according to Regulation (EC) No. 1907/2006



KLERAT 20G WAX BLOCKS

Version 5.0

Revision Date: 05.12.2017

SDS Number: S1481202451

This version replaces all previous versions.

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

1.1 Product identifier

Trade name

: KLERAT 20G WAX BLOCKS

Design code : A12720B

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

Use of the : Rodenticide

Substance/Mixture

1.3 Details of the supplier of the safety data sheet

Company : Syngenta Crop Protection AG

Postfach CH-4002 Basel Switzerland

Telephone : +41 61 323 11 11

Telefax : +41 61 323 12 12

E-mail address of person

responsible for the SDS

: sds.ch@syngenta.com

1.4 Emergency telephone number

Emergency telephone

number

: +44 1484 538444

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Reproductive toxicity, Category 1A

H360D: May damage the unborn child.

Specific target organ toxicity - repeated

exposure, Category 2

H373: May cause damage to organs through

prolonged or repeated exposure.

according to Regulation (EC) No. 1907/2006



KLERAT 20G WAX BLOCKS

Version Revision Date: SDS Number: 5.0 05.12.2017 S1481202451

This version replaces all previous versions.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms

Signal word : Danger

Hazard statements : H360D May damage the unborn child.

H373 May cause damage to organs through prolonged or

repeated exposure.

Supplemental Hazard

Statements

EUH401 To avoid risks to human health and the

environment, comply with the instructions for use.

Precautionary statements : Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been

read and understood.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/ protective clothing/ eye

protection/ face protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/

attention. Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

Hazardous components which must be listed on the label:

4-hydroxy-3-(3-(4'-bromo-4-biphenylyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

May form combustible dust concentrations in air.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Chemical name	CAS-No.	Classification	Concentration
	EC-No.		(% w/w)
	Index-No.		,
	Registration number		
4-hydroxy-3-(3-(4'-bromo-4-	56073-10-0	Acute Tox. 1; H300	>= 0.003 - <
biphenylyl)-1,2,3,4-tetrahydro-1-	259-980-5	Acute Tox. 1; H330	0.02
naphthyl)coumarin	607-172-00-1	Acute Tox. 1; H310	
		Skin Sens. 1B; H317	

according to Regulation (EC) No. 1907/2006



KLERAT 20G WAX BLOCKS

Version Revision Date: SDS Number: 5.0 05.12.2017 S1481202451

This version replaces all previous versions.

	Repr. 1A; H360D STOT RE 1; H372 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	
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For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Have the product container, label or Safety Data Sheet with

you when calling the emergency number, a poison control

center or physician, or going for treatment.

If inhaled : Move the victim to fresh air.

If breathing is irregular or stopped, administer artificial

respiration.

Keep patient warm and at rest.

Call a physician or poison control centre immediately.

In case of skin contact : Take off all contaminated clothing immediately.

Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids,

for at least 15 minutes. Remove contact lenses.

Immediate medical attention is required.

If swallowed : Take victim immediately to hospital.

Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Symptoms of poisoning are typical of anticoagulants. In

severe cases there may be bruising, haematomas of the

joints, blood in the faeces and urine

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : This product contains anticoagulants with an effect similar to

warfarin in that they act by interfering with the synthesis of

prothrombin.

The specific measure of effect is the prothrombin time. Note

this may not become prolonged until 12-18 hours after

ingestion.

The specific antidote is vitamin K1 (Phytomenandione).

according to Regulation (EC) No. 1907/2006



KLERAT 20G WAX BLOCKS

Version 5.0

Revision Date: 05.12.2017

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Initially, antidote should be given by injection (10-20mg, or 0.25mg/kg for children), by slow intravenous infusion at a rate not exceeding 1mg/minute. In severe cases the use of fresh frozen plasma may be required.

Maintenance treatment is given orally (40mg/day in divided doses for adults; up to 20mg/day in divided doses for children).

The prothrombin time and the haemoglobin should be monitored. Patients should be kept under medical supervision until the prothrombin time has been normal for 3 consecutive days.

