

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Mixture
Trade name : Harz (Epoxidharzbasis)
Product code : 281.01.0217

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Use of the substance/mixture : Epoxy resin

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet**Supplier**

FIBRO GmbH Geschäftsbereich Normalien
August-Läpple-Weg
P.O. Box 1120
74855 Hassmersheim - Deutschland
T +49 6266-73-0 - F +49 6266-73-237
info@fibro.de

Safety Data Sheet

info@ubsplus.de

1.4. Emergency telephone number

Emergency number : +49 761 19240
(VIZ Freiburg, 24 h, German & English)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Skin Irrit. 2 H315
Eye Irrit. 2 H319
Skin Sens. 1 H317
Aquatic Chronic 2 H411

Full text of H statements : see section 16

2.2. Label elements**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :



GHS07

GHS09

Signal word (CLP) :

Warning

Hazardous ingredients :

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol ; bis-[4-(2,3-epoxypropoxy)phenyl]propane

Hazard statements (CLP) :

H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) :

P260 - Do not breathe spray, vapours, gas.
P273 - Avoid release to the environment.
P280 - Wear eye protection, protective gloves, protective clothing.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 - Dispose of contents and container to an approved waste disposal plant.

EUH-statements :

EUH205 - Contains epoxy constituents. May produce an allergic reaction.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	(CAS-No.) 9003-36-5 (EC-No.) 500-006-8 (REACH-no) 01-2119454392-40	50 - 75	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411
bis-[4-(2,3-epoxipropoxy)phenyl]propane	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5 (EC Index-No.) 603-073-00-2 (REACH-no) 01-2119456619-26	5 - 25	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411

Specific concentration limits:

Name	Product identifier	Specific concentration limits
bis-[4-(2,3-epoxipropoxy)phenyl]propane	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5 (EC Index-No.) 603-073-00-2 (REACH-no) 01-2119456619-26	(C >= 5) Eye Irrit. 2, H319 (C >= 5) Skin Irrit. 2, H315

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Move the affected person away from the contaminated area. Fresh air, rest. Prevent cooling by covering the victim (no warming up). If unconscious place in recovery position and seek medical advice. Do not give an unconscious person anything to drink. Remove soiled clothing promptly.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.
First-aid measures after skin contact	: Immediately remove contaminated clothing or footwear. Rinse and then wash skin thoroughly with water and soap. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Wash with plenty of water (during 20 minutes minimum) with eyes wide open after taking off soft contact lenses and immediately take medical advice.
First-aid measures after ingestion	: Rinse mouth. Do not give an unconscious person anything to drink. Do not induce vomiting. Immediately call a POISON CENTER/doctor.

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

Symptoms/effects after skin contact	: Irritation. Erythema.
Symptoms/effects after eye contact	: redness, itching, tears.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: water, carbon dioxide (CO ₂), powder and foam.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Heating may cause a fire or explosion.
Hazardous decomposition products in case of fire	: Carbon monoxide. Carbon dioxide.

5.3. Advice for firefighters

Precautionary measures fire	: Making extinguishing agents environment-friendly. Evacuate area.
Firefighting instructions	: Do not allow run-off from fire fighting to enter drains or water courses. Do not contaminate ground and surface water.

Protection during firefighting : Extra personal protection: complete protective clothing including self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate the danger area. Keep public away from danger area. Mark the danger area.

6.1.1. For non-emergency personnel

Protective equipment : Wear personal protective equipment.

6.1.2. For emergency responders

Protective equipment : Wear personal protective equipment. Breathing apparatus.

Emergency procedures : Ventilate spillage area. Stop leak if safe to do so.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Dike and contain spill. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13).

6.4. Reference to other sections

Fire fighting measures. SECTION 5. Personal protective equipment. SECTION 8. Disposal considerations. SECTION 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Read label before use. Use personal protective equipment as required. Do not breathe vapours. Avoid contact with skin and eyes. Keep in original containers.

Hygiene measures : Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with soap and water before leaving work. Apply emollient cream.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Take precautionary measures against static discharge.

