

Safety Data Sheet

according to Regulation (EC) No 1907/2006

S62-325GM5

Revision date: 04.07.2018

Product code: 950709

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

S62-325GM5

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

Solder paste

Uses advised against

any non-intended use.

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

Company name:	Cobar Europe BV	
Street:	Aluminiumstraat 2	
Place:	NL-4823 AL Breda	
Telephone:	+31 76 5445566	Telefax: +31 76 5445577
e-mail:	info@Cobar.com	

Supplier

Company name:	Balver Zinn Josef Jost GmbH & Co. KG	
Street:	Blintroper Weg 11	
Place:	D-58802 Balve	
Telephone:	+49 2375 915-0	Telefax: +49 2375 915-114
Responsible Department:	cia@BalverZinn.com	

1.4. Emergency telephone number: Chemtrec: +44(0) 870-8200418**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Reproductive toxicity: Repr. 1A

Reproductive toxicity: Lact.

Specific target organ toxicity - repeated exposure: STOT RE 1

Hazardous to the aquatic environment: Aquatic Acute 1

Hazardous to the aquatic environment: Aquatic Chronic 1

Hazard Statements:

Causes skin irritation.

Causes serious eye irritation.

May damage fertility. May damage the unborn child.

May cause harm to breast-fed children.

Causes damage to organs through prolonged or repeated exposure.

Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**

lead powder [particle diameter < 1 mm]

Signal word: Danger

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Pictograms:



Hazard statements

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H360FD	May damage fertility. May damage the unborn child.
H362	May cause harm to breast-fed children.
H372	Causes damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements

P201	Obtain special instructions before use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P263	Avoid contact during pregnancy and while nursing.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P391	Collect spillage.

Special labelling of certain mixtures

Restricted to professional users.

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
7440-31-5	tin			50 - < 55 %
	231-141-8		01-2119486474-28	
7439-92-1	lead powder [particle diameter < 1 mm]			30 - < 35 %
	231-100-4	082-013-00-1	01-2119513221-59	
	Repr. 1A, Lact., STOT RE 1, Aquatic Acute 1 (M-Factor = 10), Aquatic Chronic 1 (M-Factor = 1); H360FD H362 H372 H400 H410			
65997-13-9	ester of hydrogenated rosin			5 - < 10 %
107-41-5	2-methylpentane-2,4-diol			1 - < 5 %
	203-489-0	603-053-00-3		
	Skin Irrit. 2, Eye Irrit. 2; H315 H319			
2687-94-7	N-(n-octyl)-2-pyrrolidone			1 - < 5 %
	403-700-8	613-098-00-0	01-0000015335-74	
	Skin Corr. 1B, Aquatic Chronic 2; H314 H411			
7440-22-4	silver			1 - < 5 %

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	231-131-3		01-2119555669-21	
	Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiy[bis[12-hydroxyoctadecanamide]			< 1 %
	484-050-2		01-0000020228-74	
	Aquatic Acute 1, Aquatic Chronic 1; H400 H410			

Full text of H and EUH statements: see section 16.

Further Information

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: lead powder [particle diameter < 1 mm] CAS n°: 7439-92-1

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Change contaminated clothing.

First aider: Pay attention to self-protection!

After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. Get medical advice/attention.

After contact with skin

Remove contaminated, saturated clothing immediately. Wash immediately with: Water and soap. Get medical advice/attention.

After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

After ingestion

Rinse mouth thoroughly with water. Let water be drunk in little sips (dilution effect). Do NOT induce vomiting.

Never give anything by mouth to an unconscious person or a person with cramps. Get medical advice/attention.

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

refer to chapter 2 and 11.

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**

Sand

Extinguishing powder

D -powder

Unsuitable extinguishing media

Extinguishing media which must not be used for safety reasons:

Water

High power water jet

Water spray jet

5.2. Special hazards arising from the substance or mixture

Can be released in case of fire: Gas/vapours, irritant. Carbon monoxide Carbon dioxide (CO₂). Nitrogen oxides (NO_x). Metal oxide smoke, toxic.

