



MTN INDUSTRIAL PURE ZINC 99%
Code: EX0140108



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


1.1	PRODUCT IDENTIFIER:	MTN INDUSTRIAL PURE ZINC 99% Code: EX0140108
1.2	RELEVANT IDENTIFIED USES AND USES ADVISED AGAINST: <u>Intended uses (main technical functions):</u> Paint. <u>Sectors of use:</u> Consumer uses (SU21). <u>Uses advised against:</u> This product is not recommended for any use or sector of use industrial, professional or consume other than those previously listed as 'Intended or identified uses'. <u>Restrictions on manufacture, placing on market and use:</u> Nor restricted.	<input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Professional <input checked="" type="checkbox"/> Consumers
1.3	DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET: MONTANA COLORS, S.L. Pol. Ind. Plà de les Vives - c/AnaisNin 6 - 08295 Sant Vicenç de Castellet (Barcelona) ESPAÑA Phone: +34 93 8332760 - Fax: +34 93 8332761 - www.montanacolors.com <u>E-mail address of the person responsible for the safety data sheet:</u> e-mail: msds@montanacolors.com	
1.4	EMERGENCY TELEPHONE NUMBER: +34 93 8332787 (9:00-17:00 h.) (working hours)	Call CHEMTREC Day or Night. Within USA and Canada: 1-800-424-9300.

SECTION 2 : HAZARDS IDENTIFICATION

2.1	CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:												
	<u>HMIS Hazard Ratings:</u>	<table border="1"> <tr><td>3</td><td>HEALTH</td></tr> <tr><td>4</td><td>FLAMMABILITY</td></tr> <tr><td>1</td><td>REACTIVITY</td></tr> <tr><td>G</td><td>PPE</td></tr> </table>	3	HEALTH	4	FLAMMABILITY	1	REACTIVITY	G	PPE	(3) Serious chronic health hazard (4) Very high flammability hazard (1) Low physicochemical hazard (G) Safety glasses, gloves and vapor respirator		
3	HEALTH												
4	FLAMMABILITY												
1	REACTIVITY												
G	PPE												
	Note: HMIS Hazard Ratings involve data and interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of the material, all the information contained in this SDS must be considered.												
	<u>Classification in accordance with Regulation (EC) No. 1272/2008-487/2013 (CLP):</u> DANGER: Flam. Aerosol 1:H222+H229 Eye Irrit. 2:H319 STOT SE (narcosis) 3:H336 Aquatic Acute 1:H400 Aquatic Chronic 1:H410 EUH066												
	Danger class	Classification of the mixture	Cat.	Routes of exposure	Target organs	Effects							
	<u>Physicochemical:</u> 	Flam. Aerosol 1:H222+H229 Eye Irrit. 2:H319 STOT SE (narcosis) 3:H336 Aquatic Acute 1:H400	Cat.1 Cat.2 Cat.3	- Eyes Inhalation	- Eyes CNS	- Irritation Narcosis							
	<u>Human health:</u> 	Aquatic Chronic 1:H410 EUH066	Cat.1 Cat.1 -	- Skin	- Skin	- Dryness, Cracking							
	<u>Environment:</u> 												

Full text of hazard statements mentioned is indicated in section 16.

2.2	LABEL ELEMENTS: 	This product is labelled with the signal word DANGER
	<u>Hazard statements:</u> H222 H229 H319 H336 H410 EUH066	Extremely flammable aerosol. Pressurized container: may burst if heated. Causes serious eye irritation. May cause drowsiness or dizziness. Very toxic to aquatic life with long lasting effects. Repeated exposure may cause skin dryness or cracking.
	<u>Precautionary statements:</u> P101 P102 P103 P210 P211 P251 P264a P271-P260d P304+P340-P312 P305+P351+P338 P337+P313 P410+P412 P273-P391-P501a	If medical advice is needed, have product container or label at hand. Keep out of reach of children. Read label before use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Wash the hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Do not breathe aerosol. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Avoid release to the environment. Collect spillage. Dispose of contents/container in accordance with local regulations.

