

Safety Data Sheet

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier:

STEEL DEE

- **1.2 Relevant identified uses of the substance or mixture and uses advised against:** Ready to use product, designed for degreasing surfaces and devices made from stainless steel.
- 1.3 Details of the supplier of the safety data sheet:

TENZI Sp. z o.o. Skarbimierzyce 20 72-002 Dołuje tel. +48 91 3119777 fax. +48 91 3119779 E-mail address for a competent person responsible for SDS: technolog@tenzi.pl

1.4 Emergency telephone number: +48 91 31 19 777 (mon. - fri. 8am - 4pm) or 112.

SECTION 2. HAZARDS IDENTIFICATION	
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2.1	. Classification of th	ne substance or mixture:
	<i>Classification acco</i> Skin Irrit. 2 H315 Eye Dam. 1 H318	
2.2	. Label elements: (According to 1272	2/2008/EC*)
		Hazard symbols:
	Signal words : DANGER	
	Hazard statements H315 H318	- Causes skin irritation. – Causes serious eye damage.
	Precautionary stat P280 P305+P351+P338	 Wear protective gloves/protective clothing/eye protection/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P310	 Immediately call a POISON CENTER/doctor



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2.3. Other hazards:

Substance does not meet criteria for PBT or vPvB in accordance with Annex XIII of REACH Regulation.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Substances:

Not applicable.

3.2. Mixtures:

Composition (according to: 648/2004/EC):

- < 2% sodium hydroxide
- < 5% cationic surfactants
- < 5% non-ionic surfactants
- < 5% phosphates
- < 5% phosphonates
- aroma composition
- auxiliary substances not classified as dangerous

Identification		Identification Hazardous ingredient/classification		
CAS: WF:	7320-34-5 230-785-7	Phosphates		
Index: Not applicable Registration: 01-2119489369-18-XXXX		Eye Irrit. 2 H319	< 4%	
CAS: WF:	68439-54-3 Polymer	Non-ionic surfactants		
Index: Registration:	Not applicable Introductory	Eye Dam. 1 H318, Acute Tox. 4 H302	< 3.5%	
CAS: WF:	863679-20-3 No data available	Cationic surfactants		
Index: Registration:	Not applicable Introductory	Acute Tox.4 H302, Skin Irrit. 2 H315, Eye Dam. 1 H318	< 3%	
CAS: WE:	68155-07-7 931-329-6	Non-ionic surfactants		
Index: Registration:	Not applicable 01-2119490100-53-0013	Skin Irrit. 2 H315, Eye Dam. 1 H318, Aquatic Chronic 2 H411	< 2%	
CAS: WE:	2809-21-4 220-552-8	Phosphonates		
Index: Not applicable Registration: 01-2119510391-53-XXXX		Acute Tox. 4 H302, Met. Corr. 1 H290, Eye Dam. 1 H318, Skin Irrit. 2 H315	< 1.2%	
CAS: WE:	1310-73-2 215-185-5	Sodium hydroxide	4.0%	
Index: Registration:	011-002-00-6 01-2119457892-27-XXXX	Skin Corr. 1A H314, Met. Corr. 1 H290	- < 1.2%	

The full texts of H symbols and phrases are in section 16.



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SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures:

Inhalation:

In case of inhalation poisoning symptoms (cough, dyspnea, dizziness) move the injured to fresh air. Make sure to keep him warm and calm. Get medical attention. Physical effort may cause pulmonary edema.

Skin contact:

If product comes in contact with the skin, immediately remove all contaminated clothing and flush exposed area with large amounts of water. In case of skin changes or burns, get medical attention.

Eye contact:

Flush eyes with running water (at least 15 minutes) while keeping eyelids open. Get medical attention.

Ingestion:

Wash your mouth with running water. Drink about 1-2 liters of fresh water. Do not induce vomiting. Get medical attention and show them this SDS or product's label. Don't give anything to unconscious person.

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

Inhalation:

In case of long-term exposure without proper ventilation, it may cause irritation of the upper respiratory tract.

Skin:

Irritant to skin.

Eyes:

Corrosive, causes severe eye burns, chemical conjunctivitis and corneal damage (redness, intense pain), possible irreversible impairment of vision or blindness.

Ingestion:

May cause irritation of the mucous membranes.

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

Get medical attention.

Fresh water and eye-wash preparations must be available on the worksite.

SECTION 5. FIREFIGHTING MEASURES

5.1. Extinguishing media:

Suitable extinguishing media:

Water, foam, extinguishing powder, carbon dioxide.

