

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**S62-325-XM2 DI-1%; S62-325XM2 DIR IMAG; S62-325XM3; S6M-325XM3; S62-XM3S;  
S6M-XM3S**

Revision date: 18.04.2018

Product code: 950705

Page 1 of 16

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

S62-325-XM2 DI-1%; S62-325XM2 DIR IMAG; S62-325XM3; S6M-325XM3; S62-XM3S; S6M-XM3S

**Further trade names**

This MSDS covers the following products:

S62-325-XM2 DI-1%

S62-325XM2 DIR IMAG

S62-325XM3

S6M-325XM3

S62-XM3S

S6M-XM3S

**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  
e-mail: info@Cobar.com

Telefax: +31 76 5445577

**Supplier**

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

Telefax: +49 2375 915-114

**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 Dam. 1

Reproductive toxicity: Repr. 1A

Reproductive toxicity: Lact.

Specific target organ toxicity - repeated exposure: STOT RE 1

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Causes skin irritation.

Causes serious eye damage.

May damage fertility. May damage the unborn child.

May cause harm to breast-fed children.

Causes damage to organs through prolonged or repeated exposure.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**S62-325-XM2 DI-1%; S62-325XM2 DIR IMAG; S62-325XM3; S6M-325XM3; S62-XM3S;  
S6M-XM3S**

Revision date: 18.04.2018

Product code: 950705

Page 2 of 16

Harmful to aquatic life with long lasting effects.

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

lead massive [particle diameter &gt;= 1 mm]

N-(n-octyl)-2-pyrrolidone

**Signal word:** Danger**Pictograms:****Hazard statements**

H315	Causes skin irritation.
H318	Causes serious eye damage.
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.
H412	Harmful 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.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P310	Immediately call a POISON CENTER/doctor.

**Special labelling of certain mixtures**

EUH208	Contains Resin acids and Rosin acids, fumarated, esters with glycerol. May produce an allergic reaction. 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			55 - < 60 %
	231-141-8		01-2119486474-28	
7439-92-1	lead massive [particle diameter >= 1 mm]			30 - < 35 %
	231-100-4	082-014-00-7	01-2119513221-59	
	Repr. 1A, Lact., STOT RE 1; H360FD H362 H372			
65997-13-9	ester of hydrogenated rosin			1 - < 5 %

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**S62-325-XM2 DI-1%; S62-325XM2 DIR IMAG; S62-325XM3; S6M-325XM3; S62-XM3S;  
S6M-XM3S**

Revision date: 18.04.2018

Product code: 950705

Page 3 of 16

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			< 2 %
	231-131-3		01-2119555669-21	
65997-05-9	Rosin, oligomers			< 1 %
	500-163-2			
65997-06-0	hydrogenated rosin			< 1 %
	266-041-3		01-2119487113-41	
97489-11-7	Resin acids and Rosin acids, fumarated, esters with glycerol			< 1 %
	307-051-0			
	Eye Irrit. 2, Skin Sens. 1; H319 H317			
	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]			< 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**

Product does not contain listed SVHC substances &gt; 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH).

**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.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**S62-325-XM2 DI-1%; S62-325XM2 DIR IMAG; S62-325XM3; S6M-325XM3; S62-XM3S;  
S6M-XM3S**

Revision date: 18.04.2018

Product code: 950705

Page 4 of 16

**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 (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>). Metal oxide smoke, toxic.**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**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**S62-325-XM2 DI-1%; S62-325XM2 DIR IMAG; S62-325XM3; S6M-325XM3; S62-XM3S;  
S6M-XM3S**

Revision date: 18.04.2018

Product code: 950705

Page 5 of 16

**Advice on safe handling**

Provide adequate ventilation as well as local exhaust 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.  
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 <sup>3</sup>	fibres/ml	Category	Origin
-	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
-	Tin compounds, inorganic, except SnH <sub>4</sub> , (as Sn)	-	2		TWA (8 h)	WEL
			4		STEL (15 min)	WEL

**Biological Monitoring Guidance Values (EH40)**

CAS No	Substance	Parameter	Value	Test material	Sampling time
7439-92-1	Lead (woman of reproductive capacity)	lead	20 µg/dl	blood	Random

**DNEL/DMEL values**

CAS No	Substance	DNEL type	Exposure route	Effect	Value

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**S62-325-XM2 DI-1%; S62-325XM2 DIR IMAG; S62-325XM3; S6M-325XM3; S62-XM3S;  
S6M-XM3S**