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Supplementary statements:

EUH208

Contains oleylamine-trimeric C18-fatty acids aduct, tall-oil fatty-acids oleylamide. May produce an allergic reaction.

Hazardous ingredients:

Acetone

n-butyl acetate

Hydrocarbons C9 aromatics

2.3

OTHER HAZARDS:

Hazards which do not result in classification but which may contribute to the overall hazards of the mixture:

Other physicochemical hazards: Vapours may form with air a mixture potentially flammable or explosive.Other adverse human health effects: No other relevant adverse effects are known.Other negative environmental effects: No other adverse effects are known.**SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS**

3.1

SUBSTANCES:

Not applicable (mixture).

3.2

MIXTURES:


This product is a mixture.


Chemical description:


Aerosol.


HAZARDOUS INGREDIENTS:


Substances taking part in a percentage higher than the exemption limit:

30 < 40 %  **Zinc powder (stabilized)**
 CAS: 7440-66-6 , EC: 231-175-3
 Warning: Aquatic Acute 1:H400 | Aquatic Chronic 1:H410


30 < 40 %  **Dimethyl ether**
 CAS: 115-10-6 , EC: 204-065-8
 Danger: Flam. Gas 1:H220 | Press. Gas:H280


5 < 10 %  **Xylene (mixture of isomers)**
 CAS: 1330-20-7 , EC: 215-535-7
 Danger: Flam. Liq. 3:H226 | Acute Tox. (inh.) 4:H332 | Acute Tox. (skin) 4:H312 | Skin Irrit. 2:H315 | Eye Irrit. 2:H319 | STOT SE (irrit.) 3:H335 | STOT RE 2:H373i | Asp. Tox. 1:H304


5 < 10 %  **Acetone**
 CAS: 67-64-1 , EC: 200-662-2
 Danger: Flam. Liq. 2:H225 | Eye Irrit. 2:H319 | STOT SE (narcosis) 3:H336 | EUH066

2,5 < 5 %  **n-butyl acetate**
 CAS: 123-86-4 , EC: 204-658-1
 Warning: Flam. Liq. 3:H226 | STOT SE (narcosis) 3:H336 | EUH066

2,5 < 5 %  **Hydrocarbons, C9, aromatics**
 (CAS: 64742-95-6) , List No. 918-668-5
 Danger: Flam. Liq. 3:H226 | STOT SE (irrit.) 3:H335 | STOT SE (narcosis) 3:H336 | Asp. Tox. 1:H304 | Aquatic Chronic 2:H411 | EUH066

1 < 2,5 %  **Zinc oxide**
 CAS: 1314-13-2 , EC: 215-222-5
 Warning: Aquatic Acute 1:H400 | Aquatic Chronic 1:H410

0,1 < 0,3 %  **Oleylamine-trimeric C18-fatty acids aduct**
 CAS: 147900-93-4 , List No. 604-612-4
 Warning: Acute Tox. (oral) 4:H302 | Skin Sens. 1B:H317 | STOT RE 2:H373o | Aquatic Chronic 2:H411

< 0,20 %  **Tall-oil fatty-acids oleylamide**
 CAS: 85711-55-3 , EC: 288-315-1
 Danger: Eye Dam. 1:H318 | Skin Sens. 1A:H317 | STOT RE 2:H373o

Impurities:

Does not contain other components or impurities which will influence the classification of the product.

Stabilizers:

None

Reference to other sections:

For more information on hazardous ingredients, see sections 8, 11, 12 and 16.



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SECTION 4 : FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST-AID MEASURES AND MAIN SYMPTOMS AND EFFECTS, ACUTE AND DELAYED:

4.2



Symptoms may occur after exposure, so that in case of direct exposure to the product, when in doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. Lifeguards should pay attention to self-protection and use the recommended protective equipment if there is a possibility of exposure. Wear protective gloves when administering first aid.