Storage conditions : Store in a dry, cool and well-ventilated place. Protect from sunlight.

Incompatible products : Oxidizing agent. Strong bases. Strong acids.

Heat and ignition sources : Store away from direct sunlight or other heat sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge.

Information on mixed storage : Keep away from food, drink and animal feeding stuffs.

Special rules on packaging : Keep in original containers.

7.3. Specific end use(s)

Epoxy resin.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (9003-36-5)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	29.39 mg/m ³
Acute - local effects, dermal	8.3 µg/cm ²
Long-term - systemic effects, dermal	104.15 mg/kg bw/d
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	6.25 mg/kg bw/d
Long-term - systemic effects, inhalation	8.7 mg/m ³
Long-term - systemic effects, dermal	62.5 mg/kg bw/d
PNEC (Water)	
PNEC aqua (freshwater)	3 µg/L
PNEC aqua (marine water)	0.3 µg/L
PNEC aqua (intermittent, freshwater)	0.0254 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.294 mg/kg dwt
PNEC sediment (marine water)	0.0294 mg/kg dwt
PNEC (Soil)	

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (9003-36-5)	
PNEC soil	0.237 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	10 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane (1675-54-3)	
DNEL/DMEL (Workers)	
Acute - systemic effects, dermal	8.3 mg/kg bw
Acute - systemic effects, inhalation	12.3 mg/m ³
Long-term - systemic effects, dermal	8.3 mg/kg bw/d
Long-term - systemic effects, inhalation	12.3 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, dermal	3.6 mg/kg bw
Acute - systemic effects, inhalation	0.75 mg/m ³
Acute - systemic effects, oral	0.75 mg/kg bw
Long-term - systemic effects, oral	0.75 mg/kg bw/d
Long-term - systemic effects, inhalation	0.75 mg/m ³
Long-term - systemic effects, dermal	3.6 mg/kg bw/d
PNEC (Water)	
PNEC aqua (freshwater)	3 µg/L
PNEC aqua (marine water)	0.3 µg/L
PNEC aqua (intermittent, freshwater)	0.013 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.5 mg/kg dwt
PNEC sediment (marine water)	0.5 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	10 mg/l

8.2. Exposure controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Materials for protective clothing	: Wear proper protective equipment
Hand protection	: Chemically resistant protective gloves. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. . Penetration time of glove material : >480 min (EN 374). Material : Nitrile rubber (0,7 mm)
Eye protection	: Sealed safety goggles. (EN 166).
Respiratory protection	: Not necessary with sufficient ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Breathing apparatus with filter. Filter type: A. Appropriate self-contained breathing apparatus may be required



Other information : Do not eat, drink or smoke during use. Avoid contact with skin and eyes.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: light yellow
Odour	: characteristic
Odour threshold	: Not determined
pH	: Not determined
Relative evaporation rate (butylacetate=1)	: Not determined
Melting point	: Not determined
Freezing point	: Not determined
Boiling point	: > 200 °C (DIN 53171)
Flash point	: > 250 °C (ISO 2719)
Auto-ignition temperature	: No data available

Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable.
Vapour pressure	: < 0.1 hPa (T = 20°C)
Relative vapour density at 20 °C	: Not determined
Relative density	: Not determined
Density	: 1.15 - 1.17 g/cm ³ (DIN 53217)
Solubility	: Water: Slightly soluble
Log Pow	: Not determined
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 15000 - 19000 mPa.s (T = 25°C, ISO 9371)
Explosive properties	: Not known.
Oxidising properties	: Not known.
Explosive limits	: Not determined

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with : water, amines and alcohol's. Polymerization.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Polymerization.

10.4. Conditions to avoid

Direct sunlight. Moisture. Ignition sources.

