

according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended

Revision Date 24-Jan-2024

Revision Number 3

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

1.1. Product identifier

Product Description:	Dimethyltin dichloride
Cat No. :	A17661
Synonyms	Dichlorodimethyltin.; Dimethyldichlorostannane
Index No	050-029-00-8
CAS No	753-73-1
EC No	212-039-2
Molecular Formula	C2 H6 Cl2 Sn
REACH registration number	-

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

Recommended Use	Laboratory chemicals.		
Uses advised against	No Information available		

1.3. Details of the supplier of the safety data sheet

Company

Avocado Research Chemicals Ltd. (Part of Thermo Fisher Scientific) Shore Road, Heysham Lancashire, LA3 2XY, United Kingdom Office Tel: +44 (0) 1524 850506 Office Fax: +44 (0) 1524 850608

E-mail address

begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11 Emergency Number **US**:001-201-796-7100 / **Europe:** +32 14 57 52 99 **CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe:**001-703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Physical hazards

Based on available data, the classification criteria are not met

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Health hazards

Acute oral toxicity Acute dermal toxicity Acute Inhalation Toxicity - Dusts and Mists Skin Corrosion/Irritation Serious Eye Damage/Eye Irritation Reproductive Toxicity Specific target organ toxicity - (repeated exposure)

Environmental hazards

Based on available data, the classification criteria are not met

Category 3 (H301) Category 3 (H311) Category 2 (H330) Category 1 B (H314) Category 1 (H318) Category 2 (H361d) Category 1 (H372)

Full text of Hazard Statements: see section 16



Signal Word

Danger

Hazard Statements

H330 - Fatal if inhaled
H314 - Causes severe skin burns and eye damage
H361d - Suspected of damaging the unborn child
H372 - Causes damage to organs through prolonged or repeated exposure
H301 + H311 - Toxic if swallowed or in contact with skin
EUH071 - Corrosive to the respiratory tract

Precautionary Statements

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P310 - Immediately call a POISON CENTER or doctor/physician
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

2.3. Other hazards

This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Component	CAS No	EC No	Weight %	CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567
Stannane, dichlorodimethyl-	753-73-1	EEC No. 212-039-2	95	Skin Corr. 1B (H314) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 2 (H330)

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	STOT RE 1 (H372) Repr. 2 (H361d) (EUH071)
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REACH registration number

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately.
Inhalation	Remove to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
Self-Protection of the First Aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.
4.2. Most important symptoms and	effects, both acute and delayed
	Causes burns by all exposure routes. Difficulty in breathing. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

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

Notes to Physician Treat symptomatically. Symptoms may be delayed.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons No information available.

5.2. Special hazards arising from the substance or mixture

The product causes burns of eyes, skin and mucous membranes.

Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO₂), Metal oxides, Hydrogen chloride gas.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Use personal protective equipment as required. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid dust formation.

6.2. Environmental precautions

Should not be released into the environment. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance. Use only under a chemical fume hood. Wear personal protective equipment/face protection. Do not breathe (dust, vapor, mist, gas). Avoid dust formation.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Store under an inert atmosphere.

Technical Rules for Hazardous Substances (TRGS) 510 Class 6.1A Storage Class (LGK) (Germany)

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

List source(s): UK - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020.

Component	The United Kingdom	European Union	Ireland
Stannane, dichlorodimethyl-	STEL: 0.2 mg/m ³ 15 min		

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TWA: 0.1 mg/m³ 8 hr Skin		
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Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

Component	Acute effects local	Acute effects	Chronic effects local	Chronic effects
	(Oral)	systemic (Oral)	(Oral)	systemic (Oral)
Stannane, dichlorodimethyl- 753-73-1 (95)	0.02 mg/kg bw/day			1.25 mg/kg bw/day

Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
Stannane, dichlorodimethyl- 753-73-1 (95)	DNEL = 17.8µg/cm2	DNEL = 0.02mg/kg bw/day	DNEL = 3µg/cm2	DNEL = 0.01mg/kg bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Stannane, dichlorodimethyl- 753-73-1 (95)		DNEL = 0.02mg/m ³		DNEL = 0.017mg/m ³

Predicted No Effect Concentration (PNEC)

See values below.