Revision date: 18.04.2018

Product code: 950705

Page 6 of 16

7440-31-5	tin			
Consumer DNEL, long-term		inhalation	systemic	3,476 mg/m <sup>3</sup>
Consumer DNEL, acute		inhalation	systemic	3,476 mg/m <sup>3</sup>
Worker DNEL, long-term		inhalation	systemic	11,75 mg/m <sup>3</sup>
Worker DNEL, acute		inhalation	systemic	11,75 mg/m <sup>3</sup>
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
2687-94-7	N-(n-octyl)-2-pyrrolidone			
Worker DNEL, long-term		inhalation	systemic	18,52 mg/m <sup>3</sup>
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 <sup>3</sup>
Consumer DNEL, long-term		inhalation	systemic	0,04 mg/m <sup>3</sup>
65997-05-9	Rosin, oligomers			
Consumer DNEL, long-term		oral	systemic	10 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	117 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	17 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	35 mg/m <sup>3</sup>
Consumer DNEL, long-term		dermal	systemic	10 mg/kg bw/day
65997-06-0	hydrogenated rosin			
Consumer DNEL, long-term		dermal	systemic	10 mg/kg bw/day
Worker DNEL, long-term		dermal	systemic	17 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	35 mg/m <sup>3</sup>
Worker DNEL, long-term		inhalation	systemic	117 mg/m <sup>3</sup>
Consumer DNEL, long-term		oral	systemic	10 mg/kg bw/day
97489-11-7	Resin acids and Rosin acids, fumarated, esters with glycerol			
Worker DNEL, long-term		dermal	systemic	4 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	9 mg/m <sup>3</sup>
Consumer DNEL, long-term		dermal	systemic	2,5 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	2,5 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	29 mg/m <sup>3</sup>
	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 <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	14 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	2,9 mg/m <sup>3</sup>
Consumer DNEL, long-term		dermal	systemic	8,3 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	8,3 mg/kg bw/day

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**S62-325-XM2 DI-1%; S62-325XM2 DIR IMAG; S62-325XM3; S6M-325XM3; S62-XM3S;  
S6M-XM3S**

Revision date: 18.04.2018

Product code: 950705

Page 7 of 16

**PNEC values**

CAS No	Substance	Value
Environmental compartment		
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
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
65997-05-9	Rosin, oligomers	
Freshwater		0,0016 mg/l
Marine water		0,00016 mg/l
Freshwater sediment		0,007 mg/kg
Marine sediment		0,0007 mg/kg
Micro-organisms in sewage treatment plants (STP)		1000 mg/l
Soil		0,00045 mg/kg
65997-06-0	hydrogenated rosin	
Freshwater		0,0016 mg/l
Marine water		0,00016 mg/l
Freshwater sediment		0,007 mg/kg
Marine sediment		0,0007 mg/kg
Micro-organisms in sewage treatment plants (STP)		1000 mg/l
Soil		0,00045 mg/kg
97489-11-7	Resin acids and Rosin acids, fumarated, esters with glycerol	
Freshwater		0,1 mg/l
Marine water		0,01 mg/l
Freshwater sediment		1,55 mg/kg
Marine sediment		0,155 mg/kg
Micro-organisms in sewage treatment plants (STP)		1,26 mg/l
Soil		0,249 mg/kg
	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

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**S62-325-XM2 DI-1%; S62-325XM2 DIR IMAG; S62-325XM3; S6M-325XM3; S62-XM3S;  
S6M-XM3S**

Revision date: 18.04.2018

Product code: 950705

Page 8 of 16

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.  
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.



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**S62-325-XM2 DI-1%; S62-325XM2 DIR IMAG; S62-325XM3; S6M-325XM3; S62-XM3S;  
S6M-XM3S**

Revision date: 18.04.2018

Product code: 950705

Page 9 of 16

**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: 179 °C

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: not determined  
(at 20 °C)

Density: not determined

Water solubility: not miscible

**Solubility in other solvents**

not determined

Viscosity / dynamic: not determined  
(at 20 °C)

Viscosity / kinematic: not determined  
(at 20 °C)

Flow time: not determined

Vapour density: not determined

**9.2. Other information**

Solid content: not determined

**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.

**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.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**S62-325-XM2 DI-1%; S62-325XM2 DIR IMAG; S62-325XM3; S6M-325XM3; S62-XM3S;  
S6M-XM3S**

Revision date: 18.04.2018

Product code: 950705

Page 10 of 16

**10.6. Hazardous decomposition products**

Can be released in case of fire: Gas/vapours, irritant. Carbon monoxide Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>). 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 massive [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
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	
65997-05-9	Rosin, oligomers				
	oral	LD50 >4000 mg/kg	Mouse.	MSDS extern.	
	dermal	LD50 >2000 mg/kg	Rabbit	MSDS extern.	
65997-06-0	hydrogenated rosin				
	oral	LD50 >5000 mg/kg	Rat.	RTECS	
	dermal	LD50 >2000 mg/kg	Rat.	MSDS extern.	
97489-11-7	Resin acids and Rosin acids, fumarated, esters with glycerol				
	oral	LD50 >2000 mg/kg	Rat. (OECD 401)	ECHA Dossier	

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**S62-325-XM2 DI-1%; S62-325XM2 DIR IMAG; S62-325XM3; S6M-325XM3; S62-XM3S;  
S6M-XM3S**

Revision date: 18.04.2018

Product code: 950705

Page 11 of 16

	dermal	LD50 mg/kg	>2000	Rat. (OECD 402)	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]						
	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 damage.