Route of exposure	Symptoms and effects, acute and delayed	Description of first-aid measures
<u>Inhalation:</u> 	Inhalation of solvent vapours may produce headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, unconsciousness.	Remove the patient out of the contaminated area into the fresh air. If breathing is irregular or stops, administer artificial respiration. If the person is unconscious, place in appropriate recovery position. Keep the patient warm and at rest until medical attention arrives.
<u>Skin:</u>	In case of prolonged contact, the skin may become dry.	Remove immediately contaminated clothing. Wash thoroughly the affected area with plenty of cold or lukewarm water and neutral soap, or use a suitable skin cleanser. Do not use solvents or thinners.
<u>Eyes:</u> 	Contact with the eyes produces redness and pain.	Remove contact lenses. Rinse eyes copiously by irrigation with plenty of clean, fresh water, holding the eyelids apart. Call a physician immediately.
<u>Ingestion:</u>	If swallowed, may cause irritation of the throat, abdominal pain, drowsiness, nausea, vomiting and diarrhoea.	If swallowed, seek medical advice immediately and show container or label. Do not induce vomiting. Keep the patient at rest.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:

Notes to physician: Treatment should be directed at the control of symptoms and the clinical condition of the patient.
Antidotes and contraindications: Specific antidote not known.

SECTION 5 : FIRE-FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:
Extinguishing powder or CO₂.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:
Reacts with water. Fire can produce a dense black smoke. As consequence of combustion or thermal decomposition, hazardous products may be produced: carbon monoxide, carbon dioxide, nitrogen oxides. Irritant. Exposure to combustion or decomposition products may be a hazard to health.



ANSI/NFPA 704:
Health: 2
Flammability: 4
Reactivity: 1
Special key: w

5.3 ADVICE FOR FIREFIGHTERS:
Special protective equipment: Depending on magnitude of fire, heat-proof protective clothing may be required, appropriate independent breathing apparatus, gloves, protective glasses or face masks and boots. If the fire-proof protective equipment is not available or not used, combat fire from a sheltered position or at a safe distance. The standard EN469 provides a basic level of protection for chemical incidents.
Other recommendations: Cool with water the tanks, cisterns or containers close to sources of heat or fire. Bear in mind the direction of the wind. Do not allow fire-fighting residue to enter drains, sewers or water courses.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:
Eliminate possible sources of ignition and when appropriate, ventilate the area. Do not smoke. Avoid direct contact with this product. Avoid breathing vapours. Keep people without protection in opposition to the wind direction.

6.2 ENVIRONMENTAL PRECAUTIONS:
Avoid contamination of drains, surface or subterranean water and soil. In the case of large scale spills or when the product contaminates lakes, rivers or sewages, inform the appropriate authorities in accordance with local regulations.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:
Contain and mop up spills with non-combustible absorbent materials (earth, sand, vermiculite, diatomaceous earth, etc.). Avoid use of solvents. Keep the remains in a closed container.



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SECTION 7 : HANDLING AND STORAGE

- 7.1 **PRECAUTIONS FOR SAFE HANDLING:**
Comply with the existing legislation on health and safety at work.
General recommendations:
Avoid any type of leakage or escape.
Recommendations for the prevention of fire and explosion risks:
Pressurised container. Protect from sunlight and do not expose to temperature exceeding 50°C. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material. Do not smoke.
- | | | |
|--|---|--------------------------|
| - Flash point | : | -40. °C |
| - Autoignition temperature | : | 403. °C |
| - Upper/lower flammability or explosive limits | : | 2.9 - 21.9 % Volume 25°C |
- Recommendations for the prevention of toxicological risks:**
Do not eat, drink or smoke in application and drying areas. After handling, wash hands with soap and water. Avoid applying the product directly to people, animals, plants or foodstuffs. For exposure controls and personal protection measures, see section 8.
- Recommendations for the prevention of environmental contamination:**
Product dangerous to the environment. Avoid any spillage in the environment. Pay special attention to the cleaning water. In the case of accidental spillage, follow the instructions indicated in section 6.
- 7.2 **CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:**
Prevent unauthorized access. Keep out of reach of children. This product should be stored isolated from heat and electrical sources. Do not smoke in storage area. If possible, avoid direct contact with sunlight. Avoid extreme humidity conditions. For more information, see section 10.
- | | | |
|-------------------------------|---|--|
| Class of store | : | According to current legislation. |
| Maximum storage period | : | 24. months |
| Temperature interval | : | min: 5. °C, max: 50. °C (recommended). |
- Incompatible materials:**
Keep away from oxidizing agents, from strongly alkaline and strongly acid materials.
- Type of packaging:**
According to current legislation.



