# SAFETY DATA SHEET



Version #: 01

Issue date: 26-December-2022

Revision date: -Supersedes date: -

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

1.1. Product identifier

Trade name or designation

Tputty™910

of the mixture

Registration number

None.

**Synonyms** 

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

Identified uses

Telecom, industry, automotive, consumer electronics.

Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Company name

Laird

**Address** 

4707 Detroit Ave

Ave Cleveland, Ohio 44102 United States of America

Telephone number

+1-216-939-2300

**Email** 

clv-customerservice@lairdtech.com

Manufacturer

Laird

**Address** 

C3&C4 Building, HongTai Industry Park, NO 87 TaiFeng Road, TEDA

TianJin, China

Telephone number

+86(0)22-66298160

**Corporate Office** 

Laird PLC

**Address** 

100 Pall Mall, London, SW1Y 5NQ

United Kingdom

1.4. Emergency telephone

+44 (0)20 7468 4040

number

# **SECTION 2: Hazards identification**

# 2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

#### Classification according to Regulation (EC) No 1272/2008 as amended

This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

#### 2.2. Label elements

#### Label according to Regulation (EC) No. 1272/2008 as amended

None. **Hazard pictograms** Signal word None.

**Hazard statements** The mixture does not meet the criteria for classification.

**Precautionary statements** 

Prevention Observe good industrial hygiene practices.

Response Wash hands after handling.

Store away from incompatible materials. Storage

Dispose of waste and residues in accordance with local authority requirements. Disposal

Supplemental information on

the label

None.

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#### 2.3. Other hazards

This mixture does not contain substances assessed to be vPvB / PBT according to Regulation

(EC) No 1907/2006, Annex XIII.

The mixture does not contain any substances included in the list established in accordance with REACH Article 59(1) for having endocrine disrupting properties at a concentration equal to or greater than 0.1% by weight.

The mixture does not contain any substances having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0.1% by weight.

# **SECTION 3: Composition/information on ingredients**

#### 3.2. Mixtures

**General information** 

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Aluminium nitride	15 - 30	24304-00-5 246-140-8	-	-	
	Classification: STOT RE	1;H372, Aquatic Acut	e 1;H400, Aquatic Chronic 1	;H410	

Composition comments

The ingredients in this product are fully encapsulated in the resin matrix, therefore no exposure to these materials is expected during normal use/handling of this product.

The full text for all H-statements is displayed in section 16.

All concentrations are in percent by weight. Components not listed are either non-hazardous or are below reportable limits.

#### **SECTION 4: First aid measures**

**General information** 

Ensure that medical personnel are aware of the material(s) involved, and take precautions to

4.1. Description of first aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Wash off with soap and water. Get medical attention if irritation develops and persists. Skin contact

Rinse with water. Get medical attention if irritation develops and persists. Eye contact

Rinse mouth. Get medical attention if symptoms occur. Ingestion 4.2. Most important symptoms Direct contact with eyes may cause temporary irritation.

and effects, both acute and

delayed

Treat symptomatically.

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

# **SECTION 5: Firefighting measures**

General fire hazards No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing

media

Special powder against metal fires. Dry chemical powder. Carbon dioxide (CO2). Dry sand.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

During fire, hazardous combustion products are released that may include: Fumes of metal oxides. Nitrogen oxides. Silicon oxide fumes.

5.3. Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Cool containers exposed to flames with water until well after the fire is out.

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Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

# **SECTION 6: Accidental release measures**

# 6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency Wear appropriate personal protective equipment. personnel

For emergency responders Keep unnecessary personnel away. Wear appropriate personal protective equipment.

Avoid discharge into drains, water courses or onto the ground. 6.2. Environmental precautions

6.3. Methods and material for Stop the flow of material, if this is without risk. Sweep up or gather material and place in appropriate container for disposal. Clean surface thoroughly to remove residual contamination. containment and cleaning up Following product recovery, flush area with water.

963517 Version #: 01 Revision date: -Issue date: 26-December-2022 For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

# **SECTION 7: Handling and storage**

7.1. Precautions for safe handling

Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe

good industrial hygiene practices.