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5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
In case of fire: Wear self-contained breathing apparatus.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Use water spray jet to protect personnel and to cool endangered containers.
Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Ventilate affected area. Remove persons to safety.
Avoid exposure. Do not breathe smoke. Do not breathe vapour/aerosol. Avoid contact with skin, eyes and clothes.
Wear personal protection equipment. (See section 8.)
Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Take up mechanically.
Treat the recovered material as prescribed in the section on waste disposal.
Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Provide adequate ventilation as well as local exhaustion at critical locations.
Avoid exposure - obtain special instructions before use.
Do not breathe smoke. Do not breathe vapour/aerosol. Avoid contact with skin, eyes and clothes.
Wear suitable protective clothing. (See section 8.)

Advice on protection against fire and explosion

Usual measures for fire prevention.

Further information on handling

General protection and hygiene measures: See section 8.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed in a cool, well-ventilated place.
Keep/Store only in original container.

Advice on storage compatibility

Do not store together with: Explosives. Gas. Oxidizing liquids. Oxidizing solids. Self-reactive substances and mixtures. Organic peroxides. Ammonium nitrate and preparations containing ammonium nitrate. Combustible toxic substances. Non-combustible toxic substances. Radioactive substances. Infectious substances.

Further information on storage conditions

Keep the packing dry and well sealed to prevent contamination and absorption of humidity.

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Protect against: UV-radiation/sunlight. heat. moisture. frost.
storage temperature: refer to specifications.

7.3. Specific end use(s)

refer to chapter 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
107-41-5	2-Methylpentane-2,4-diol	25	123		TWA (8 h)	WEL
		25	123		STEL (15 min)	WEL
-	Lead other than lead alkyls	-	0.15		TWA (8 h)	CLAW
		-	-		STEL (15 min)	CLAW
7440-22-4	Silver, metallic	-	0.1		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

Biological Monitoring Guidance Values (EH40)

CAS No	Substance	Parameter	Value	Test material	Sampling time
7439-92-1	Lead (any other employee)	lead	35 µg/dl	blood	Random

DNEL/DMEL values

CAS No	Substance	DNEL type	Exposure route	Effect	Value
7440-31-5	tin	Consumer DNEL, long-term	inhalation	systemic	3,476 mg/m ³
		Consumer DNEL, acute	inhalation	systemic	3,476 mg/m ³
		Worker DNEL, long-term	inhalation	systemic	11,75 mg/m ³
		Worker DNEL, acute	inhalation	systemic	11,75 mg/m ³
		Consumer DNEL, long-term	dermal	systemic	80 mg/kg bw/day
		Worker DNEL, acute	dermal	systemic	133,3 mg/kg bw/day
		Consumer DNEL, acute	dermal	systemic	80 mg/kg bw/day
		Worker DNEL, long-term	dermal	systemic	133,3 mg/kg bw/day
		Consumer DNEL, acute	oral	systemic	80 mg/kg bw/day
		Consumer DNEL, long-term	oral	systemic	80 mg/kg bw/day
107-41-5	2-methylpentane-2,4-diol	Worker DNEL, long-term	inhalation	systemic	14 mg/m ³
		Worker DNEL, long-term	inhalation	local	49 mg/m ³
		Worker DNEL, acute	inhalation	local	98 mg/m ³
		Worker DNEL, long-term	dermal	systemic	2 mg/kg bw/day
		Consumer DNEL, long-term	inhalation	systemic	3,5 mg/m ³
		Consumer DNEL, long-term	inhalation	local	25 mg/m ³

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Consumer DNEL, long-term	dermal	systemic	1 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	1 mg/kg bw/day
Consumer DNEL, acute	inhalation	local	49 mg/m ³
2687-94-7	N-(n-octyl)-2-pyrrolidone		
Worker DNEL, long-term	inhalation	systemic	18,52 mg/m ³
7440-22-4	silver		
Consumer DNEL, long-term	oral	systemic	1,2 mg/kg bw/day
Worker DNEL, long-term	inhalation	systemic	0,1 mg/m ³
Consumer DNEL, long-term	inhalation	systemic	0,04 mg/m ³
	Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandylbis[12-hydroxyoctadecanamide]		
Worker DNEL, long-term	inhalation	systemic	9,8 mg/m ³
Worker DNEL, long-term	dermal	systemic	14 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	2,9 mg/m ³
Consumer DNEL, long-term	dermal	systemic	8,3 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	8,3 mg/kg bw/day