10.5. Incompatible materials

Water. Acids. Bases. Oxidizing agent.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified (Based on available data, the classification criteria are not met)

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (9003-36-5)	
LD50 oral rat	> 2000 mg/kg bodyweight
LD50 dermal rabbit	> 2000 mg/kg bodyweight

bis-[4-(2,3-epoxipropoxy)phenyl]propane (1675-54-3)	
LD50 oral rat	> 2000 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402 method)
LD50 dermal rabbit	> 2000 mg/kg bodyweight

Skin corrosion/irritation	: Causes skin irritation. Calculation method pH: Not determined
Serious eye damage/irritation	: Causes serious eye irritation. Calculation method pH: Not determined
Respiratory or skin sensitisation	: May cause an allergic skin reaction. Calculation method
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (No data available)
STOT-repeated exposure	: Not classified (No data available)
Aspiration hazard	: Not classified (No data available)

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Toxic to aquatic life with long lasting effects.

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (9003-36-5)	
LC50 fish 1	2.54 mg/l
EC50 Daphnia 1	2.55 mg/l (OECD 202 method)
bis-[4-(2,3-epoxipropoxi)phenyl]propane (1675-54-3)	
LC50 fish 1	1.3 mg/l (OECD 203 method)
EC50 Daphnia 1	2.1 mg/l (OECD 202 method)
NOEC chronic crustacea	0.3 mg/l (OECD 211 method)

12.2. Persistence and degradability

Harz (Epoxidharzbasis)	
Persistence and degradability	Contains non readily biodegradable component(s).
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (9003-36-5)	
Biodegradation	16 % (28 d, OECD 301B)
bis-[4-(2,3-epoxipropoxi)phenyl]propane (1675-54-3)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	5 % (28 d, OECD 301F)

12.3. Bioaccumulative potential

Harz (Epoxidharzbasis)	
Log Pow	Not determined
Bioaccumulative potential	Not determined.
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (9003-36-5)	
BCF fish 1	150
Log Pow	3.3
Bioaccumulative potential	Low bioaccumulation potential.
bis-[4-(2,3-epoxipropoxi)phenyl]propane (1675-54-3)	
Bioconcentration factor (BCF REACH)	31 Quantitative structure-activity relationship (QSAR)
Log Pow	3.24 (25 °C)
Bioaccumulative potential	Low bioaccumulation potential.

12.4. Mobility in soil

Harz (Epoxidharzbasis)	
Ecology - soil	No data available.
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (9003-36-5)	
Log Koc	3.65 Quantitative structure-activity relationship (QSAR)
bis-[4-(2,3-epoxipropoxi)phenyl]propane (1675-54-3)	
Log Koc	2.65 Quantitative structure-activity relationship (QSAR)

12.5. Results of PBT and vPvB assessment

Harz (Epoxidharzbasis)	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	
Component	
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (9003-36-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
bis-[4-(2,3-epoxipropoxi)phenyl]propane (1675-54-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations



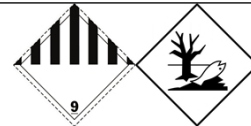
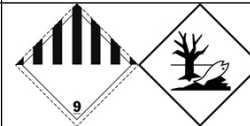
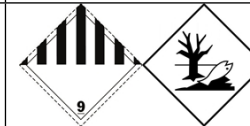
13.1. Waste treatment methods

Regional legislation (waste)	: This material and its container must be disposed of in a safe way, and as per local legislation.
Sewage disposal recommendations	: Do not allow to enter drains or water courses.

Product/Packaging disposal recommendations : Do not dispose of with domestic waste.
 Additional information : Handle uncleaned empty containers as full ones.