**Type** 

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed container. Store away from incompatible materials (see section 10 of the

Value

**Form** 

SDS).

7.3. Specific end use(s)

Telecom, industry, automotive, consumer electronics. Observe industrial sector guidance on best

practices.

# **SECTION 8: Exposure controls/personal protection**

## 8.1. Control parameters

Components

# Occupational exposure limits

-	-	
Austria.	MAK L	ist

Thermal conductive filler	MAK	5 mg/m3	Respirable fraction.
		5 mg/m3	Respirable fume.
		10 mg/m3	Inhalable fraction.
	STEL	20 mg/m3	Inhalable fraction.
		10 mg/m3	Respirable fume.
		10 mg/m3	Respirable fraction.
Belgium. Exposure Limit Values			
Components	Туре	Value	Form
Thermal conductive filler	TWA	1 mg/m3	Respirable fraction.
Bulgaria. OELs. Regulation No 13		<del>-</del>	
Components	Туре	Value	Form
Aluminium nitride (CAS 24304-00-5)	TWA	2 mg/m3	
Thermal conductive filler	TWA	10 mg/m3	Dust.
		1,5 mg/m3	Respirable fraction.
Croatia. OELs (GVI). Regulation o Biological Limit Values, Annex I (I	n Protection of Workers again NN 91/2018), as amended		hemicals at Work, OELs an
Biological Limit Values, Annex I (	NN 91/2018), as amended	st Exposure to Dangerous C	
Biological Limit Values, Annex I (l Components	NN 91/2018), as amended Type	est Exposure to Dangerous Cl Value	Form
Croatia. OELs (GVI). Regulation o Biological Limit Values, Annex I (I Components Thermal conductive filler	NN 91/2018), as amended	value  4 mg/m3	Form Respirable dust.
Biological Limit Values, Annex I (l Components	NN 91/2018), as amended Type	est Exposure to Dangerous Cl Value	Form
Biological Limit Values, Annex I (I Components  Thermal conductive filler  Czech Republic. OELs. Governme	NN 91/2018), as amended Type  MAC  ent Decree 361	Value  4 mg/m3  10 mg/m3	Form  Respirable dust.  Total dust.
Biological Limit Values, Annex I (I Components Thermal conductive filler Czech Republic. OELs. Governme Components	MN 91/2018), as amended Type  MAC  ent Decree 361 Type	Value  4 mg/m3 10 mg/m3  Value	Form Respirable dust. Total dust. Form
Biological Limit Values, Annex I (I Components  Thermal conductive filler  Czech Republic. OELs. Governme	NN 91/2018), as amended Type  MAC  ent Decree 361	Value  4 mg/m3  10 mg/m3	Form  Respirable dust.  Total dust.
Biological Limit Values, Annex I (I Components  Thermal conductive filler  Czech Republic. OELs. Governme Components  Thermal conductive filler  Denmark. Exposure Limit Values	MN 91/2018), as amended Type  MAC  ent Decree 361 Type  TWA	Value  4 mg/m3 10 mg/m3  Value  0,1 mg/m3	Form  Respirable dust. Total dust.  Form  Respirable dust.
Biological Limit Values, Annex I (I Components  Thermal conductive filler  Czech Republic. OELs. Governme Components  Thermal conductive filler  Denmark. Exposure Limit Values	MN 91/2018), as amended Type  MAC  ent Decree 361 Type	Value  4 mg/m3 10 mg/m3  Value	Form Respirable dust. Total dust. Form
Biological Limit Values, Annex I (I Components  Thermal conductive filler  Czech Republic. OELs. Governme Components  Thermal conductive filler	MN 91/2018), as amended Type  MAC  ent Decree 361 Type  TWA	Value  4 mg/m3 10 mg/m3  Value  0,1 mg/m3	Form  Respirable dust. Total dust.  Form  Respirable dust.
Biological Limit Values, Annex I (I Components  Thermal conductive filler  Czech Republic. OELs. Governme Components  Thermal conductive filler  Denmark. Exposure Limit Values Components	MN 91/2018), as amended Type  MAC  ent Decree 361 Type  TWA  Type	Value  4 mg/m3 10 mg/m3  Value  0,1 mg/m3  Value	Form  Respirable dust. Total dust.  Form  Respirable dust.  Form
Biological Limit Values, Annex I (I Components  Thermal conductive filler  Czech Republic. OELs. Governme Components  Thermal conductive filler  Denmark. Exposure Limit Values Components  Thermal conductive filler  Estonia. OELs. Occupational Expo	MN 91/2018), as amended Type  MAC  ent Decree 361 Type  TWA  Type  TLV  osure Limits of Hazardous Su	Value  4 mg/m3 10 mg/m3 Value  0,1 mg/m3  Value  5 mg/m3 2 mg/m3 bstances (Regulation No. 105	Form  Respirable dust. Total dust.  Form  Respirable dust.  Form  Total Respirable.  5/2001, Annex), as amended
Biological Limit Values, Annex I (I Components  Thermal conductive filler  Czech Republic. OELs. Governme Components  Thermal conductive filler  Denmark. Exposure Limit Values Components	MN 91/2018), as amended Type  MAC  ent Decree 361 Type  TWA  Type  TLV	Value  4 mg/m3 10 mg/m3  Value  0,1 mg/m3  Value  5 mg/m3 2 mg/m3	Form  Respirable dust. Total dust.  Form  Respirable dust.  Form  Total Respirable.
Biological Limit Values, Annex I (I Components  Thermal conductive filler  Czech Republic. OELs. Governme Components  Thermal conductive filler  Denmark. Exposure Limit Values Components  Thermal conductive filler  Estonia. OELs. Occupational Expo	MN 91/2018), as amended Type  MAC  ent Decree 361 Type  TWA  Type  TLV  osure Limits of Hazardous Su	Value  4 mg/m3 10 mg/m3 Value  0,1 mg/m3  Value  5 mg/m3 2 mg/m3 bstances (Regulation No. 105	Form  Respirable dust. Total dust.  Form  Respirable dust.  Form  Total Respirable.  5/2001, Annex), as amended
Biological Limit Values, Annex I (I Components  Thermal conductive filler  Czech Republic. OELs. Governme Components  Thermal conductive filler  Denmark. Exposure Limit Values Components  Thermal conductive filler  Estonia. OELs. Occupational Expo Components  Aluminium nitride (CAS	NN 91/2018), as amended Type  MAC  ent Decree 361 Type  TWA  Type  TLV  osure Limits of Hazardous Su Type	Value  4 mg/m3 10 mg/m3  Value  0,1 mg/m3  Value  5 mg/m3 2 mg/m3 bstances (Regulation No. 105 Value	Form  Respirable dust. Total dust.  Form  Respirable dust.  Form  Total Respirable.  5/2001, Annex), as amended

