SAFETY DATA SHEET



Date of issue/Date of revision23 November 2022Version 9.04

Section 1. Identification		
Product code	: 00321552	
Product name	: SIGMADUR ONE WHITE	
Product type	: Liquid.	
Relevant identified uses o	f the substance or mixture and uses advised against	
Product use	Coating. Professional applications, Used by spraying.	
Supplier's details	: PPG Industries (Singapore) Pte. Ltd., No. 1 Tuas Basin Close, Singapore 638803. Tel +65 68653737	
Emergency telephone number (with hours of operation)	: CHEMTREC +(65)-31581349 (CCN 17704)	

Section 2. Hazards identification

Classification of the substance or mixture	: FLAMMABLE LIQUIDS - Category 3 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A CARCINOGENICITY - Category 1B SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2

GHS label elements, includin	g precautionary statements
Hazard pictograms	
Signal word	: Danger
Hazard statements	 Flammable liquid and vapour. Causes serious eye irritation. May cause cancer. Causes damage to organs through prolonged or repeated exposure. (central nervous system (CNS)) Toxic to aquatic life with long lasting effects.
Precautionary statements	

Section 2. Hazards identification

Prevention	:	Obtain special instructions before use. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Avoid release to the environment. Do not breathe vapour. Do not eat, drink or smoke when using this product.
Response	:	Collect spillage. IF exposed or concerned: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.
Storage	:	Store in a well-ventilated place. Keep cool.
Disposal	:	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Others because which do not		

result in classification

Other hazards which do not : Prolonged or repeated contact may dry skin and cause irritation.

%

10 - <20

10 - <20

1 - <3

1 - <3

1 - <3

0.1 - < 0.3

0.1 - < 0.3

0.1 - < 0.3

CAS number

64742-48-9

64742-82-1

22464-99-9

27253-31-2

111-84-2

107-98-2

136-51-6

96-29-7

Section 3. Composition/information on ingredients

2-butanone oxime

neodecanoic acid, cobalt salt

: Mixture

CAS number/other identifiers

CAS number	: Not applicable.
EC number	: Mixture.
Ingredient name	
Naphtha (petroleum), hyd	drotreated heavy
Naphtha (petroleum), hyd	drodesulfurized heavy
nonane	
1-methoxy-2-propanol	
2-ethylhexanoic acid, ziro	conium salt
calcium bis(2-ethylhexan	oate)

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 and hence require reporting in this section.

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

SUB codes represent substances without registered CAS Numbers.

Section 4. First aid measures

Description of necessary first aid measures Eye contact : Remove contact lenses, irrigate copiously with clean, fresh water, holding the evelids 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.

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Section 4. First aid measures

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.

Most important symptoms/effects, acute and delayed

Potential acute health effect	<u>:ts</u>	
Eye contact	:	Causes serious eye irritation.
Inhalation	:	No known significant effects or critical hazards.
Skin contact	:	Defatting to the skin. May cause skin dryness and irritation.
Ingestion	:	No known significant effects or critical hazards.
Over-exposure signs/symp	ton	<u>15</u>
Eye contact	:	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	:	No specific data.
Skin contact	:	Adverse symptoms may include the following: irritation dryness cracking
Ingestion	:	No specific data.
Indication of immediate med	lica	l attention and special treatment needed, if necessary
Notes to physician	:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	1	No specific treatment.
Protection of first-aiders	:	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media	
Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water jet.

thoroughly with water before removing it, or wear gloves.

Product name SIGMADUR ONE WHITE

Section 5. Firefighting measures

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Specific hazards arising from the chemical	: Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon oxides metal oxide/oxides
Special protective actions for fire-fighters	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures		
For non-emergency personnel	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.	
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". 	
Environmental precautions	: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.	
Methods and material for containment and cleaning up		
Small spill	: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.	
Large spill	: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and	

arge spin
The stop leak in without risk. Move containers from spin area. Ose spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spill product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 6. Accidental release measures

Section 7. Handling and storage

Precautions for safe handling	L	
Protective measures	:	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
		Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside.
Advice on general occupational hygiene	:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	:	Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