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SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS:

If a product contains ingredients with exposure limits, may be necessary a personnel monitoring, work place or biological, to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to EN689, EN14042 and EN482 standard concerning methods for assessing the exposure by inhalation to chemical agents, and exposure to chemical and biological agents. Reference should be also made to national guidance documents for methods for the determination of dangerous substances.

OCCUPATIONAL EXPOSURE LIMIT VALUES (TLV)

AGCIH 2013	Year	TLV-TWA		TLV-STEL		Remarks
		ppm	mg/m3	ppm	mg/m3	
Zinc powder (stabilized)	1996	-	10.	-	-	Inhalable dust
Dimethyl ether		1000.	1920.	-	-	Recommended
Xylene (mixture of isomers)	1996	100.	434.	150.	651.	A4
Acetone	1997	500.	1188.	750.	1782.	A4
n-butyl acetate	1998	150.	713.	200.	950.	
Hydrocarbons C9 aromatics		50.	290.	-	-	Internal value
Zinc oxide	2003	-	2.0	-	10.	Breathable dust

TLV - Threshold Limit Value, TWA - Time Weighted Average, STEL - Short Term Exposure Limit.

A4 - Non classified as carcinogenic in humans.

BIOLOGICAL EXPOSURE INDICES (BEI):

Not available



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8.2

EXPOSURE CONTROLS:**ENGINEERING MEASURES:**

Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these measures are not sufficient to maintain concentrations of particulates and vapours below the Occupational Exposure Limits, suitable respiratory protection must be worn.

Protection of respiratory system: Avoid the inhalation of vapours.

Protection of eyes and face: It is recommended to dispose of water taps or sources with clean water close to the working area.

Protection of hands and skin: It is recommended to dispose of water taps or sources with clean water close to the working area. Barrier creams may help to protect the exposed areas of the skin. Barrier creams should not be applied once exposure has occurred.

OCCUPATIONAL EXPOSURE CONTROLS: Directive 89/686/EEC-96/58/EC:

As a general measure on prevention and safety in the work place, we recommend the use of a basic personal protection equipment (PPE), with the corresponding EC marking. For more information on personal protective equipment (storage, use, cleaning, maintenance, type and characteristics of the PPE, protection class, marking, category, etc.), you should consult the informative brochures provided by the manufacturers of PPE.

Mask:

Suitable combined filter mask for gases, vapours and particles (OSHA 29CFR 1910.134 and ANSI Z88.2). Classe 1: low capacity up to 1000 ppm, Classe 2: medium capacity up to 5000 ppm, Classe 3: high capacity up to 10000 ppm. In order to obtain a suitable protection level, the filter class must be selected depending on the type and concentration of the contaminating agents present, in accordance with the specifications supplied by the filter producers. The respiratory equipment with filters does not work satisfactorily when the air contains high concentrations of vapour or oxygen content less than 18% in volume.

Goggles:

Advisable. Clean daily and disinfect at regular intervals in accordance with the instructions of the manufacturer.

Face shield:

No.

Gloves:

Gloves resistant against chemicals (OSHA 29CFR 1910.132). There are several factors (for example, temperature), they do in practice the period of use of a protective gloves resistant against chemicals is clearly lower than the established standard OSHA 29CFR 1910.132. Due to the wide variety of circumstances and possibilities, we must have in mind the manual of instructions from manufacturers of gloves. The gloves should be immediately replaced when any sign of degradation is noted.

Boots:

No.