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**Type** 

**TWA** 

Value

2 mg/m3

Finland. Workplace Exposure Limits

Components

24304-00-5)

Aluminium nitride (CAS

France. Threshold Limit	Values (VLEP) for Occupational Exposu	ure to Chemicals in France, INRS ED 984	
Components	Туре	Value	
Thermal conductive filler	VME	10 mg/m3	
Regulatory status:	Indicative limit (VL)		

Thermal conductive filler	VME	10 mg/m3	
Regulatory status: Indicativ	ve limit (VL)		
Germany. DFG MAK List (advisor in the Work Area (DFG)		nvestigation of Health Hazard	-
Components	Туре	Value	Form
Thermal conductive filler	TWA	4 mg/m3	Inhalable dust.
		1,5 mg/m3	Respirable dust.
Germany. TRGS 900, Limit Value	s in the Ambient Air at the Wor	kplace	
Components	Туре	Value	Form
Thermal conductive filler	AGW	10 mg/m3	Inhalable fraction.
		1,25 mg/m3	Respirable fraction.
Greece. OELs (Decree No. 90/199	9, as amended)		
Components	Type	Value	Form
Thermal conductive filler	TWA	5 mg/m3	Respirable.
		10 mg/m3	Inhalable
Hungary. OELs. Joint Decree on	Chemical Safety of Workplaces	<b>3</b>	
Components	Туре	Value	Form
Aluminium nitride (CAS 24304-00-5)	TWA	1 mg/m3	Respirable.
Thermal conductive filler	TWA	5 mg/m3	
		2 mg/m3	Respirable.
celand. OELs. Regulation 390/20	09 on Pollution Limits and Mea	sures to Reduce Pollution at	the Workplace, as amend
Components	Туре	Value	
Aluminium nitride (CAS 24304-00-5)	TWA	2 mg/m3	
Thermal conductive filler	TWA	10 mg/m3	
reland. Occupational Exposure I	_imits		
Components	Туре	Value	Form
Thermal conductive filler	TWA	4 mg/m3	Respirable dust.
		10 mg/m3	Total inhalable dust.
taly. OELs			
Components	Туре	Value	Form
Aluminium nitride (CAS 24304-00-5)	TWA	1 mg/m3	Respirable fraction.
Latvia. OELs. Occupational expo	sure limit values of chemical s	ubstances in work environme	ent
Components	Туре	Value	Form
Aluminium nitride (CAS	TWA	6 mg/m3	
24304-00-5) Diamond (CAS 7782-40-3)	TWA	2 ma/m2	Dust.
Thermal conductive filler	TWA	2 mg/m3	
memai conductive tillel	IVVA	6 mg/m3 4 mg/m3	Decomposition aerosol
	<b>.</b>	· ·	
Lithuania. OELs. Limit Values fo Components	r Chemical Substances, Genera Type	al Requirements (Hygiene No Value	rm HN 23:2007)
Aluminium nitride (CAS 24304-00-5)	TWA	6 mg/m3	
Norway. Administrative Norms fo	or Contaminants in the Workpla Type	ce Value	
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10 mg/m3

TLV

Thermal conductive filler

Poland. Maximum permissible concentrations and intensities of harmful factors in the work environment (Dz.U.Poz	Ľ.
1286/2018. Annex 1)	