Use extinguishing measures that are appropriate to local circumstances and surrounding environment.

Unsuitable extinguishing media:

Don't use water jet on liquid's surface.

5.2. Special hazards arising from the substance or mixture: Product is non-flammable.



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5.3. Advice for firefighters:

Firefighters should wear self-contained breathing apparatus and full protective clothing. In case of fire, warn the people nearby and evacuate unprotected and untrained personnel from hazard area. Notify relevant emergency services. If possible, remove the containers away from the influence of fire and high temperature. Water may be used to keep fire-exposed containers cool until fire is out. The after burning residues should be removed

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Protective chemical-proof gloves (0.11 mm thick), safety glasses.

For emergency responders:

Protective clothes, protective chemical-proof gloves (0.11 mm thick), self-contained breathing apparatus, safety glasses. Avoid skin and eye contact. Provide proper ventilation.

6.2. Environmental precautions:

Avoid discharge into drains, watercourses or onto the ground at all costs.

6.3. Methods and material for containment and cleaning up:

In case of unexpected release of the substance into the environment, inform appropriate services about the emergency and remove any source of ignition. Prevent spills from entering sewers, surface water or groundwater. If it is possible, confine and contain the spill by closing the flow of the liquid, plug the damaged container and put it into leakproof wrapping. For a larger spill, make a dike around the outside edges of the spill and use absorbent materials (sand, sawdust, minced limestone). Store clean-up materials for disposal as hazardous waste. Decontaminate polluted area with water.

6.4. Reference to other sections:

See section 8 and 13.

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling:

Be careful when working with this product.

Use personal protection recommended in section 8

Mix only with water. DO NOT mix with any other chemical substances.

People with skin allergy or respiratory system problems should not have contact with this product.

Avoid risk - read this instruction sheet carefully before using the product.

After usage, keep container tightly closed and keep it away from unauthorized people.

Use only adequate ventilation to avoid inhalation poisoning.

7.2. Conditions for safe storage, including any incompatibilities:

Store in a tightly closed, original plastic container. Store this product in a dry environment that will be maintained at 5°C - 35°C temperature with a good ventilation system and an easy washable, nonabsorbable alkaline resistant floor. DO NOT expose the product to sunlight and keep away from heat, sparks, flame and source of ignition.

7.3. Specific end use(s):

No data available.



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SECTION 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION	
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8.1. Control parameters:

Please check any national occupational exposure limit values in your country.

NDS/NDSCh/NDSP values for individual chemical substances (according to SDS or Chemical Safety Report):

Phosphates (data for highly concentrated substance): NDS, NDSCh, NDSP: not identified

Non-ionic surfactants (data for highly concentrated substance): NDS, NDSCh, NDSP: not identified

Cationic surfactants (data for highly concentrated substance): NDS, NDSCh, NDSP: not identified

Non-ionic surfactants (data for highly concentrated substance): NDS, NDSCh, NDSP: not identified

Phosphonates (data for highly concentrated substance): NDS, NDSCh, NDSP: not identified

Sodium hydroxide (data for highly concentrated substance):

NDS:	0.5 mg/m³
NDSCh:	1 mg/m ³
NDSP:	not identified.

DNEL /PNEC values for individual chemical substances (according to SDS or Chemical Safety Report):

Phosphates (data for highly concentrated substance): DNEL, PNEC: not identified.

Non-ionic surfactants (data for highly concentrated substance): DNEL, PNEC: not identified.

Cationic surfactants (data for highly concentrated substance): DNEL, PNEC: not identified.

Non-ionic surfactants (data for highly concentrated substance):

DNEL:

Group: workers, Exposure time: long-term, Exposure route: dermal, Type of effect: systemic effect, Group: workers, Exposure time: long-term, Exposure route: dermal, Type of effect: local effect, Group: workers, Exposure time: long-term, Exposure route: inhalation, Type of effect: systemic effect, Group: consumers, Exposure time: long-term, Exposure route: dermal, Type of effect: systemic effect, Group: consumers, Exposure time: long-term, Exposure route: dermal, Type of effect: local effect, Group: consumers, Exposure time: long-term, Exposure route: dermal, Type of effect: local effect, Group: consumers, Exposure time: long-term, Exposure route: inhalation, Type of effect: systemic effect, Group: consumers, Exposure time: long-term, Exposure route: inhalation, Type of effect: systemic effect, Group: consumers, Exposure time: long-term, Exposure route: inhalation, Type of effect: systemic effect, Group: consumers, Exposure time: long-term, Exposure route: inhalation, Type of effect: systemic effect, Group: consumers, Exposure time: long-term, Exposure route: infection, Type of effect: systemic effect, Group: consumers, Exposure time: long-term, Exposure route: infection, Type of effect: systemic effect, Group: consumers, Exposure time: long-term, Exposure route: infection, Type of effect: systemic effect,