Apron:

No.

Clothing:

No.

Thermal hazards:

Not applicable (the product is handled at room temperature).

ENVIRONMENTAL EXPOSURE CONTROLS:

Avoid any spillage in the environment. Avoid any release into the atmosphere.

Spills on the soil: Prevent contamination of soil.

Spills in water: Very toxic to aquatic organisms. May cause long-term adverse effects on the aquatic environment. Do not allow to escape into drains, sewers or water courses.

Emissions to the atmosphere: Because of volatility, emissions to the atmosphere while handling and use may result. When possible, avoid solvent release to the atmosphere; do not pulverize more than is strictly necessary.

- VOC

:

688.8 g/l (-H₂O-es)

ASTM D-3960



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SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1	<p>INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:</p> <p><u>Appearance</u></p> <ul style="list-style-type: none"> - Physical state : Aerosol. - Odour : Characteristic - Odour threshold : Not available (mixture). <p><u>pH-value</u></p> <ul style="list-style-type: none"> - pH : Not applicable (non-aqueous media). <p><u>Change of state</u></p> <ul style="list-style-type: none"> - Melting point : Not applicable (mixture). - Initial boiling point : Not applicable <p><u>Density</u></p> <ul style="list-style-type: none"> - Relative density : 1.185 at 20/4°C Relative water <p><u>Stability</u></p> <ul style="list-style-type: none"> - Decomposition temperature : > 500. °C <p><u>Viscosity:</u></p> <ul style="list-style-type: none"> - Viscosity (flow time) : Not applicable <p><u>Volatility:</u></p> <ul style="list-style-type: none"> - Vapour pressure : Not available <p><u>Solubility(ies)</u></p> <ul style="list-style-type: none"> - Liposolubility : Not applicable - Partition coefficient: n-octanol/water : Not applicable (mixture). <p><u>Flammability:</u></p> <ul style="list-style-type: none"> - Flash point : -40. °C - Upper/lower flammability or explosive limits : 2.9 - 21.9 % Volume 25°C - Autoignition temperature : 403. °C <p><u>Explosive properties:</u> Vapours can form explosive mixtures with air and are able to flame up or explode in presence of an ignition source.</p> <p><u>Oxidizing properties:</u> Not classified as oxidizing product.</p>
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9.2	<p>OTHER INFORMATION:</p> <ul style="list-style-type: none"> - Solids : 46. % Weight - VOC (supply) : 53.9 % Weight <p>The values indicated do not always coincide with product specifications. The data for the product specifications can be found in the technical data sheet of the same. For additional information concerning physical and chemical properties related to safety and environment, see sections 7 and 12.</p>
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SECTION 10 : STABILITY AND REACTIVITY

10.1	<p>REACTIVITY:</p> <p><u>Corrosivity to metals:</u> It is not corrosive to metals.</p> <p><u>Pyrophorical properties:</u> It is not pyrophoric.</p>
10.2	<p>CHEMICAL STABILITY:</p> <p>Stable under recommended storage and handling conditions.</p>
10.3	<p>POSSIBILITY OF HAZARDOUS REACTIONS:</p> <p>Possible dangerous reaction with water, oxidizing agents, acids, alkalis, amines, peroxides.</p>
10.4	<p>CONDITIONS TO AVOID:</p> <p><u>Heat:</u> Keep away from sources of heat.</p> <p><u>Light:</u> Avoid direct contact with sunlight.</p> <p><u>Air:</u> Not applicable.</p> <p><u>Humidity:</u> Avoid extreme humidity conditions.</p> <p><u>Pressure:</u> Not applicable.</p> <p><u>Shock:</u> Not applicable.</p>
10.5	<p>INCOMPATIBLE MATERIALS:</p> <p>Keep away from oxidizing agents, from strongly alkaline and strongly acid materials.</p>
10.6	<p>HAZARDOUS DECOMPOSITION PRODUCTS:</p> <p>As consequence of thermal decomposition, hazardous products may be produced: nitrogen oxides.</p>



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SECTION 11 : TOXICOLOGICAL INFORMATION

No experimental toxicological data on the preparation is available. The toxicological classification for these mixture has been carried out by using the conventional calculation method of the Regulation (EC) No. 1272/2008~487/2013 (CLP).