1286/2018, Annex 1)			
Components	Туре	Value	Form
hermal conductive filler	TWA	2,5 mg/m3	Inhalable fraction.
		1,2 mg/m3	Respirable fraction.
Portugal. VLEs. Norm on occupational	exposure to chemical age	ents (NP 1796)	
Components	Туре	Value	Form
Aluminium nitride (CAS 24304-00-5)	TWA	1 mg/m3	Respirable fraction.
Thermal conductive filler	TWA	1 mg/m3	Respirable fraction.
Romania. OELs. Protection of workers	from exposure to chemic	al agents at the workplace	
Components	Туре	Value	Form
Polydimethylsiloxane (CAS 63148-62-9)	STEL	300 mg/m3	
	TWA	200 mg/m3	
Thermal conductive filler	STEL	5 mg/m3	Aerosol
	TWA	2 mg/m3	Aerosol
Slovakia. OELs. Decree of the governn agents	nent of the Slovak Republi	ic concerning protection of h	ealth in work with chemic
Components	Туре	Value	Form
Thermal conductive filler	TWA	4 mg/m3	Inhalable fraction.
		0,1 mg/m3	Respirable fraction.
Slovenia. OELs. Regulations concernii	ng protection of workers a	ngainst risks due to exposure	to chemicals while work
(Official Gazette of the Republic of Slo		.gao a.a. to enposant	
Components	Туре	Value	Form
Thermal conductive filler	TWA	10 mg/m3	Inhalable fraction.
		1,25 mg/m3	Respirable fraction.
Spain. Occupational Exposure Limits			
Components	Туре	Value	Form
Aluminium nitride (CAS	T\\/ \	4	5
	TWA	1 mg/m3	Respirable fraction.
24304-00-5)	TWA	1 mg/m3 10 mg/m3	Respirable fraction.
24304-00-5) Thermal conductive filler	TWA	10 mg/m3	·
24304-00-5) Thermal conductive filler Sweden. OELs (Annex 1). Work Enviro amended	TWA onment Authority (AV), Occ	10 mg/m3 cupational Exposure Limit Va	alues (AFS 2018:1), as
24304-00-5) Thermal conductive filler Sweden. OELs (Annex 1). Work Enviro amended Components	TWA onment Authority (AV), Occ Type	10 mg/m3 cupational Exposure Limit Va Value	alues (AFS 2018:1), as Form
24304-00-5) Thermal conductive filler Sweden. OELs (Annex 1). Work Enviro amended Components Aluminium nitride (CAS	TWA onment Authority (AV), Occ	10 mg/m3 cupational Exposure Limit Va	alues (AFS 2018:1), as
24304-00-5) Thermal conductive filler Sweden. OELs (Annex 1). Work Enviro amended Components Aluminium nitride (CAS 24304-00-5)	TWA onment Authority (AV), Occ Type	10 mg/m3 cupational Exposure Limit Va Value	alues (AFS 2018:1), as Form
Adminium nitride (CAS 24304-00-5) Thermal conductive filler  Sweden. OELs (Annex 1). Work Enviro amended Components  Aluminium nitride (CAS 24304-00-5) Thermal conductive filler	TWA enment Authority (AV), Occ Type TWA	10 mg/m3 cupational Exposure Limit Va Value 1 mg/m3	Form Total dust.
24304-00-5) Thermal conductive filler  Sweden. OELs (Annex 1). Work Enviro amended Components  Aluminium nitride (CAS 24304-00-5) Thermal conductive filler	TWA conment Authority (AV), Occ Type TWA TWA	10 mg/m3 cupational Exposure Limit Va Value 1 mg/m3 5 mg/m3	Form  Total dust.  Total dust.
