

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

1.1 Product identifier	
Product name	: Guard Endure+ D S (C063)
Product code	: 34942
Product type	: Powder coating.
Other means of identification	: Not available.

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

Use in coatings - Industrial use

1.3 Details of the supplier of the safety data sheet

JOTUN CZECH a.s. NA ROVNEM 866 400 04 TRMICE CZECH REPUBLIC

Phone : + 420 477 828 969 Fax.: + 420 477 828 962 sdspowder@jotun.com

1.4 Emergency telephone number

Contact NHS Direct; phone 0845 4647 or 111. Open 24/7.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS] Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended. See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements		
Signal word	:	No signal word.
Hazard statements	:	H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements		
General	:	Not applicable.
Prevention	:	P261 - Avoid breathing dust.
Response	:	Not applicable.
Storage	:	Not applicable.
Disposal	:	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	:	Contains zinc di(benzothiazol-2-yl) disulphide, benzene-1,2,4-tricarboxylic acid 1,2-anhydride and N,N',N'',N'''-tetrakis(4,6-bis(butyl-(N-methyl-2,2,6,6-tetramethylpiperidin-4-yl)amino)triazin-2-yl)-4,7-diazadecane-1,10-diamine. May produce an allergic reaction.

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SECTION 2: Hazards identification

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: Not applicable.
Special packaging requirem	<u>ents</u>
Containers to be fitted with child-resistant fastenings	: Not applicable.
Tactile warning of danger	: Not applicable.
2.3 Other hazards	
Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Other hazards which do not result in classification	: None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures :	Mixture			
Product/ingredient name	Identifiers	Weight %	Regulation (EC) No. 1272/2008 [CLP]	Туре
titanium dioxide	EC: 236-675-5 CAS: 13463-67-7	≥10 - ≤25	Not classified.	[2]
zinc di(benzothiazol-2-yl) disulphide	EC: 205-840-3 CAS: 155-04-4	<1	Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
benzene-1,2,4-tricarboxylic acid 1,2-anhydride	REACH #: 01-2119489422-34 EC: 209-008-0 CAS: 552-30-7 Index: 607-097-00-4	<1	Èye Óam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335	[1] [2] [5]
			See Section 16 for the full text of the H statements declared above.	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

<u>Type</u>

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

[6] Additional disclosure due to company policy

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures		
General	: In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.	
Eye contact	 Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice. 	
Inhalation	: Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.	
Skin contact	 Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners. 	
Ingestion	: If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.	
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.	

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs	s/symptoms
Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.
Ingestion	: No specific data.
4.3 Indication of any i	mmediate medical attention and special treatment needed
Notes to physician	 Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.

See toxicological information (Section 11)

SECTION 5: Firefighting measures

5.1 Extinguishing media	
Suitable extinguishing media	: Recommended: alcohol-resistant foam, CO ₂ blanket, water spray or mist.
Unsuitable extinguishing	: Do not use water jet.
media	Do not use inert gas under high pressure (e.g. CO2).
5.2 Special hazards arising f	rom the substance or mixture
Hazards from the substance or mixture	: Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.
	Fine dust clouds may form explosive mixtures with air.
Hazardous combustion products	: Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.
5.3 Advice for firefighters	
Special protective actions for fire-fighters	: Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.
Special protective equipment for fire-fighters	: Appropriate breathing apparatus may be required.

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SECTION 6: Accidental release measures

6.1 Personal precautions, pro	te	ctive equipment and emergency procedures
For non-emergency personnel	:	Exclude sources of ignition and ventilate the area. Avoid breathing dust. Refer to protective measures listed in sections 7 and 8.
For emergency responders	:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
6.2 Environmental precautions	:	Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.
6.3 Methods and material for containment and cleaning up	:	Contain and collect spillage with an electrically protected vacuum cleaner or by wet- brushing and place in container for disposal according to local regulations (see section 13). Do not use a dry brush as dust clouds or static can be created.
6.4 Reference to other sections	:	See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

Advice should be taken from a competent occupational health practitioner on the assessment of employees with skin or respiratory complaints before the individual is exposed to the uncured product.