PNEC values

CAS No	Substance	Value
Environmental compartment		Value
7439-92-1	lead powder [particle diameter < 1 mm]	
Freshwater		0,0031 mg/l
Marine water		0,0035 mg/l
Freshwater sediment		174 mg/kg
Marine sediment		164 mg/kg
Secondary poisoning		10,9 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,1 mg/l
Soil		212 mg/kg
107-41-5	2-methylpentane-2,4-diol	
Micro-organisms in sewage treatment plants (STP)		20 mg/l
Freshwater sediment		1,79 mg/kg
Freshwater		0,429 mg/l
Marine water		0,0429 mg/l
Soil		0,11 mg/kg
Secondary poisoning		100 mg/kg
Marine sediment		0,179 mg/kg
2687-94-7	N-(n-octyl)-2-pyrrolidone	
Freshwater sediment		0,08 mg/kg
Marine water		0,0012 mg/l
Micro-organisms in sewage treatment plants (STP)		4,6 mg/l
Marine sediment		0,008 mg/kg
Soil		0,06 mg/kg
Freshwater		0,012 mg/l
7440-22-4	silver	
Soil		1,41 mg/kg

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Freshwater	0,00004 mg/l
Marine sediment	438,13 mg/kg
Freshwater sediment	438,13 mg/kg
Marine water	0,00086 mg/l
Micro-organisms in sewage treatment plants (STP)	0,025 mg/l
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	
Freshwater	0,000146 mg/l
Marine water	0,0000146 mg/l
Soil	66,576 mg/kg
Marine sediment	5,554 mg/kg
Freshwater sediment	55,54 mg/kg
Micro-organisms in sewage treatment plants (STP)	10 mg/l

8.2. Exposure controls



Appropriate engineering controls

Provide adequate ventilation as well as local exhaust at critical locations.
Process within closed systems.

Protective and hygiene measures

The usual precautions for handling chemicals should be considered.
Keep away from food, drink and animal feedingstuffs.
Always close containers tightly after the removal of product. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Protect skin by using skin protective cream. Take off contaminated clothing and wash it before reuse. Street clothing should be stored separately from work clothing. Contaminated work clothing should not be allowed out of the workplace.

Eye/face protection

Recommended eye protection brand: Tightly sealed safety glasses. (DIN EN 166)

Hand protection

Wear suitable gloves.
for coarse soldering works: heat insulating.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
In the case of wanting to use the gloves again, clean them before taking off and air them well. Before using check leak tightness / impermeability.
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Protective clothing (heat-resistant)
Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.
Respiratory protection necessary at:
Insufficient ventilation.
exceeding exposure limit values
Release of: product.

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Suitable respiratory protective equipment: Particle filter device (DIN EN 143) Type: P3
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

Environmental exposure controls

This material and its container must be disposed of in a safe way.

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

Physical state:	Paste	
Colour:	metallic, grey	
Odour:	characteristic.	
pH-Value:		not determined

Changes in the physical state

Melting point:	not determined
Initial boiling point and boiling range:	not determined
Flash point:	not determined

Explosive properties

none

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Decomposition temperature:	not determined

Oxidizing properties

none.

Vapour pressure: (at 20 °C)	not determined
Density:	not determined
Water solubility:	not miscible

Solubility in other solvents

not determined

Viscosity / dynamic: (at 20 °C)	not determined
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Viscosity / kinematic: (at 20 °C)	not determined
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Flow time:	not determined
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Vapour density:	not determined
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9.2. Other information

Solid content:	not determined
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SECTION 10: Stability and reactivity**10.1. Reactivity**

No information available.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

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10.3. Possibility of hazardous reactions

Reacts with : Strong acid, Oxidising agent

10.4. Conditions to avoid

Protect against: UV-radiation/sunlight. heat.

10.5. Incompatible materials

Materials to avoid: Oxidizing agents, strong. Reducing agents, strong. Strong acid. strong alkalis.