24304-00-5) Thermal conductive filler  Sweden. OELs (Annex 1). Work Enviro amended Components  Aluminium nitride (CAS 24304-00-5) Thermal conductive filler  Switzerland. SUVA Grenzwerte am Arb	TWA conment Authority (AV), Occ Type TWA TWA	10 mg/m3 cupational Exposure Limit Va Value 1 mg/m3 5 mg/m3	Form  Total dust.  Total dust.
24304-00-5) Thermal conductive filler  Sweden. OELs (Annex 1). Work Enviro amended Components  Aluminium nitride (CAS 24304-00-5) Thermal conductive filler  Switzerland. SUVA Grenzwerte am Arb Components	TWA conment Authority (AV), Occ Type TWA TWA TWA coeitsplatz	10 mg/m3  cupational Exposure Limit Va  Value  1 mg/m3  5 mg/m3 2 mg/m3	Form  Total dust.  Respirable dust.  Form
24304-00-5) Thermal conductive filler Sweden. OELs (Annex 1). Work Enviro amended Components Aluminium nitride (CAS 24304-00-5) Thermal conductive filler Switzerland. SUVA Grenzwerte am Arb Components	TWA enment Authority (AV), Occ Type TWA TWA TWA peitsplatz Type	10 mg/m3  cupational Exposure Limit Value  1 mg/m3  5 mg/m3  2 mg/m3  Value  24 mg/m3	Form  Total dust.  Respirable dust and/o fume.
24304-00-5) Thermal conductive filler  Sweden. OELs (Annex 1). Work Enviro amended  Components  Aluminium nitride (CAS 24304-00-5)	TWA conment Authority (AV), Occ Type TWA TWA TWA coeitsplatz Type STEL	10 mg/m3 cupational Exposure Limit Va  Value  1 mg/m3 5 mg/m3 2 mg/m3 Value	Form Total dust. Respirable dust and/o
24304-00-5) Thermal conductive filler  Sweden. OELs (Annex 1). Work Enviro amended Components  Aluminium nitride (CAS 24304-00-5) Thermal conductive filler  Switzerland. SUVA Grenzwerte am Arb Components  Thermal conductive filler	TWA pnment Authority (AV), Occ Type TWA TWA Deitsplatz Type STEL TWA	10 mg/m3  cupational Exposure Limit Value  1 mg/m3 5 mg/m3 2 mg/m3  Value  24 mg/m3 3 mg/m3 3 mg/m3 3 mg/m3	Form  Total dust.  Total dust.  Respirable dust.  Form  Respirable dust and/o fume.  Respirable dust and/o fume.  Respirable dust and/o fume.
24304-00-5) Thermal conductive filler Sweden. OELs (Annex 1). Work Enviro amended Components Aluminium nitride (CAS 24304-00-5) Thermal conductive filler Switzerland. SUVA Grenzwerte am Arb Components Thermal conductive filler	TWA pnment Authority (AV), Occ Type TWA TWA Deitsplatz Type STEL TWA	10 mg/m3 cupational Exposure Limit Value 1 mg/m3 5 mg/m3 2 mg/m3 Value 24 mg/m3 3 mg/m3	Form  Total dust.  Total dust.  Respirable dust.  Form  Respirable dust and/o fume.  Respirable dust and/o fume.  Respirable dust and/o fume.  Respirable dust and/o
24304-00-5) Thermal conductive filler  Sweden. OELs (Annex 1). Work Enviro amended Components  Aluminium nitride (CAS 24304-00-5) Thermal conductive filler  Switzerland. SUVA Grenzwerte am Arb Components	TWA conment Authority (AV), Occ Type TWA TWA Deitsplatz Type STEL TWA (WELs)	10 mg/m3  cupational Exposure Limit Value  1 mg/m3 5 mg/m3 2 mg/m3  Value  24 mg/m3 3 mg/m3 3 mg/m3 3 mg/m3	Form  Total dust.  Total dust.  Respirable dust.  Form  Respirable dust and/o fume.  Respirable dust and/o fume.  Respirable dust and/o fume.