Component	Fresh water	Fresh water	Water Intermittent	Microorganisms in	Soil (Agriculture)
		sediment		sewage treatment	
Stannane,	PNEC = 0.017mg/L	PNEC =	PNEC = 0.17mg/L	PNEC = 0.79mg/L	PNEC =
dichlorodimethyl-	-	0.143888mg/kg	-	-	0.0188mg/kg soil
753-73-1 (95)		sediment dw			dw

Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
Stannane,	PNEC =	PNEC =		PNEC =	
dichlorodimethyl-	0.0017mg/L	0.0143888mg/kg		0.111mg/kg food	
753-73-1 (95)		sediment dw			

8.2. Exposure controls

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective ec Eye Protection		(European standarc	d - EN 166)		
Hand Protection	Protectiv	ve gloves			
Glove material Nitrile rubber Viton (R)	Breakthrough time See manufacturers recommendations	Glove thickness	EU standard EN 374	Glove comments (minimum requirement)	

Skin and body protection Long sleeved clothing.

Inspect gloves before use.

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Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Respiratory Protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly
Large scale/emergency use	Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced Recommended Filter type: Type A Brown
Small scale/Laboratory use	Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141 When RPE is used a face piece Fit Test should be conducted
Environmental experies controls	No information available

Environmental exposure controls

Evaporation Rate

No information available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State	Crystalline Powder	
Appearance Odor Odor Threshold Melting Point/Range Softening Point Boiling Point/Range Flammability (liquid) Flammability (solid,gas) Explosion Limits	White No information available No data available 103 - 110 °C / 217.4 - 230 °F No data available 188 - 190 °C / 370.4 - 374 °F No data available No information available No data available	
Flash Point Autoignition Temperature Decomposition Temperature pH	No information available No data available No data available No information available	Method - No information available
Viscosity Water Solubility Solubility in other solvents	Not applicable 20 g/L (20°C) No information available	Solid
Partition Coefficient (n-octanol/wat Component Stannane, dichlorodimethyl-	er) log Pow -2.18	
Vapor Pressure Density / Specific Gravity Bulk Density	No data available No data available No data available	
Vapor Density Particle characteristics	Not applicable No data available	Solid
9.2. Other information		
Molecular Formula Molecular Weight	C2 H6 Cl2 Sn 219.66	

Not applicable - Solid

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity	None known, based on information available	
10.2. Chemical stability	Moisture sensitive.	
10.3. Possibility of hazardous reactions		
Hazardous Polymerization Hazardous Reactions	Hazardous polymerization does not occur. None under normal processing.	
10.4. Conditions to avoid	Incompatible products. Excess heat. Exposure to moist air or water.	
10.5. Incompatible materials	Water. Strong oxidizing agents.	

10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO₂). Metal oxides. Hydrogen chloride gas.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Product Information

(a) acute toxicity;

Oral	Category 3
Dermal	Category 3
Inhalation	Category 2

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Stannane, dichlorodimethyl-	LD50 = 73900 µg/kg (Rat)	LD50 = 404 mg/kg (Rabbit)	LC50 = 125 mg/L (Rat) 1 h

- (b) skin corrosion/irritation; Category 1 B
- (c) serious eye damage/irritation; Category 1
- (d) respiratory or skin sensitization;
Respiratory
SkinNo data available
No data available(e) germ cell mutagenicity;No data available(f) carcinogenicity;No data available
There are no known carcinogenic chemicals in this product(g) reproductive toxicity;Category 2(h) STOT-single exposure;No data available

(i) STOT-repeated exposure;	Category 1
Target Organs	Blood, Central nervous system (CNS), Eyes, Respiratory system, Kidney, Liver, Skin, Urinary Tract, Immune system.
(j) aspiration hazard;	Not applicable Solid
Other Adverse Effects	The toxicological properties have not been fully investigated.
Symptoms / effects,both acute and delayed	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

11.2. Information on other hazards

Endocrine Disrupting Properties Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects

Do not empty into drains. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Stannane, dichlorodimethyl-	LC50: = 320 mg/L, 96h (Pimephales promelas)		

12.2. Persistence and degradability	Product contains heavy metals. Discharge into the environment must be avoided. Special pre-treatment is necessary		
Persistence	based on information available, May persist. Contains substances known to be hazardous to the environment or not degradable in waste		
Degradation in sewage			
treatment plant	water treatment plants.	5	
12.3. Bioaccumulative potential	May have some potential to bioaccumulate		
Component	log Pow	Bioconcentration factor (BCF)	
Stannane, dichlorodimethyl-	-2.18	No data available	
12.4. Mobility in soil 12.5. Results of PBT and vPvB	The product is water soluble, and may spread environment due to its water solubility. Highly No data available for assessment.	d in water systems Will likely be mobile in the y mobile in soils	
assessment <u>12.6. Endocrine disrupting</u> <u>properties</u> Endocrine Disruptor Information	This product does not contain any known or s	suspected endocrine disruptors	
12.7 Other advarge offects			