<u>Control parameters</u> <u>Occupational exposure limits</u>

Section 8. Exposure controls/personal protection

Ingredient name		Exposure limits	
nonane		Workplace Safety and Health Act (Singapore, 2/2006). PEL (long term): 1050 mg/m ³ 8 hours. PEL (long term): 200 ppm 8 hours.	
1-methoxy-2-propanol		Workplace Safety and Health Act (Singapore, 2/2006). [Propylene glycol monomethyl ether] PEL (short term): 553 mg/m ³ 15 minutes. PEL (short term): 150 ppm 15 minutes. PEL (long term): 369 mg/m ³ 8 hours.	
2-ethylhexanoic acid, zirconium	salt	PEL (long term): 100 ppm 8 hours. Workplace Safety and Health Act (Singapore, 2/2006). [Zirconium and compounds] PEL (short term): 10 mg/m ³ , (Zr) 15	
neodecanoic acid, cobalt salt		minutes. PEL (long term): 5 mg/m ³ , (Zr) 8 hours. Workplace Safety and Health Act (Singapore, 2/2006). [Cobalt, elemental and inorganic compounds] PEL (long term): 0.02 mg/m ³ , (Co) 8 hours.	
Recommended monitoring : procedures	Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.		
Appropriate engineering : controls	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.		
Environmental exposure : controls	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.		
Individual protection measures	ì		
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 : Skin protection	Chemical splash goggles.		

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Section 8. Exposure controls/personal protection

Hand protection	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Gloves	: For prolonged or repeated handling, use the following type of gloves:
	Recommended: nitrile rubber, butyl rubber
Body protection	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
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	: Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

Section 9. Physical and chemical properties

<u>Appearance</u>	
Physical state	: Liquid.
Colour	: Various
Odour	: Characteristic.
рН	insoluble in water.
Boiling point	: >37.78°C (>100°F)
Flash point	: Closed cup: 33°C (91.4°F)
Evaporation rate	 Highest known value: 0.814 (1-methoxy-2-propanol) Weighted average: 0.61compared with butyl acetate
Flammability (solid, gas)	: liquid
Vapour pressure	: Highest known value: 1.1 kPa (8.5 mm Hg) (at 20°C) (1-methoxy-2-propanol). Weighted average: 0.36 kPa (2.7 mm Hg) (at 20°C)
Vapour density	: Highest known value: 4.4 (Air = 1) (nonane). Weighted average: 3.78 (Air = 1)
Relative density	: 1.14
	Media Result
Solubility(ies)	Not soluble
Auto-ignition temperature	: Lowest known value: 205°C (401°F) (nonane).
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Section 9. Physical and chemical properties

Viscosity

: Kinematic (40°C (104°F)): >21 mm²/s (>21 cSt)

Section 10. Stability and reactivity

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Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: When exposed to high temperatures may produce hazardous decomposition products.
Incompatible materials	: Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
Hazardous decomposition products	: Depending on conditions, decomposition products may include the following materials: carbon oxides metal oxide/oxides

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Naphtha (petroleum), hydrotreated heavy	LD50 Dermal	Rabbit	>5000 mg/kg	-
,	LD50 Oral	Rat	>6 g/kg	-
Naphtha (petroleum), hydrodesulfurized heavy	LD50 Oral	Rat	>5000 mg/kg	-
nonane	LC50 Inhalation Gas.	Rat	3200 ppm	4 hours
	LC50 Inhalation Vapour	Rat	16790 mg/m ³	4 hours
1-methoxy-2-propanol	LC50 Inhalation Vapour	Rat	>7000 ppm	6 hours
2	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Oral	Rat	5.2 g/kg	-
2-ethylhexanoic acid, zirconium salt	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
2-butanone oxime	LD50 Dermal	Rabbit	1100 mg/kg	-
	LD50 Oral	Rat	100 mg/kg	-
neodecanoic acid, cobalt sall	LD50 Oral	Rat - Female	1098 mg/kg	-

Conclusion/Summary : There are no data available on the mixture itself. Irritation/Corrosion Conclusion/Summary

Skin	: There are no data available on the mixture itself.
Eyes	: There are no data available on the mixture itself.
Respiratory	: There are no data available on the mixture itself.