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Hungary. Chemical Safety at Workplace Ordinance Joint Decree No. 25/2000 (Annex 2): Permissible limit values of

biological exposure (effect) indices

Components	, Value	Determinant	Specimen	Sampling Time	
Aluminium nitride (CAS 24304-00-5)	0,25 µmol/mmol	Aluminium	Creatinine in urine	*	
	0,06 mg/g	Aluminium	Creatinine in urine	*	
Thermal conductive filler	0,25 µmol/mmol	Aluminium	Creatinine in urine	*	
	0,06 mg/g	Aluminium	Creatinine in urine	*	

<sup>\* -</sup> For sampling details, please see the source document.

Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)				
Components	Value	Determinant	Specimen	Sampling Time
Thermal conductive filler	50 μg/g	Aluminium	Creatinine in urine	*

<sup>\* -</sup> For sampling details, please see the source document.

Recommended monitoring procedures

Follow standard monitoring procedures.

Derived no effect levels

(DNELs)

Not available.

Predicted no effect

concentrations (PNECs)

Not available.

**Exposure guidelines** 

Occupational Exposure Limits are not relevant to the current physical form of the product.

8.2. Exposure controls

Appropriate engineering

controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

#### Individual protection measures, such as personal protective equipment

**General information** Personal protection equipment should be chosen according to the CEN standards and in

discussion with the supplier of the personal protective equipment.

Eye/face protection Wear safety glasses with side shields (or goggles). Eye protection should meet standard EN 166.

Skin protection

Wear suitable gloves tested to EN374. Suitable gloves can be recommended by the glove - Hand protection

supplier.

- Other Wear suitable protective clothing.

In case of insufficient ventilation, wear suitable respiratory equipment. Use filter type A1 / P2 Respiratory protection

according to EN 143. Check with respiratory protective equipment suppliers.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Always observe good personal hygiene measures, such as washing after handling the material Hygiene measures

and before eating, drinking, and/or smoking. Routinely wash work clothing and protective

equipment to remove contaminants.