12.7. Other adverse effects	
Persistent Organic Pollutant	

This product does not contain any known or suspected substance

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Ozone Depletion Potential

13.1 Waste treatment methods

This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods	
Waste from Residues/Unused Products	Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.
Contaminated Packaging	Dispose of this container to hazardous or special waste collection point.
European Waste Catalogue (EWC)	According to the European Waste Catalog, Waste Codes are not product specific, but application specific.
Other Information	Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not flush to sewer. Large amounts will affect pH and harm aquatic organisms.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

<u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> Technical Shipping Name <u>14.3. Transport hazard class(es)</u> Subsidiary Hazard Class <u>14.4. Packing group</u>	UN2923 Corrosive solid, toxic, n.o.s. Stannane, dichlorodimethyl- 8 6.1 II
ADR	
<u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> Technical Shipping Name <u>14.3. Transport hazard class(es)</u> Subsidiary Hazard Class <u>14.4. Packing group</u>	UN2923 Corrosive solid, toxic, n.o.s. Stannane, dichlorodimethyl- 8 6.1 II
IATA	
<u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> Technical Shipping Name <u>14.3. Transport hazard class(es)</u> Subsidiary Hazard Class <u>14.4. Packing group</u>	UN2923 Corrosive solid, toxic, n.o.s. Stannane, dichlorodimethyl- 8 6.1 II
14.5. Environmental hazards	No hazards identified
14.6. Special precautions for user	No special precautions required.
14.7. Maritime transport in bulk according to IMO instruments	Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION

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

International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Stannane, dichlorodimethyl-	753-73-1	212-039-2	-	-	Х	Х	KE-10117	Х	Х
Component	CAS No	TSCA	notific	ation -	DSL	NDSL	AICS	NZIoC	PICCS
Stannane, dichlorodimethyl-	753-73-1	X	ACT	IVE	Х	-	Х	Х	Х

Legend: X - Listed '-' - Not Listed KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Stannane, dichlorodimethyl-	753-73-1	-	Use restricted. See item 75. (see link for restriction details) Use restricted. See item 20. (see link for restriction details)	-

REACH links

https://echa.europa.eu/substances-restricted-under-reach

Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident		
		Notification	Requirements	
Stannane, dichlorodimethyl-	753-73-1	Not applicable	Not applicable	

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)? Not applicable

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 .

Take note of Directive 94/33/EC on the protection of young people at work

Take note of Dir 92/85/EC on the protection of pregnant and breastfeeding women at work

National Regulations

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

WGK Classification

Water endangering class = 3 (self classification)

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H301 - Toxic if swallowed H311 - Toxic in contact with skin

H330 - Fatal if inhaled

H314 - Causes severe skin burns and eye damage

H361d - Suspected of damaging the unborn child

H372 - Causes damage to organs through prolonged or repeated exposure

EUH071 - Corrosive to the respiratory tract

Legend

CAS - Chemical Abstracts Service TSCA - United States Toxic Substances Control Act Section 8(b) Inventorv EINECS/ELINCS - European Inventory of Existing Commercial Chemical DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances/EU List of Notified Chemical Substances Substances List PICCS - Philippines Inventory of Chemicals and Chemical Substances ENCS - Japanese Existing and New Chemical Substances **IECSC** - Chinese Inventory of Existing Chemical Substances AICS - Australian Inventory of Chemical Substances **KECL** - Korean Existing and Evaluated Chemical Substances NZIOC - New Zealand Inventory of Chemicals WEL - Workplace Exposure Limit TWA - Time Weighted Average ACGIH - American Conference of Governmental Industrial Hygienists IARC - International Agency for Research on Cancer **DNEL** - Derived No Effect Level Predicted No Effect Concentration (PNEC) RPE - Respiratory Protective Equipment LD50 - Lethal Dose 50% LC50 - Lethal Concentration 50% EC50 - Effective Concentration 50%

NOEC - No Observed Effect ConcentrationPOW - Partition coefficient Octanol:WaterPBT - Persistent, Bioaccumulative, ToxicvPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of
Dangerous Goods by RoadICAO/IATA - International Civil Aviation Organization/International Air
Transport AssociationIMO/IMDG - International Maritime Organization/International Maritime
Dangerous Goods CodeMARPOL - International Convention for the Prevention of Pollution from
ShipsOECD - Organisation for Economic Co-operation and Development
BCF - Bioconcentration factorATE - Acute Toxicity Estimate
VOC - (Volatile Organic Compound)Key literature references and sources for dataVOC - (Volatile Organic Compound)

https://echa.europa.eu/information-on-chemicals

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts. Chemical incident response training.

Prepared By	Health, Safety and Environmental Department
Revision Date	24-Jan-2024
Revision Summary	New emergency telephone response service provider.

This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.

Disclaimer

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

End of Safety Data Sheet