**Sensitising effects**

Contains Resin acids and Rosin acids, fumarated, esters with glycerol. May produce an allergic reaction.

May cause sensitisation especially in sensitive humans.

**Carcinogenic/mutagenic/toxic effects for reproduction**

May damage fertility. May damage the unborn child. (lead massive [particle diameter >= 1 mm])

May cause harm to breast-fed children. (lead massive [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

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 massive [particle diameter >= 1 mm])

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

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**S62-325-XM2 DI-1%; S62-325XM2 DIR IMAG; S62-325XM3; S6M-325XM3; S62-XM3S;  
S6M-XM3S**

Revision date: 18.04.2018

Product code: 950705

Page 12 of 16

Result: NOAEL = >1000 mg/kg(bw)/day

Literature information: ECHA Dossier

**Aspiration hazard**

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

**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
2687-94-7	N-(n-octyl)-2-pyrrolidone					
	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
97489-11-7	Resin acids and Rosin acids, fumarated, esters with glycerol					
	Acute algae toxicity	ErC50 mg/l	>100	72 h	Desmodesmus subspicatus (OECD 201)	ECHA Dossier
	Acute crustacea toxicity	EC50 mg/l	>100	48 h	Daphnia magna (OECD 202)	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]					
	Acute fish toxicity	LC50 mg/l	(>0,024)	96 h	Cyprinus 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			
65997-06-0	hydrogenated rosin			
	OECD Guideline 301 B	0,95%	28	ECHA Dossier
	Product is not easily 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-alkandiylbis[12-hydroxyoctadecanamide]			
	no guideline followed	7%	28	MSDS extern.
	Product is not easily biodegradable.			

**12.3. Bioaccumulative potential**

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**S62-325-XM2 DI-1%; S62-325XM2 DIR IMAG; S62-325XM3; S6M-325XM3; S62-XM3S;  
S6M-XM3S**

Revision date: 18.04.2018

Product code: 950705

Page 13 of 16

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
65997-05-9	Rosin, oligomers	>6,5
	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]	>6,5

**BCF**

CAS No	Chemical name	BCF	Species	Source
7439-92-1	lead massive [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****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:**

No dangerous good in sense of this transport regulation.

**14.2. UN proper shipping name:**

No dangerous good in sense of this transport regulation.

**14.3. Transport hazard class(es):**

No dangerous good in sense of this transport regulation.

**14.4. Packing group:**

No dangerous good in sense of this transport regulation.

**Inland waterways transport (ADN)**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**S62-325-XM2 DI-1%; S62-325XM2 DIR IMAG; S62-325XM3; S6M-325XM3; S62-XM3S;  
S6M-XM3S**

Revision date: 18.04.2018

Product code: 950705

Page 14 of 16

**14.1. UN number:** No dangerous good in sense of this transport regulation.  
**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.  
**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.  
**14.4. Packing group:** No dangerous good in sense of this transport regulation.

**Marine transport (IMDG)**

**14.1. UN number:** No dangerous good in sense of this transport regulation.  
**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.  
**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.  
**14.4. Packing group:** No dangerous good in sense of this transport regulation.

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number:** No dangerous good in sense of this transport regulation.  
**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.  
**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.  
**14.4. Packing group:** No dangerous good in sense of this transport regulation.

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**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**

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

**EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 63: lead massive [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): Not subject to 2012/18/EU (SEVESO III)

**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**

Chemical safety assessments for substances in this mixture were not carried out.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**S62-325-XM2 DI-1%; S62-325XM2 DIR IMAG; S62-325XM3; S6M-325XM3; S62-XM3S;  
S6M-XM3S**

Revision date: 18.04.2018

Product code: 950705

Page 15 of 16

**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; 18.04.2018, 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
- 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 Dam. 1; H318	Calculation method
Repr. 1A; H360FD	Calculation method
Lact.; H362	Calculation method
STOT RE 1; H372	Calculation method
Aquatic Chronic 3; H412	Calculation method

**Relevant H and EUH statements (number and full text)**

- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**S62-325-XM2 DI-1%; S62-325XM2 DIR IMAG; S62-325XM3; S6M-325XM3; S62-XM3S;  
S6M-XM3S**

Revision date: 18.04.2018

Product code: 950705

Page 16 of 16

H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
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.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains Resin acids and Rosin acids, fumarated, esters with glycerol. May produce an allergic reaction.

**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.)*