7.1 Precautions for safe handling

Precautions should be taken to prevent the formation of dusts in concentrations above flammable, explosive or occupational exposure limits.

Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources.

Mixture may charge electrostatically: always use earthing leads when transferring from one container to another. Operators should wear antistatic footwear and clothing and floors should be of the conducting type.

Keep away from heat, sparks and flame.

Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Put on appropriate personal protective equipment (see Section 8).

Always keep in containers made from the same material as the original one.

Comply with the health and safety at work laws.

Do not allow to enter drains or watercourses.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

Additional information on storage conditions

Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep container tightly closed.

Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

See Technical Data Sheet / packaging for further information.

7.3 Specific end use(s)	
Recommendations	: Not available.
Industrial sector specific solutions	: Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Dust Limit : 10 mg/m³ (TWA of total inhalable dust) and 4 mg/m³ (TWA of respirable)

Product/ingredient name	Exposure limit values
titanium dioxide	EH40/2005 WELs (United Kingdom (UK), 8/2018).
	TWA: 10 mg/m ³ 8 hours. Form: inhalable dust
	TWA: 4 mg/m ³ 8 hours. Form: respirable dust
benzene-1,2,4-tricarboxylic acid 1,2-anhydride	EH40/2005 WELs (United Kingdom (UK), 8/2018). Inhalation
	sensitiser.
	TWA: 0.04 mg/m ³ 8 hours.
	STEL: 0.12 mg/m ³ 15 minutes.
Recommended monitoring : If this product contains ingredients with exposure limits, personal, workplace	

procedures atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : Avoid breathing dust. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain exposure to dusts below the OEL, suitable respiratory protection must be worn.

Individual protection measures

Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	: Safety eyewear complying to EN 166 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
Skin protection	

SECTION 8: Exposure controls/personal protection

Gloves	 There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. The breakthrough time must be greater than the end use time of the product. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly. The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance
	damage and poor maintenance. Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.
	Wear suitable gloves tested to EN374. Recommended, gloves(breakthrough time) > 8 hours: nitrile rubber, neoprene, PVC
	For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves.
	The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.
Body protection	: Personnel should wear protective clothing. Care should be taken in the selection of protective clothing to ensure that inflammation and irritation of the skin at the neck and wrists through contact with the powder are avoided.
Other skin protection	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	: If workers are exposed to concentrations above the exposure limit, they must use a respirator according to EN 140. If dust is generated and ventilation is inadequate, use respirator that will protect against dust/mist. (FFP2 / N95).
Environmental exposure controls	: Do not allow to enter drains or watercourses.

SECTION 9: Physical and chemical properties

9.1 Information on basic physica	and chemical properties
<u>Appearance</u>	
Physical state	: Solid. Powder.
Colour	: Various
Odour	: Odourless.
Odour threshold	: Not applicable.
рН	: Not applicable.
Melting point (dust)	: 85 - 115 °C
Initial boiling point and boiling range	: Not applicable.
Flash point	: Not applicable.
Evaporation rate	: Not applicable.
Flammability (solid, gas)	: Fine dust clouds may form explosive mixtures with air.
Lower explosion limit (dust)	: 30 g/m ³ (EN 14034-3)
Minimum ignition energy (mJ)	: 10 - 30 (EN 13821)
Vapour pressure	: Not applicable.
Vapour density	: Not applicable.
Density	: 1.2 to 1.9 g/cm ³
Solubility(ies)	: Insoluble in the following materials: cold water and hot water.