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:ACUTE TOXICITY:Dose and lethal concentrations

for individual ingredients :
Dimethyl ether
Xylene (mixture of isomers)
Acetone
n-butyl acetate
Hydrocarbons C9 aromatics
Zinc oxide
Tall-oil fatty-acids oleylamide

DL50 (OECD 401)
mg/kg oral

4300. Rat
5800. Rat
10768. Rat
3592. Rat
> 5000. Rat
> 2000. Rat

DL50 (OECD 402)
mg/kg cutaneous

1700. Rabbit
15800. Rabbit
17600. Rabbit
3160. Rabbit

CL50 (OECD 403)
mg/m3.4h inhalation

> 100000 Rat
> 22080. Rat
> 76000. Rat
> 23400. Rat
> 6193. Rat
> 5700. Rat

No observed adverse effect level

Not available



Lowest observed adverse effect level

Not available

INFORMATION ON LIKELY ROUTES OF EXPOSURE : Acute toxicity:

Routes of exposure	Acute toxicity	Cat.	Main effects, acute and/or delayed
<u>Inhalation:</u> Not classified	ATE > 20000 mg/m3	-	Not classified as a product with acute toxicity if inhaled (based on available data, the classification criteria are not met).
<u>Skin:</u> Not classified	ATE > 2000 mg/kg	-	Not classified as a product with acute toxicity in contact with skin (based on available data, the classification criteria are not met).
<u>Eyes:</u> Not classified	Not available	-	Not classified as a product with acute toxicity by eye contact (lack of data).
<u>Ingestion:</u> Not classified	ATE > 5000 mg/kg	-	Not classified as a product with acute toxicity if swallowed (based on available data, the classification criteria are not met).

CORROSION / IRRITATION / SENSITISATION :

Danger class	Target organs	Cat.	Main effects, acute and/or delayed
<u>Respiratory corrosion/irritation:</u> Not classified	-	-	Not classified as a product corrosive or irritant by inhalation (based on available data, the classification criteria are not met).
<u>Skin corrosion/irritation:</u> Not classified	-	-	Not classified as a product corrosive or irritant in contact with skin (based on available data, the classification criteria are not met).
<u>Serious eye damage/irritation:</u> 	Eyes 	Cat.2	IRRITANT: Causes serious eye irritation.
<u>Respiratory sensitisation:</u> Not classified	-	-	Not classified as a product sensitising by inhalation (based on available data, the classification criteria are not met).
<u>Skin sensitisation:</u> Not classified	-	-	Not classified as a product sensitising by skin contact (based on available data, the classification criteria are not met).

ASPIRATION HAZARD:

Danger class	Target organs	Cat.	Main effects, acute and/or delayed
<u>Aspiration hazard:</u> Not classified	-	-	Not applicable.



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SPECIFIC TARGET ORGANS TOXICITY (STOT): Single exposure (SE) and/or Repeated exposure (RE):

Effects	SE/RE	Target organs	Cat.	Main effects, acute and/or delayed
<u>Cutaneous:</u>	RE	Skin 	-	DEFATTENING: Repeated exposure may cause skin dryness or cracking.
<u>Neurological:</u> 	SE	CNS 	Cat.3	NARCOSIS: May cause drowsiness or dizziness if inhaled.

CMR EFFECTS:

Carcinogenic effects: Is not considered as a carcinogenic product.

Genotoxicity: Is not considered as a mutagenic product.

Toxicity for reproduction: Do not harm fertility. Do not harm the fetus developing.

Effects via lactation: Not classified as a hazardous product for children breast-fed.

DELAYED AND IMMEDIATE EFFECTS AS WELL AS CHRONIC EFFECTS FROM SHORT AND LONG-TERM EXPOSURE:

Routes of exposure: May be absorbed by inhalation of vapour, through the skin and by ingestion.