**Environmental exposure** 

controls

Emissions from ventilation or work process equipment should be checked to ensure they comply

with the requirements of environmental protection legislation. Fume scrubbers, filters or

engineering modifications to the process equipment may be necessary to reduce emissions to

acceptable levels.

# **SECTION 9: Physical and chemical properties**

9.1. Information on basic physical and chemical properties

Solid. Physical state **Form** Gel Red Colour

Odour No data available.

**Odour threshold** Property has not been measured. Melting point/freezing point Property has not been measured. **Boiling point or initial boiling** Property has not been measured. point and boiling range

**Flammability** Not flammable.

Tputty™910 SDS EU Upper/lower flammability or explosive limits

Explosive limit - lower (%) Property has not been measured. Explosive limit - upper Property has not been measured.

(%)

Flash point Property has not been measured. **Auto-ignition temperature** Property has not been measured. **Decomposition temperature** Property has not been measured. Property has not been measured. pН Not applicable, material is a solid. Kinematic viscosity

Solubility

Solubility (water) Property has not been measured. Partition coefficient Not applicable for mixtures.

(n-octanol/water) (log value)

Not applicable, material is a solid. Vapour pressure

Density and/or relative density

**Density** Property has not been measured. Relative density Property has not been measured. Not applicable, material is a solid. Vapour density

**Particle characteristics** 

Particle size Property has not been measured.

9.2. Other information

No relevant additional information available. 9.2.1. Information with regard to physical hazard classes

9.2.2. Other safety characteristics

**Evaporation rate** Property has not been measured. **Viscosity** Property has not been measured.

# **SECTION 10: Stability and reactivity**

10.1. Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Material is stable under normal conditions. 10.2. Chemical stability

10.3. Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Contact with incompatible materials. 10.4. Conditions to avoid 10.5. Incompatible materials Strong oxidising agents. Acids. Chlorine.

10.6. Hazardous Decomposition is not expected under normal conditions of use and storage. In the event of fire:

See Section 5. decomposition products

# **SECTION 11: Toxicological information**

**General information** Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation Due to the physical form of the product, the ingredients are not expected to present a hazard by

inhalation.

Skin contact Prolonged skin contact may cause temporary irritation. Eye contact Direct contact with eyes may cause temporary irritation.

May cause discomfort if swallowed. Ingestion

Direct contact with eyes may cause temporary irritation. **Symptoms** 

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

**Acute toxicity** Not expected to be acutely toxic.

Skin corrosion/irritation Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met. Serious eye damage/eye

irritation

Based on available data, the classification criteria are not met. Respiratory sensitisation Skin sensitisation Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met. Germ cell mutagenicity Carcinogenicity Based on available data, the classification criteria are not met.

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963517 Version #: 01 Revision date: -Issue date: 26-December-2022 Reproductive toxicity

Specific target organ toxicity single exposure

Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met.

Specific target organ toxicity -

repeated exposure

Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

Mixture versus substance

information

No information available.

#### 11.2. Information on other hazards

**Endocrine disrupting** 

properties

This mixture does not contain any substances having endocrine disrupting properties with respect to human health as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than

0.1% by weight.

Other information Chronic effects are not expected when this product is used as intended.

# **SECTION 12: Ecological information**

Based on available data, the classification criteria are not met for hazardous to the aquatic 12.1. Toxicity

environment.

12.2. Persistence and

degradability

No data is available on the degradability of this product.

12.3. Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient

n-octanol/water (log Kow)

Not applicable for mixtures.

**Bioconcentration factor (BCF)** Not available.

No data available for this product. 12.4. Mobility in soil

12.5. Results of PBT and vPvB

assessment

This mixture does not contain substances assessed to be vPvB / PBT according to Regulation

(EC) No 1907/2006, Annex XIII.

12.6. Endocrine disrupting

properties

This mixture does not contain any substances having endocrine disrupting properties with respect to the environment as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than

0.1% by weight.

12.7. Other adverse effects No data available for this product.

#### **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some

product residues. This material and its container must be disposed of in a safe manner.

Since emptied containers may retain product residue, follow label warnings even after container is Contaminated packaging

emptied. Empty containers should be taken to an approved waste handling site for recycling or

disposal.