PNEC:

Aqua (fresh water):	0.007 mg/l
Aqua (marine water):	0.0007 mg/l
Sewage treatment plant:	830 mg/l
Sediment:	0.0424 mg/kg
Soil:	0.0189 mg/kg

Creation date: 18.03.2010 Revision date: 23.12.2016 Version: 1.0 Value: 4.16 mg/kg Value: 0.09 mg/cm² Value: 73.4 mg/m³ Value: 2.5 mg/kg Value: 0.056 mg/cm² Value: 21.7 mg/m³ Value: 6.25 mg/kg



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Phosphonates (data for highly concentrated substance): DNEL, PNEC: not identified.

Sodium hydroxide (data for highly concentrated substance):

DNEL, PNEC: not identified.

NOTE: When the concentration of substance is known, personal protective equipment should be chosen based on substance concentration in a workplace, exposure time and operations performed by the employee. In emergency situations, if substance concentration in the workplace is unknown, personal protection of highest class level should be used.

8.2. Exposure controls:

RESPIRATORY PROTECTION:

In case of insufficient ventilation, wear suitable respiratory equipment - masks with gas and vapour protection.

HAND PROTECTION:

Protective gloves resistant to alkaline chemical substances. 0.11 mm thick.

EYE/FACE PROTECTION:

Safety glasses. In case of contact with skin, use face shield

SKIN PROTECTION:

Protective clothes.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

Appearance:	Light-yellow coloured liquid
Odour:	Characteristic for materials used in production
Odour threshold:	No data available
pH:	13 ± 1
Melting point:	No data available
Freezing point:	No data available
Initial boiling point:	No data available
Boiling range:	No data available
Flash point:	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper flammability limit:	No data available
Lower flammability limit:	No data available
Upper explosive limit:	No data available
Lower explosive limit:	No data available
Vapour pressure:	No data available
Vapour density:	No data available
Relative density:	1.060 ± 0.020 g/cm ³
Solubility:	
A) Water:	soluble
B) Organic solvent:	No data available
Partition coefficient N-Octan:	
Partition coefficient Water:	No data available



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Auto-ignition temperature: No data available Decomposition temperature: No data available Viscosity: No data available No data available Explosive properties: Oxidising properties: No data available

9.2. Other information: Refractive index: 20.3% Brix^{*} ± 5%

> - Degrees Brix is the content of an aqueous solution. One degree Brix is 1 gram of sucrose in 100 grams of solution and represents the strength of the solution as percentage by weight (%w/w).

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity:

No data available.

- 10.2 Chemical stability: Stable under recommended storage conditions (see section 7).
- 10.3 Possibility of hazardous reactions: May violently react with acids (releases warmth).
- 10.4 Conditions to avoid: Avoid heavily warmed rooms without ventilation and long-term exposure to sunlight.

10.5 Incompatible materials: Acids, strong oxidizers.

- 10.6 Hazardous decomposition products:

No data available.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

ACUTE TOXICITY:

Inhalation:

In case of long-term exposure without proper ventilation, it may cause irritation of the upper respiratory tract.

Skin: Irritant to skin.

Eyes:

Corrosive, causes severe eye burns, chemical conjunctivitis and corneal damage (redness, intense pain), possible irreversible impairment of vision or blindness.

Ingestion:

May cause irritation of the mucous membranes.

ATEmix = 8904 (acute toxicity, orally)



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DETAILS OF PARTICULAR COMPONENTS (according to substances SDS):

Phosphates (data for highly concentrated substance):

LD50: >2000 mg/kg (mouse, orally)

Non-ionic surfactants (data for highly concentrated substance): Data for ethoxylate alcohols C8-C18)>5-20EO):

LD50:	>300-2000 mg/kg	(rat, orally)
LD50:	>2000 mg/kg	(rat, dermal)

Harmful after swallowing. Contact with eyes may cause irreversible damage.

Cationic surfactants (data for highly concentrated substance):

LD:	833 mg/kg	(orally)
LD50:	>300-2000 mg/kg	(rat, orally)

May cause serious eye damage.