Oral treatment may need continuing for several months (20mg/day in divided doses for adults and up to 20mg/day in divided doses for children). (For animal cases the dose is 2-5mg/kg).

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media :

Extinguishing media - small fires

Use water spray, alcohol-resistant foam, dry chemical or

carbon dioxide.

Extinguishing media - large fires

Alcohol-resistant foam

or

Water spray

Unsuitable extinguishing

media

Do not use a solid water stream as it may scatter and spread

fire

5.2 Special hazards arising from the substance or mixture

Specific hazards during

firefighting

: As the product contains combustible organic components, fire

will produce dense black smoke containing hazardous

products of combustion (see section 10).

Exposure to decomposition products may be a hazard to

health.

5.3 Advice for firefighters

Special protective equipment :

for firefighters

Wear full protective clothing and self-contained breathing

apparatus.

Further information : Do not allow run-off from fire fighting to enter drains or water

courses.

Cool closed containers exposed to fire with water spray.

SECTION 6: Accidental release measures

according to Regulation (EC) No. 1907/2006



KLERAT 20G WAX BLOCKS

Version SDS Number: Revision Date: 5.0

05.12.2017 S1481202451 This version replaces all previous versions.

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions Refer to protective measures listed in sections 7 and 8.

Avoid dust formation.

6.2 Environmental precautions

Environmental precautions Do not flush into surface water or sanitary sewer system.

If the product contaminates rivers and lakes or drains inform

respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up Contain spillage, pick up with an electrically protected vacuum

> cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13). Do not create a powder cloud by using a brush or compressed

Clean contaminated surface thoroughly. Clean with detergents. Avoid solvents.

Retain and dispose of contaminated wash water.

6.4 Reference to other sections

For disposal considerations see section 13., Refer to protective measures listed in sections 7 and 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling No special protective measures against fire required.

> Avoid contact with skin and eyes. When using do not eat, drink or smoke. For personal protection see section 8.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out

of the reach of children. Keep away from food, drink and

animal feedingstuffs.

Further information on

storage stability

Physically and chemically stable for at least 2 years when

stored in the original unopened sales container at ambient

temperatures.

7.3 Specific end use(s)

Specific use(s)

For proper and safe use of this product, please refer to the

approval conditions laid down on the product label.

SECTION 8: Exposure controls/personal protection

according to Regulation (EC) No. 1907/2006



KLERAT 20G WAX BLOCKS

Version Revision Date: SDS Number: This version replaces all previous versions. 5.0 05.12.2017 S1481202451

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
paraffin waxes and hydrocarbon waxes	8002-74-2	TWA (alveolate fume)	2 mg/m3	CH SUVA
4-hydroxy-3-(3-(4'-bromo-4-biphenylyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin	56073-10-0	TWA	0.002 mg/m3	Syngenta

8.2 Exposure controls

Engineering measures

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

The extent of these protection measures depends on the actual risks in use.

Maintain air concentrations below occupational exposure standards. Where necessary, seek additional occupational hygiene advice.

Personal protective equipment

Eye protection : No special protective equipment required.

Hand protection

Material : Nitrile rubber
Break through time : > 480 min
Glove thickness : 0.5 mm

Remarks : Wear protective gloves. The choice of an appropriate glove

does not only depend on its material but also on other quality features and is different from one producer to the other. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical

breakthrough.

The selected protective gloves have to satisfy the

specifications of EU Directive 89/686/EEC and the standard

EN 374 derived from it.

Skin and body protection : Choose body protection in relation to its type, to the

concentration and amount of dangerous substances, and to

the specific work-place.

Remove and wash contaminated clothing before re-use.

according to Regulation (EC) No. 1907/2006



KLERAT 20G WAX BLOCKS

5.0

Revision Date: 05.12.2017

SDS Number: S1481202451

This version replaces all previous versions.

Wear as appropriate:

Dust impervious protective suit

Respiratory protection No personal respiratory protective equipment normally

required.

When workers are facing concentrations above the exposure

limit they must use appropriate certified respirators.