SECTION 9: Physical and chemical properties

1	Not applicable.
:	> 400°C
1	Not available.
:	Not applicable.
	: :

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: Fine dust clouds may form explosive mixtures with air.
10.2 Chemical stability	: Stable under recommended storage and handling conditions (see Section 7).
10.3 Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame).
	Take precautionary measures against electrostatic discharges.
	To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material.
	Prevent dust accumulation.
10.5 Incompatible materials	: Not applicable.
10.6 Hazardous decomposition products	 Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
zinc di(benzothiazol-2-yl) disulphide	LD50 Oral	Rat	540 mg/kg	-

Acute toxicity estimates

None.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
benzene-1,2,4-tricarboxylic acid 1,2-anhydride	Eyes - Irritant	Mammal - species unspecified	-	-	-

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
zinc di(benzothiazol-2-yl) disulphide	skin	Mammal - species unspecified	Sensitising
benzene-1,2,4-tricarboxylic acid 1,2-anhydride	skin	Mammal - species unspecified	Sensitising

Mutagenicity

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards. **Reproductive toxicity**

SECTION 11: Toxicological information

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

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

Specific target organ toxicity (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 information : None identified.

SECTION 12: Ecological information

12.1 Toxicity

There are no data available on the mixture itself.

Coating powder residues should not be allowed to enter drains or watercourses or be deposited where they could affect ground or surface waters.

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

This material is harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
zinc di(benzothiazol-2-yl) disulphide benzene-1,2,4-tricarboxylic acid 1,2-anhydride	5.02 0.06	-	low low

12.4 Mobility in soil	
Soil/water partition coefficient (Koc)	: Not available.
Mobility	: Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

SECTION 13: Disposal considerations

Methods of disposal	: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non- recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
Hazardous waste	: Yes.
Disposal considerations	: Do not allow to enter drains or watercourses. Dispose of according to all federal, state and local applicable regulations. If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.
European waste catalogue (EWC)	 08 01 11* Waste paint and varnish containing organic solvents or other dangerous substances
Packaging	
Methods of disposal	: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
Disposal considerations : Using information provided in this safety data sheet, advice should be the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with national legal provisions.	
Type of packaging	European waste catalogue (EWC)
CEPE Paint Guidelines	15 01 10* packaging containing residues of or contaminated by hazardous substances
Special precautions	: This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

user

14.6 Special precautions for : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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SECTION 14: Transport information

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 EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
benzene-1,2,4-tricarboxylic acid 1,2 anhydride; trimellitic anhydride; TMA	Substance of equivalent concern for human health	Candidate	ED/61/2018, EU/2018/594	27.06.2018
Annex XVII - Restrictions : Not applicable on the manufacture, placing on the market and use of certain dangerous substances,).			

mixtures and articles Other EU regulations

voc

: The provisions of Directive 2004/42/EC on VOC apply to this product. Refer to the product label and/or technical data sheet for further information.

VOC for Ready-for-Use : Not applicable.

Mixture Europe inventory

: Not determined.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

Industrial use

: The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

International regulations

<u>Chemical Weapon Convention List Schedules I, II & III Chemicals</u> Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

SECTION 15: Regulatory information

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UNECE Aarhus Protocol on POPs and Heavy Metals
Not listed.
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15.2	Chemica	safety

: No Chemical Safety Assessment has been carried out.

assessment

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and	: ATE = Acute Toxicity Estimate
acronyms	CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
	DMEL = Derived Minimal Effect Level
	DNEL = Derived No Effect Level
	EUH statement = CLP-specific Hazard statement
	PBT = Persistent, Bioaccumulative and Toxic
	PNEC = Predicted No Effect Concentration
	RRN = REACH Registration Number
	vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements

H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Full text of classifications [CLP/GI	<u>1S]</u>
Aquatic Acute 1, H400	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1

STOT SE 3, H335	(Respiratory tract irritation) - Category 3
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE
Skin Sens. 1, H317	SKIN SENSITISATION - Category 1
Resp. Sens. 1, H334	RESPIRATORY SENSITISATION - Category 1
Eye Dam. 1, H318	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Aquatic Chronic 3, H412	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Aquatic Chronic 1, H410	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Acute 1, H400	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1

Date of printing	: 26.08.2020
Date of issue/ Date of revision	: 26.08.2020
Date of previous issue	: No previous validation
Version	: 1
Notico to reador	

Notice to reader

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the given data without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

SECTION 16: Other information

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.