Short-term exposure: Exposure to solvent vapour concentrations in excess of the stated occupational exposure limit, may result in adverse health effects, such as mucous membrane and respiratory system irritation and adverse effects on kidneys, liver and central nervous system. Liquid splashes in the eyes may cause irritation and reversible damage. If swallowed, may cause irritation of the throat; other effects may be the same as described in the exposure to vapours.

Long-term or repeated exposure: Repeated or prolonged contact may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. Repeated exposure may cause skin dryness or cracking.

INTERACTIVE EFFECTS:

Not available.

INFORMATION ABOUT TOXICOCINETICS, METABOLISM AND DISTRIBUTION:

Dermal absorption: Not available.

Basic toxicokinetics: Not available.

ADDITIONAL INFORMATION:

Not available.

SECTION 12 : ECOLOGICAL INFORMATION

No experimental ecotoxicological data on the preparation as such is available. The ecotoxicological classification for these mixture has been carried out by using the conventional calculation method of the Regulation (EC) No. 1272/2008-487/2013 (CLP).

12.1	<u>TOXICITY:</u>			
	<u>Acute toxicity in aquatic environment for individual ingredients :</u>	<u>CL50 (OECD 203)</u> mg/l.96hours	<u>CE50 (OECD 202)</u> mg/l.48hours	<u>CE50 (OECD 201)</u> mg/l.72hours
	Zinc powder (stabilized)	2.3 Fishes	0.15 Daphnia	0.15 Algae
	Dimethyl ether	4100. Fishes	4400. Daphnia	
	Xylene (mixture of isomers)	14. Fishes	16. Daphnia	> 10. Algae
	Acetone	5540. Fishes	12100. Daphnia	
	n-butyl acetate	18. Fishes	44. Daphnia	675. Algae
	Hydrocarbons C9 aromatics	9.2 Fishes	3.2 Daphnia	2.9 Algae
	Zinc oxide	1.8 Fishes	1.7 Daphnia	0.17 Algae
	Tall-oil fatty-acids oleylamide	> 100. Fishes	15. Daphnia	7.0 Algae
	<u>No observed effect concentration</u>	<u>NOEC (OECD 210)</u> mg/l.28days	<u>NOEC (OECD 211)</u> mg/l.21days	<u>NOEC (OECD 201)</u> mg/l.72hours
	n-butyl acetate		23. Daphnia	
	<u>Lowest observed effect concentration</u>	Not available		

12.2	<u>PERSISTENCE AND DEGRADABILITY:</u>			
	Not available.			
	<u>Aerobic biodegradation for individual ingredients :</u>	<u>DQO</u> mgO2/g	<u>%DBO/DQO</u> 5 days 14 days 28 days	<u>Biodegradability</u>
	Dimethyl ether	1041.	~ 1. ~ 3. ~ 5.	Not easy
	Xylene (mixture of isomers)	2620.	~ 52. ~ 81. ~ 88.	Easy
	Acetone	1920.	~ 91.	Easy
	n-butyl acetate	2204.	~ 80. ~ 82. ~ 83.	Easy
	Hydrocarbons C9 aromatics	3195.		Easy
	Oleylamine-trimeric C18-fatty acids aduct			Easy
	Tall-oil fatty-acids oleylamide		51. 72. 87.	Easy

Note: Biodegradability data correspond to an average of data from various bibliographic sources.



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12.3 **BIOACCUMULATIVE POTENTIAL:**

Not available.

Bioaccumulation

for individual ingredients :

	<u>logPow</u>	<u>BCF</u> L/kg	<u>Potential</u>
Zinc powder (stabilized)		16700. (calculated)	Not available
Dimethyl ether	0.0700	1.7 (calculated)	Unlikely, low
Xylene (mixture of isomers)	3.16	57. (calculated)	Low
Acetone	-0.240	3.2 (calculated)	No bioaccumulable
n-butyl acetate	1.81	6.9 (calculated)	No bioaccumulable
Hydrocarbons C9 aromatics	3.30	70. (calculated)	Low
Oleylamine-trimeric C18-fatty acids aduct		3.2 (calculated)	No bioaccumulable
Tall-oil fatty-acids oleylamide	13.5	71. (calculated)	Low

12.4 **MOBILITY IN SOIL:**

Not available.