10.6. Hazardous decomposition products

Can be released in case of fire: Gas/vapours, irritant. Carbon monoxide Carbon dioxide (CO₂). Nitrogen oxides (NO_x). Metal oxide smoke, toxic.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicokinetics, metabolism and distribution

No data available.

Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7440-31-5	tin				
	oral	LD50 >2000 mg/kg	Rat	ECHA Dossier	
	dermal	LD50 >2000 mg/kg	Rat	ECHA Dossier	
	inhalation (4 h) aerosol	LC50 (>4,75) mg/l	Rat	ECHA Dossier	
7439-92-1	lead powder [particle diameter < 1 mm]				
	oral	LD50 > 2000 mg/kg	Rat	Study report (2003)	OECD Guideline 423
	dermal	LD50 > 2000 mg/kg	Rat	Study report (2003)	OECD Guideline 402
107-41-5	2-methylpentane-2,4-diol				
	oral	LD50 >2000 mg/kg	Rat (OECD 420)	ECHA Dossier	
	dermal	LD50 >2000 mg/kg	Rabbit (OECD 402)	ECHA Dossier	
2687-94-7	N-(n-octyl)-2-pyrrolidone				
	oral	LD50 2050 mg/kg	Rat	RTECS	
	dermal	LD50 >2000 mg/kg	Rabbit.	RTECS	
7440-22-4	silver				
	oral	LD50 >2000 mg/kg	Rat	ECHA Dossier	
	dermal	LD50 >2000 mg/kg	Rat	ECHA Dossier	
	inhalation (4 h) aerosol	LC50 >5,16 mg/l	Rat	ECHA Dossier	
	Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiyibis[12-hydroxyoctadecanamide]				

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	oral	LD50 mg/kg	>2000	Rat	ECHA Dossier	
	dermal	LD50 mg/kg	>2000		ECHA Dossier	
	inhalation aerosol	LC50 mg/l	(>6,3)		ECHA Dossier	

Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

Sensitising effects

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

May cause sensitisation especially in sensitive humans.

Carcinogenic/mutagenic/toxic effects for reproduction

May damage fertility. May damage the unborn child. (lead powder [particle diameter < 1 mm])

May cause harm to breast-fed children. (lead powder [particle diameter < 1 mm])

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

lead (CAS No. 7439-92-1):

In vivo mutagenicity/genotoxicity Evidence exists for in-vivo mutagenicity.

Carcinogenicity: LOAEL = >250 ppm (Rat; EPA OTS 798.332; 104 weeks)

Reproductive toxicity: NOAEL = 250 mg/L (Rat; 60d)

Literature information: ECHA Dossier

2-methylpentane-2,4-diol (CAS-No.: 107-41-5):

In-vitro mutagenicity: No experimental indications of mutagenicity in-vitro exist.

Reproductive toxicity:

Species: Sprague-Dawley Rat.

Method: OECD Guideline 421

Result: NOAEL = 1000 mg/kg/day (female.), = 200 mg/kg/day (male.)

Developmental toxicity/teratogenicity:

Exposure time: 10d

Species: Sprague-Dawley CrI CD (SD) IGS BR Rat.

Method: OECD Guideline 414

Result: NOAEL = 300 mg/kg/day

Literature information: ECHA Dossier

N-(n-octyl)-2-pyrrolidone (CAS-No.: 2687-94-7):

In-vitro mutagenicity: No experimental indications of mutagenicity in-vitro exist.

Literature information: ECHA Dossier

Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide] (EC No. 484-050-2):

In-vitro mutagenicity: No experimental indications of mutagenicity in-vitro exist.

Reproductive toxicity:

Species: CrI:WI(Han) Rat.

Method: no guideline mentioned

Result: NOAEL = >1000 mg/kg/day

Literature information: ECHA Dossier

STOT-single exposure

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

STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure. (lead powder [particle diameter < 1 mm])

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2-methylpentane-2,4-diol (CAS-No.: 107-41-5):
Subchronic oral toxicity:
Exposure time: 90d
Species: Sprague-Dawley CrI CD (SD) IGS BR Rat.
Method: OECD Guideline 408
Result: NOAEL = 450 mg/kg/day
Literature information: ECHA Dossier

Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide] (EC No. 484-050-2):

Subacute oral toxicity:
Exposure time: 28d
Species: Wistar Rat.
Method: no guideline mentioned
Result: NOAEL = >1000 mg/kg(bw)/day
Literature information: ECHA Dossier

Aspiration hazard

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

(lead; Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide])

Specific effects in experiment on an animal

No data available.