The use of technical measures should always have priority Protective measures

over the use of personal protective equipment. When selecting personal protective equipment, seek

appropriate professional advice.

SECTION 9: Physical and chemical properties 9.1 Information on basic physical and chemical properties

Appearance

solid

Colour dark blue

Odour No data available

Odour Threshold No data available

pН No data available

Melting point/range No data available

No data available Boiling point/boiling range

Evaporation rate No data available

Flammability (solid, gas) May form combustible dust concentrations in air.

Burning number 5 (100 °C)

2 (20 °C)

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower : No data available

Relative vapour density

flammability limit

Vapour pressure

No data available No data available

Density 1.2 g/cm3

Solubility(ies)

Solubility in other solvents not soluble

Solvent: Water

according to Regulation (EC) No. 1907/2006



KLERAT 20G WAX BLOCKS

Version 5.0

Revision Date: 05.12.2017

SDS Number: S1481202451

This version replaces all previous versions.

Partition coefficient: n-

octanol/water

No data available

Auto-ignition temperature : 252 °C

Decomposition temperature : No data available

Viscosity Viscosity, dynamic

: No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

9.2 Other information

Minimum ignition : 350 °C

temperature

Minimum ignition energy : 300 - 1,000 mJ (350 °C)

SECTION 10: Stability and reactivity

10.1 Reactivity

None reasonably foreseeable.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions

: No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid

: No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid

None known.

10.6 Hazardous decomposition products

Hazardous decomposition

products

: No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Information on likely routes of exposure

according to Regulation (EC) No. 1907/2006



KLERAT 20G WAX BLOCKS

Version 5.0

Revision Date: 05.12.2017

SDS Number: S1481202451

This version replaces all previous versions.

Ingestion Inhalation Skin contact Eye contact

Acute toxicity

Components:

4-hydroxy-3-(3-(4'-bromo-4-biphenylyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin:

Acute oral toxicity

: LD50 (Rat, female): 0.561 mg/kg

LD50 (Rat, male): 0.418 mg/kg

Acute inhalation toxicity : LC50 (Rat, female): 0.00305 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

LC50 (Rat, male): 0.00486 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat, male): 5.21 mg/kg

LD50 (Rat, female): 3.16 mg/kg

Skin corrosion/irritation

Components:

4-hydroxy-3-(3-(4'-bromo-4-biphenylyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin:

Species: Rabbit

Result: No skin irritation

Serious eye damage/eye irritation

Components:

4-hydroxy-3-(3-(4'-bromo-4-biphenylyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin:

Species: Rabbit

Result: No eye irritation

Respiratory or skin sensitisation

Components:

4-hydroxy-3-(3-(4'-bromo-4-biphenylyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin:

Test Type: Buehler Test Species: Guinea pig

Result: The product is a skin sensitiser, sub-category 1B.

Germ cell mutagenicity

Components:

4-hydroxy-3-(3-(4'-bromo-4-biphenylyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin:

according to Regulation (EC) No. 1907/2006



KLERAT 20G WAX BLOCKS

SDS Number: Revision Date: This version replaces all previous versions.

5.0 05.12.2017 S1481202451

Germ cell mutagenicity-

Assessment

Animal testing did not show any mutagenic effects.

Carcinogenicity

Components:

4-hydroxy-3-(3-(4'-bromo-4-biphenylyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin:

Carcinogenicity -: No evidence of carcinogenicity in animal studies.

Assessment

Reproductive toxicity

Components:

4-hydroxy-3-(3-(4'-bromo-4-biphenylyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin:

Reproductive toxicity -Some evidence of adverse effects on development, based on

Assessment animal experiments.

STOT - repeated exposure

Components:

4-hydroxy-3-(3-(4'-bromo-4-biphenylyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin:

Target Organs: Blood

Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Further information

Components:

4-hydroxy-3-(3-(4'-bromo-4-biphenylyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin:

Remarks: Excessive exposure slows blood clotting time and can cause bleeding, shock and death.