SECTION 14: Transport information

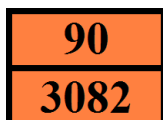
In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
3082	3082	3082	3082	3082
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXIDDERIVATE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXIDDERIVATE)	Environmentally hazardous substance, liquid, n.o.s. (EPOXIDDERIVATE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXIDDERIVATE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXIDDERIVATE)
Transport document description				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXIDDERIVATE), 9, III, (E)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXIDDERIVATE), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (EPOXIDDERIVATE), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXIDDERIVATE), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXIDDERIVATE), 9, III
14.3. Transport hazard class(es)				
9	9	9	9	9
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
No supplementary information available				

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : M6
 Special provisions (ADR) : 274, 335, 601
 Limited quantities (ADR) : 5I
 Excepted quantities (ADR) : E1
 Packing instructions (ADR) : P001, IBC03, LP01, R001
 Special packing provisions (ADR) : PP1
 Mixed packing provisions (ADR) : MP19
 Portable tank and bulk container instructions (ADR) : T4
 Portable tank and bulk container special provisions (ADR) : TP1, TP29
 Tank code (ADR) : LGBV
 Vehicle for tank carriage : AT
 Transport category (ADR) : 3
 Special provisions for carriage - Packages (ADR) : V12
 Special provisions for carriage - Loading, unloading and handling (ADR) : CV13
 Hazard identification number (Kemler No.) : 90
 Orange plates :



Tunnel restriction code (ADR) : E
 EAC code : •3Z

- Transport by sea

Special provisions (IMDG) : 274, 335
 Limited quantities (IMDG) : 5 L
 Excepted quantities (IMDG) : E1
 Packing instructions (IMDG) : P001, LP01
 Special packing provisions (IMDG) : PP1
 IBC packing instructions (IMDG) : IBC03
 Tank instructions (IMDG) : T4
 Tank special provisions (IMDG) : TP2, TP29
 EmS-No. (Fire) : F-A
 EmS-No. (Spillage) : S-F
 Stowage category (IMDG) : A

- Air transport

PCA Excepted quantities (IATA) : E1
 PCA Limited quantities (IATA) : Y964
 PCA limited quantity max net quantity (IATA) : 30kgG
 PCA packing instructions (IATA) : 964
 PCA max net quantity (IATA) : 450L
 CAO packing instructions (IATA) : 964
 CAO max net quantity (IATA) : 450L
 Special provisions (IATA) : A97, A158, A197
 ERG code (IATA) : 9L

- Inland waterway transport

Classification code (ADN) : M6
 Special provisions (ADN) : 274, 335, 61
 Limited quantities (ADN) : 5 L
 Excepted quantities (ADN) : E1
 Carriage permitted (ADN) : T
 Equipment required (ADN) : PP
 Number of blue cones/lights (ADN) : 0

- Rail transport

Classification code (RID) : M6
 Special provisions (RID) : 274, 335, 601
 Limited quantities (RID) : 5L
 Excepted quantities (RID) : E1
 Packing instructions (RID) : P001, IBC03, LP01, R001
 Special packing provisions (RID) : PP1
 Mixed packing provisions (RID) : MP19
 Portable tank and bulk container instructions (RID) : T4
 Portable tank and bulk container special provisions (RID) : TP1, TP29
 Tank codes for RID tanks (RID) : LGBV
 Transport category (RID) : 3
 Special provisions for carriage – Packages (RID) : W12
 Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW31
 Colis express (express parcels) (RID) : CE8
 Hazard identification number (RID) : 90

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

IBC code : Not applicable.

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Other information, restriction and prohibition regulations : Ozone layer depleting substances: Not subject to Regulation (EC) No 1005/2009. Persistent organic pollutants (POPs): Not subject to Regulation (EC) No 850/2004. Export and import of dangerous chemicals: Not subject to Regulation (EC) No 649/2012. Control of major-accident hazards (COMAH, Seveso III): Subject to Directive 2012/18/EC.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

Not applicable

Mixtures

SECTION 16: Other information

Indication of changes:			
Section	Changed item	Change	Comments
2.2	Label elements	Modified	
3.2	Substance name	Modified	
9.1	Auto-ignition temperature	Removed	
11	Toxicological information	Modified	
12.2	Persistence and degradability	Modified	
15	Regulatory information	Modified	

Full text of H- and EUH-statements:

Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.
EUH205	Contains epoxy constituents. May produce an allergic reaction.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
Skin Sens. 1	H317	Calculation method
Aquatic Chronic 2	H411	Calculation method

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product