May irritate skin.

Harmful when swallowed. May cause irritation of mouth, throat and mucous membrane. Inhalation may cause irritation of the throat, nose and mucous membrane.

Non-ionic surfactants (data for highly concentrated substance):

LD50:	> 2000 mg/kg	(rabbit, dermal)
LD50:	> 5000 mg/kg	(rat, orally)
NOAEL:	> 750 mg/kg	(rat, orally)
NOAEL:	1000 mg/kg	(rat)

Irritant to skin. Strongly irritant to eyes.

Phosphonates (data for highly concentrated substance):

LD50:1800 mg/kg(mouse, orally)LD50:3000 mg/kg(rat, inhalation)

Serious eye damage detected. Skin irritation detected. No allergic effects. No mutagenic effects. No carcinogenic effects. No reproductive problems.

Sodium hydroxide (data for highly concentrated substance):

LD50: 500 mg/kg (rat, orally)

Very harmful after swallowing. Causes burns in mouth, throat and stomach. Risk of gastrointestinal perforation. Corrosive effects on skin. Burns, deep wounds and skin necrosis. Serious and irreversible eye damage. Risk of blindness. No allergic effects.



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No mutagenic effects. No carcinogenic effects. Corrosive effects on respiratory system. Causes irritation of the mucous membrane.

SECTION 12. ECOLOGICAL INFORMATION

Phosphate	es (data for highly conce	entrated substance):	
LCO:	750 mg/l/48h		
Non-ionic	surfactants (data for hig	hly concentrated substance):	
LC50:	> 1-10 mg/l/96h	(Cyprinus carpio)	(OECD 203)
EC50:	> 1-10 mg/l/48h	(Daphnia magna)	(OECD 202)
EC50:	> 1-10 mg/l/72h	(Scenedesmus subsipicatus)	(OECD 201)
Cationic s	surfactants (data for high	ly concentrated substance):	
LC50:	> 10-100 mg/l/96h	(fish)	
EC50:	> 1-10 mg/l/48h	(daphnia)	
EC50:	> 1-10 mg/l/72h	(algae)	
Non-ionic	surfactants (data for hig	hly concentrated substance):	
EC50:	6000 mg/l/16h	(bacteria)	
EC50:	3.2 mg/l/48h	(daphnia)	
ErC50:	18.6 mg/l/72h	(algae)	
LC50:	2.4 mg/l/96h	(fish)	
NOEC:	2 mg/l/72h	(algae)	
	0.07 mg/l/21 days	(daphnia)	
NOECr:	0.32 mg/l/28 days	(fish)	
Phosphor	nates (data for highly cor	centrated substance):	
EC50:	292 mg/l/48h	(daphnia)	
LC50:	350 mg/l/96h	(fish)	
		concentrated substance): and bacteria. May adversely affect p	plant growth.
LC0:	157 mg/l/48h	(fish)	
LC50:	189 mg/l/48h	(fish)	
LC100:	213 mg/l/48h	(fish)	
Persisten			



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Data for the mixture ingredients:

Substance	Method	Length	Degraded percentage
Phosphates	No data available	No data available	No data available
Non-ionic surfactants	OECD 301 A	28 days	> 70%
Non-ionic surfactants	OECD 301 B	28 days	> 60%
Cationic surfactants	OECD 301 D	28 days	> 60%
Non-ionic surfactants	No data available	28 days	92.5%
Phosphonates	No data available	No data available	No data available
Sodium hydroxide	Easily degradable	Easily degradable	Easily degradable

12.3. Bioaccumulative potential:

Phosphates (data for highly concentrated substance): No data available.

Non-ionic surfactants (data for highly concentrated substance): No data available.

Cationic surfactants (data for highly concentrated substance): Biodegradable.

Non-ionic surfactants (data for highly concentrated substance): LogPow: 3.75 BFC: 65.36

Phosphonates (data for highly concentrated substance): No data available.

Sodium hydroxide (data for highly concentrated substance): No data available.

12.4. Mobility in soil

The product is water soluble and may sink into groundwater systems.

12.5. Results of PBT and vPvB assessment:

This substance/mixture does not meet the PBT and vPvB criteria of REACH, annex XIII..

12.6. Other adverse effects:

No data available.



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SECTION 13. DISPOSAL CONSIDERATIONS

RESIDUES AND WASTES:

DO NOT mix with other liquid wastes.