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
7439-92-1	lead powder [particle diameter < 1 mm]					
	Acute fish toxicity	LC50 mg/l	1,17	96 h	Oncorhynchus mykiss	Publication (1976) Acute bioassays
	Acute algae toxicity	ErC50 mg/l	0,123	72 h	Pseudokirchneriella subcapitata	Study report (2008) OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	0,1043	48 h	Ceriodaphnia dubia	Study report (2010) other: USEP
	Fish toxicity	NOEC mg/l	0,23	28 d	Cyprinodon variegatus	Study report (2010) other: ASTM Method E1241 2003
	Crustacea toxicity	NOEC mg/l	0,1433	126 d	other aquatic worm: Neanthes arenaceodentata	Study report (2007) other: PERL Protocol No. 3690NA-CSR120 d-
107-41-5	2-methylpentane-2,4-diol					
	Acute fish toxicity	LC50 mg/l	8690	96 h	Pimephales promelas (OECD 203)	ECHA Dossier
	Acute algae toxicity	ErC50 mg/l	>429	72 h	Pseudokirchnerella subcapitata (OECD 201)	ECHA Dossier
	Acute crustacea toxicity	EC50 mg/l	5410	48 h	Daphnia magna (OECD 202)	ECHA Dossier
	Acute bacteria toxicity	(3070 mg/l)			Pseudomonas aeruginosa	ECHA Dossier
2687-94-7	N-(n-octyl)-2-pyrrolidone					

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	Acute fish toxicity	LC50 mg/l	17,8	96 h	Oncorhynchus mykiss	ECHA Dossier	
	Acute algae toxicity	ErC50 mg/l	19,5	72 h	Desmodesmus subspicatus	ECHA Dossier	
	Acute crustacea toxicity	EC50 mg/l	19,1	48 h	Daphnia magna	ECHA Dossier	
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiybis[12-hydroxyoctadecanamide]							
	Acute fish toxicity	LC50 mg/l	(>0,024)	96 h	Cyprinius carpio	ECHA Dossier	
	Acute algae toxicity	ErC50 mg/l	(0,025)	72 h	Selenastrum capricornutum	ECHA Dossier	
	Acute crustacea toxicity	EC50 mg/l	(>0,024)	48 h	Daphnia magna	ECHA Dossier	
	Algae toxicity	NOEC mg/l	(0,0073)	3 d	Algae	ECHA Dossier	
	Crustacea toxicity	NOEC mg/l	(>0,024)	21 d	Daphnia magna	ECHA Dossier	

12.2. Persistence and degradability

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
107-41-5	2-methylpentane-2,4-diol			
	OECD 301F / ISO 9408 / EEC 92/69 annex V, C.4-D	81%	28	ECHA Dossier
	Product is biodegradable.			
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiybis[12-hydroxyoctadecanamide]				
	no guideline followed	7%	28	MSDS extern.
	Product is not easily biodegradable.			

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
107-41-5	2-methylpentane-2,4-diol	0,58
	Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiybis[12-hydroxyoctadecanamide]	>6,5

BCF

CAS No	Chemical name	BCF	Species	Source
7439-92-1	lead powder [particle diameter < 1 mm]	40000	Asellus meridianus	Freshwater Biology 7

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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Advice on disposal

Dispose of waste according to applicable legislation. Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

Control report for waste code/ waste marking according to EAKV:

Waste disposal number of waste from residues/unused products

160303 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; inorganic wastes containing hazardous substances; hazardous waste

Waste disposal number of used product

160303 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; inorganic wastes containing hazardous substances; hazardous waste

Waste disposal number of contaminated packaging

150202 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; absorbents, filter materials, wiping cloths and protective clothing; absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances; hazardous waste

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

Recommended cleaning agent: Water, if necessary together with cleansing agents.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number:	UN 3077
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (lead powder [particle diameter < 1 mm])
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
Hazard label:	9
Classification code:	M7
Special Provisions:	274 335 375 601
Limited quantity:	5 kg
Excepted quantity:	E1
Transport category:	3
Hazard No:	90
Tunnel restriction code:	-