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Section 11. Toxicological information

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
neodecanoic acid, cobalt salt	skin	Mouse	Sensitising
		available on the mixture itself.	
Mutagenicity		available on the mixture itself.	
Carcinogenicity		available on the mixture itself.	
Reproductive toxicity			
eratogenicity			
Conclusion/Summary : Specific target organ toxicity			

Name	Category	Route of exposure	Target organs
Naphtha (petroleum), hydrotreated heavy	Category 3	-	Respiratory tract irritation
Naphtha (petroleum), hydrodesulfurized heavy	Category 3	-	Narcotic effects
nonane	Category 3	-	Narcotic effects
1-methoxy-2-propanol	Category 3	-	Narcotic effects
2-butanone oxime	Category 1	-	upper respiratory tract
	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Naphtha (petroleum), hydrodesulfurized heavy	Category 1	-	central nervous system (CNS)
2-butanone oxime neodecanoic acid, cobalt salt	Category 2 Category 1	- oral	blood system gastrointestinal tract

Aspiration hazard

Name	Result
Naphtha (petroleum), hydrodesulfurized heavy	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on likely routes : Not available. of exposure

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Section 11. Toxicological information

Potential acute health effects

Eye contact	: Causes serious eye irritation.
Inhalation	: No known significant effects or critical hazards.
Skin contact	: Defatting to the skin. May cause skin dryness and irritation.
Ingestion	: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: No specific data.
Skin contact	: Adverse symptoms may include the following: irritation dryness cracking
Ingestion	: No specific data.

Delayeu anu inimediale ene	cts as well as chronic effects from short and long-term exposure			
Short term exposure				
Potential immediate effects	: Not available.			
Potential delayed effects	: Not available.			
Long term exposure				
Potential immediate effects	: Not available.			
Potential delayed effects	: Not available.			
Potential chronic health eff	<u>ects</u>			
General	: Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.			
Carcinogenicity	: May cause cancer. Risk of cancer depends on duration and level of exposure.			
Mutagenicity	: No known significant effects or critical hazards.			
Reproductive toxicity	: No known significant effects or critical hazards.			

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Inhalation (gases)	50694.51 mg/kg 119988.06 ppm 629.56 mg/l

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Section 11. Toxicological information

Other information

Prolonged or repeated contact may dry skin and cause irritation. Sanding and grinding dusts may be harmful if inhaled. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapour/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
✓-methoxy-2-propanol 2-ethylhexanoic acid, zirconium salt	Acute LC50 23300 mg/l Acute LC50 >4500 mg/l Fresh water Acute LC50 >100 mg/l	Daphnia Fish Fish	48 hours 96 hours 96 hours
Conclusion/Summary : There are no data available on the mixture itself.			

Persistence/degradability

Not available.

Conclusion/Summary : There are no data available on the mixture itself.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
nonane 1-methoxy-2-propanol	5.65 <1	-	high Iow
2-butanone oxime	0.63	5.01	low

Mobility in soil

Soil/water partition	: Not available.
coefficient (Koc)	

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

Section 13. Disposal considerations

Disposal methods	: 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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. Vapour from product residues may create
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Section 13. Disposal considerations

a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	UN	IMDG	ΙΑΤΑ
UN number	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3
Packing group	III	III	III
Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

Additional information

UN	: None identified.
IMDG	: None identified.
ΙΑΤΑ	: None identified.

Special precautions for user : 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.

Transport in bulk according : Not applicable. to IMO instruments

Section 15. Regulatory information

Singapore - hazardous chemicals under government control

None.

International regulations Montreal Protocol Not listed.

Stockholm Convention on Persistent Organic Pollutants Not listed.

Section 16. Other information

<u>History</u>	
Date of issue/Date of revision	: 23 November 2022
Date of previous issue	: 3/1/2022
Version	: 9.04
Prepared by	: EHS
Key to abbreviations	 ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Internediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

✓ Indicates information that has changed from previously issued version.

Notice to reader

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.