DO NOT empty into sewage system. Product should be totally used up according to its description.

If it's impossible to do so, dispose of this material and its container at hazardous or special waste collection point.

13.1. Waste treatment methods:

Contaminated containers should be completely emptied. Several times rinse the container promptly after emptying. Empty container can be stored in containers for collection of plastic packaging, or can be delivered to specialized company for recycling.

Disposal should be in accordance with the national/international regulations.

SECTION 14. TRANSPORT INFORMATION

TRADE NAME: STEEL DEE

- 14.1. UN Number:
- 14.2. UN proper shipping name:
- 14.3. Transport hazard class(es):
- 14.4. Packing group:
- 14.5. Environmental hazards:
- 14.6. Special precautions for user:

Not applicable. Not applicable. Not applicable.

Not applicable.

- No.
- For more details see Sections 6 and 8.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: No data available.

WARNING LABELS not applicable

SECTION 15. REGULATORY INFORMATION

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

1) COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

2) REGULATION (EC) No 648/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 March 2004 on detergents.

3) COMMISSION REGULATION (EC) No 907/2006 of 20 June 2006 amending Regulation (EC) No 648/2004 of the European

Parliament and of the Council on detergents, in order to adapt Annexes III and VII thereto.
4) REGULATION (EC) No 1336/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 amending Regulation (EC) No 648/2004 in order to adapt it to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

5) COMMISSION REGULATION (EC) No 551/2009 of 25 June 2009 amending Regulation (EC) No 648/2004 of the European Parliament and of the Council on detergents, in order to adapt Annexes V and VI thereto (surfactant derogation).

6) REGULATION (EU) No 259/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 14 March 2012 amending Regulation (EC) No 648/2004 as regards the use of phosphates and other phosphorus compounds in consumer laundry detergents and consumer automatic dishwasher detergents.

7) REGULATION (EC) No 273/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 February 2004 on drug precursors).

8) 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



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1999/45/EC, and amending Regulation (EC) No 1907/2006.

15.2. Chemical safety assessment

For mixture:

A Chemical Safety Assessment has not been carried out.

Phosphates: Non-ionic surfactants:	Introductory registration with transitional period. No data available.
Cationic surfactants:	A Chemical Safety Assessment has not been carried out.
Non-ionic surfactants:	A Chemical Safety Assessment has been carried out.
Phosphonates:	A Chemical Safety Assessment has not been carried out.
Sodium hydroxide:	A Chemical Safety Assessment has been carried out.

SECTION 16. OTHER INFORMATION

Information above is based on current knowledge of product in its current form. All data are presented in order to take into account safety requirements priority and not to guarantee special properties of the product. If product usage conditions are not under manufacturer control, responsibility for safe use lies with the person that uses them. The employer is obliged to inform all employees, who have contact with the product, about the risk and safety measures specified in the data sheet. Safety data presented above were prepared based on safety characteristics of substances used by the producer to compose the product and based on regulations for handling dangerous substances and their preparation. Classification of chemical mixture was done with calculation methods, based on the content of hazardous ingredients.

The full list of symbols and H phrases from Section 2 and 3:

Aquatic Chronic 2 Met.Corr 1 Eye Dam. 1 Eye Irrit. 2 Skin Corr. 1A Skin Irrit. 2 Acute Tox. 4	 Hazardous to the aquatic environment - Chronic Hazard, category 2. Substance/Mixture is corrosive to metals, category 1 Serious eye damage, category 1. Causes serious eye irritation, category 2. Corrosive to skin, category 1A Causes skin irritation, category 2. Acute toxicity, category 4.
H290 H302 H314 H315 H318 H319 H411	 May be corrosive to metals. Harmful if swallowed. Causes severe skin burns and eye damage. Causes skin irritation. Causes serious eye damage. Causes serious eye irritation. Toxic to aquatic life with long lasting effects.

More information on the product can be found on the specific technical data sheet which is available on www.tenzi.pl

Training:

Course participants should be trained about how to handle this hazardous substance, about safety and work hygiene. Drivers should also be trained and obtain proper certification in accordance with the ADR requirements.

Expiry date:

36 months from the production date (if product is stored according to the producent recommendations)



Safety Data Sheet

STEEL DEE was submitted to Inspector for Chemical Substances.

Changes compared to the previous version:

- general update.

Updated cards versions are now available on www.tenzi.pl

This Safety Data Sheet contains 13 pages. Changes in the content by unauthorized people is prohibited.