**Inland waterways transport (ADN)**

14.1. UN number:	UN 3077
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (lead powder [particle diameter < 1 mm])
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
Hazard label:	9



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Classification code: M7
 Special Provisions: 274 335 375 601
 Limited quantity: 5 kg
 Excepted quantity: E1

Marine transport (IMDG)

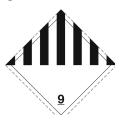
14.1. UN number: UN 3077
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (lead powder [particle diameter < 1 mm])
14.3. Transport hazard class(es): 9
14.4. Packing group: III
 Hazard label: 9



Marine pollutant: YES
 Special Provisions: 274, 335, 966, 967, 969
 Limited quantity: 5 kg
 Excepted quantity: E1
 EmS: F-A, S-F

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 3077
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (lead powder [particle diameter < 1 mm])
14.3. Transport hazard class(es): 9
14.4. Packing group: III
 Hazard label: 9



Special Provisions: A97 A158 A179 A197
 Limited quantity Passenger: 30 kg G
 Passenger LQ: Y956
 Excepted quantity: E1
 IATA-packing instructions - Passenger: 956
 IATA-max. quantity - Passenger: 400 kg
 IATA-packing instructions - Cargo: 956
 IATA-max. quantity - Cargo: 400 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: yes



Danger releasing substance: lead powder [particle diameter < 1 mm]

14.6. Special precautions for user

See section 8.

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

not relevant.

SECTION 15: Regulatory information

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

Restrictions on use (REACH, annex XVII):

Entry 30: lead powder [particle diameter < 1 mm]

2010/75/EU (VOC): No information available.

2004/42/EC (VOC): No information available.

Information according to 2012/18/EU (SEVESO III): E1 Hazardous to the Aquatic Environment

Additional information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

REACH 1907/2006 Appendix XVII, No (mixture): 28/29/30, 63

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.

Water contaminating class (D): 2 - clearly water contaminating

Additional information

Observe technical data sheet.

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

lead powder [particle diameter < 1 mm]

SECTION 16: Other information**Changes**

Rev. 1.00; 12.05.2015, Initial release

Rev. 1.01; 12.06.2015, Indication of changes section: 3, 16.

Rev. 1.1; 25.11.2016, Indication of changes - chapter: 1, 2, 3, 6, 7, 8, 12, 15, 16.

Rev. 2.0; 04.07.2018, Changes in chapter: 2, 3, 14, 15.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route

CAS Chemical Abstracts Service

DNEL: Derived No Effect Level

IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

LOAEL: Lowest observed adverse effect level

LOAEC: Lowest observed adverse effect concentration

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NOAEL: No observed adverse effect level

NOAEC: No observed adverse effect level

NTP: National Toxicology Program

N/A: not applicable

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OSHA: Occupational Safety and Health Administration
 PNEC: predicted no effect concentration
 PBT: Persistent bioaccumulative toxic
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 SARA: Superfund Amendments and Reauthorization Act
 SVHC: substance of very high concern
 TRGS Technische Regeln fuerGefahrstoffe
 TSCA: Toxic Substances Control Act
 VOC: Volatile Organic Compounds
 VwVwS: Verwaltungsvorschrift wassergefaehrdender Stoffe
 WGK: Wassergefaehrdungsklasse

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
Repr. 1A; H360FD	Calculation method
Lact.; H362	Calculation method
STOT RE 1; H372	Calculation method
Aquatic Acute 1; H400	Calculation method
Aquatic Chronic 1; H410	Calculation method

Relevant H and EUH statements (number and full text)

H314 Causes severe skin burns and eye damage.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H360FD May damage fertility. May damage the unborn child.
 H362 May cause harm to breast-fed children.
 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.
 H411 Toxic to aquatic life with long lasting effects.

Further Information

Classification according EC regulation 1272/2008 (CLP): - Classification procedure:
 Health hazards: Calculation method.
 Environmental hazards: Calculation method.
 Physical hazards: On basis of test data. and / or calculated and / or estimated.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)