SECTION 12: Ecological information

12.1 Toxicity

Components:

4-hydroxy-3-(3-(4'-bromo-4-biphenylyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin:

Toxicity to fish

LC50 (Oncorhynchus mykiss (rainbow trout)): 0.04 mg/l

Exposure time: 96 h

aquatic invertebrates

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 0.45 mg/l

Exposure time: 48 h

Toxicity to algae ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.27

Exposure time: 72 h

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.01

mg/l

according to Regulation (EC) No. 1907/2006



KLERAT 20G WAX BLOCKS

Version 5.0

Revision Date: 05.12.2017

SDS Number: S1481202451

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End point: Growth rate Exposure time: 72 h

M-Factor (Acute aquatic

toxicity)

: 10

Toxicity to microorganisms

EC50 (activated sludge): > 100 mg/l

Exposure time: 30 min

M-Factor (Chronic aquatic

toxicity)

10

12.2 Persistence and degradability

Components:

4-hydroxy-3-(3-(4'-bromo-4-biphenylyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin:

Biodegradability

: Result: Not rapidly biodegradable

Stability in water : Degradation half life: ca. 300 d

Remarks: Persistent in water.

12.3 Bioaccumulative potential

Components:

4-hydroxy-3-(3-(4'-bromo-4-biphenylyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin:

Bioaccumulation

: Remarks: bioaccumulative

12.4 Mobility in soil

Components:

4-hydroxy-3-(3-(4'-bromo-4-biphenylyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin:

Distribution among

: Remarks: Low mobility in soil.

environmental compartments

Stability in soil : Dissipation time: 157 d

Percentage dissipation: 50 % (DT50) Remarks: Product is not persistent.

12.5 Results of PBT and vPvB assessment

Product:

Assessment

: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of

0.1% or higher...

Components:

4-hydroxy-3-(3-(4'-bromo-4-biphenylyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin:

Assessment

according to Regulation (EC) No. 1907/2006



KLERAT 20G WAX BLOCKS

Revision Date: 05.12.2017 5.0

SDS Number: S1481202451

This version replaces all previous versions.

PBT substance.

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product Do not contaminate ponds, waterways or ditches with

chemical or used container.

Do not dispose of waste into sewer.

Where possible recycling is preferred to disposal or

incineration.

If recycling is not practicable, dispose of in compliance with

local regulations.

Contaminated packaging Empty remaining contents.

Triple rinse containers.

Empty containers should be taken to an approved waste

handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Remarks Not classified as dangerous in the meaning of transport

regulations.

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

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

: Not applicable

Regulation (EC) No 1005/2009 on substances that

deplete the ozone layer

Not applicable

Regulation (EC) No 850/2004 on persistent organic

pollutants

: Not applicable

according to Regulation (EC) No. 1907/2006



KLERAT 20G WAX BLOCKS

Version Revision Date: SDS Number: This version replaces all previous versions. 5.0 05.12.2017 S1481202451

Regulation (EC) No 649/2012 of the European : Not applicable

Parliament and the Council concerning the export and

import of dangerous chemicals

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Not applicable

Other regulations:

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

SECTION 16: Other information

Full text of H-Statements

H300 : Fatal if swallowed.

H310 : Fatal in contact with skin.

H317 : May cause an allergic skin reaction.

H330 : Fatal if inhaled.

H360D : May damage the unborn child.

H372 : Causes damage to organs through prolonged or repeated

exposure.

H400 : Very toxic to aquatic life.

H410 : Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity

Aquatic Acute : Acute aquatic toxicity
Aquatic Chronic : Chronic aquatic toxicity
Repr. : Reproductive toxicity
Skin Sens. : Skin sensitisation

STOT RE : Specific target organ toxicity - repeated exposure CH SUVA : Switzerland. Limit values at the work place

CH SUVA / TWA : Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO

according to Regulation (EC) No. 1907/2006



KLERAT 20G WAX BLOCKS

Version Revision Date: SDS Number: This version replaces all previous versions. 5.0 05.12.2017 S1481202451

International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID -Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

Classification procedure:

Repr. 1A	H360D	Calculation method
STOT RE 2	H373	Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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