are listed or exempt.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
 IATA: International Air Transport Association.
 ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
 IMDG: International Maritime Dangerous Goods.
 CAS: Chemical Abstracts Service.
 ATE: Acute Toxicity Estimate.
 LC50: Lethal Concentration to 50 % of a test population.
 LD50: Lethal Dose to 50% of a test population (Median Lethal Dose).
 EC₅₀: 50% of maximal Effective Concentration.
 PBT: Persistent, Bioaccumulative and Toxic substance.
 vPvB: Very Persistent and Very Bioaccumulative.

Revision comments	Revision is due to general MSDS review
Revision date	12/12/2023
Revision	6
Supersedes date	07/07/2021
SDS number	7635/11775
Hazard statements in full	H290 May be corrosive to metals. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage.

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This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.