EU waste code The Waste code should be assigned in discussion between the user, the producer and the waste

disposal company.

Disposal methods/information Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Special precautions Dispose in accordance with all applicable regulations.

#### **SECTION 14: Transport information**

14.1. UN number

14.2. UN proper shipping

Not regulated as dangerous goods. Not regulated as dangerous goods.

name

14.3. Transport hazard class(es)

Class Not assigned.

Subsidiary risk

Not assigned. Hazard No. (ADR) Not assigned. **Tunnel restriction code** Not assigned. 14.4. Packing group

14.5. Environmental hazards No.

14.6. Special precautions Not assigned.

for user

RID

14.1. UN number Not regulated as dangerous goods.

Tputty™910 SDS EU **14.2. UN proper shipping** Not regulated as dangerous goods.

name

14.3. Transport hazard class(es)

Class Not assigned.

Subsidiary risk

**14.4. Packing group** Not assigned.

14.5. Environmental hazards No.

**14.6. Special precautions** Not assigned.

for user

**ADN** 

14.1. UN number14.2. UN proper shippingNot regulated as dangerous goods.Not regulated as dangerous goods.

name

14.3. Transport hazard class(es)

Class Not assigned.

Subsidiary risk -

**14.4. Packing group** Not assigned.

14.5. Environmental hazards No.

**14.6. Special precautions** Not assigned.

for user

**IATA** 

**14.1. UN number**Not regulated as dangerous goods. **14.2. UN proper shipping**Not regulated as dangerous goods.

name

14.3. Transport hazard class(es)

Class Not assigned.

Subsidiary risk -

**14.4. Packing group** Not assigned.

14.5. Environmental hazards No.

**14.6. Special precautions** Not assigned.

for user

**IMDG** 

**14.1. UN number**Not regulated as dangerous goods. **14.2. UN proper shipping**Not regulated as dangerous goods.

name

14.3. Transport hazard class(es)

Class Not assigned.

Subsidiary risk -

**14.4. Packing group** Not assigned.

14.5. Environmental hazards

Marine pollutant No. EmS Not assigned.

14.6. Special precautions Not assigned.

for user

14.7. Maritime transport in bulk Not app

Not applicable.

according to IMO instruments

# **SECTION 15: Regulatory information**

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

**EU** regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended Not listed.

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#### Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

#### **Authorisations**

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

#### Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

# Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

Other regulations The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP

Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation

(EC) No 1907/2006, as amended.

National regulations Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as

amended.

15.2. Chemical safety

assessment

No Chemical Safety Assessment has been carried out.

#### **SECTION 16: Other information**

#### List of abbreviations

ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland

Waterways.

ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.

AGW: Occupational threshold limit value (Arbeitsplatzgrenzwert - Germany).

CAS: Chemical Abstract Service.

CEN: European Committee for Standardization. IATA: International Air Transport Association.

IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous

Chemicals in Bulk.

IMDG: International Maritime Dangerous Goods.

MAC: Maximum Allowed Concentration.

MARPOL: International Convention for the Prevention of Pollution from Ships.

PBT: Persistent, bioaccumulative and toxic.

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.

STEL: Short term exposure limit. TLV: Threshold Limit Value. TWA: Time Weighted Average. VME: Exposure Average Value.

vPvB: Very persistent and very bioaccumulative.

References ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

ECHA registered substances database

EPA: AQUIRE database

HSDB® - Hazardous Substances Data Bank

IARC Monographs. Overall Evaluation of Carcinogenicity National Toxicology Program (NTP) Report on Carcinogens

NLM: Hazardous Substances Data Base

Information on evaluation method leading to the classification of mixture

**Training information** 

Tputty™910

The classification for health and environmental hazards is derived by a combination of calculation

methods and test data, if available.

Full text of any statements, which are not written out in full under sections 2 to 15

H372 Causes damage to organs through prolonged or repeated exposure by inhalation.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects. Follow training instructions when handling this material.

## Disclaimer

Laird cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

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