12.6 **OTHER ADVERSE EFFECTS:**

Ozone depletion potential: Not available.

Photochemical ozone creation potential: Not available.

Earth global warming potential: In case of fire or incineration liberates CO₂.

Endocrine disrupting potential: Not available.

SECTION 13 : DISPOSAL CONSIDERATIONS

13.1 **WASTE TREATMENT METHODS:** Directive 2008/98/EC--Regulation (EU) no. 1357/2014:

Take all necessary measures to prevent the production of waste whenever possible. Analyse possible methods for revaluation or recycling. Dispose of this material and its container to hazardous or special waste collection point. Do not discharge into drains or the environment, dispose of at an authorised waste collection point. Waste should be handled and disposed of in accordance with current local and national regulations. For exposure controls and personal protection measures, see section 8.

Disposal of empty containers:

Emptied containers and packaging should be disposed of in accordance with currently local and national regulations. The classification of packaging as hazardous waste will depend on the degree of emptying of the same, being the holder of the residue responsible for their classification, With contaminated containers and packaging, adopt the same measures as for the product in itself. Ensure the container is completely empty before throwing it away.

Procedures for neutralising or destroying the product:

In accordance with local regulations. Do not incinerate closed containers.



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SECTION 14 : TRANSPORT INFORMATION

14.1 UN NUMBER: 1950

14.2 UN PROPER SHIPPING NAME:
AEROSOLS

14.3 TRANSPORT HAZARD CLASS(ES) AND PACKING GROUP:

14.4

Transport by road (ADR 2015) and
Transport by rail (RID 2015):

- Class:	2
- Packaging group:	-
- Classification code:	5F
- Tunnel restriction code:	(D)
- Transport category:	2 , max. ADR 1.1.3.6. 333 L
- Limited quantities:	1 L (see total exemptions ADR 3.4)
- Transport document:	Consignment paper.
- Instructions in writing:	ADR 5.4.3.4

Transport by sea (IMDG 36-12):

- Class:	2 (2.1)
- Packaging group:	-
- Emergency Sheet (EmS):	F-D,S-U
- First Aid Guide (MFAG):	620*
- Marine pollutant:	Yes.
- Transport document:	Shipping Bill of lading.

Transport by air (ICAO/IATA 2014):

- Class:	2 (2.1)
- Packaging group:	-
- Transport document:	Air Bill of lading.

Transport by inland waterways (ADN):

Not available.

14.5 ENVIRONMENTAL HAZARDS:
Classified as hazardous for the environment.

14.6 SPECIAL PRECAUTIONS FOR USER:
Ensure that persons transporting the product know what to do in case of accident or spill. Always transport in closed containers that are upright and secure. Ensure adequate ventilation.

14.7 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE:
Not applicable.

SECTION 15 : REGULATORY INFORMATION

15.1 USA REGULATIONS:

- Occupational Safety and Health Act (OSHA):

This product is considered to be hazardous under the OSHA Hazard Communication Standard.

- Clean Air Act:

· 112(r) Hazardous air pollutants (HAP) (40CFR 68):

Dimethyl ether: Threshold quantity (TQ): 10000 lbs.

The TQ applies to the quantity of substance in an release process, not at the facility as a whole.

- Clean Water Act:

· 307 Hazardous water priority pollutants (HWPP):

Zinc powder (stabilized)

- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

This product contains the following Hazardous Substances for Emergency release notification (40CFR 302):

Zinc powder (stabilized): Reportable quantity (RQ): 1000 lbs.

Xylene (mixture of isomers): Reportable quantity (RQ): 100 lbs.

Acetone: Reportable quantity (RQ): 5000 lbs.

n-butyl acetate: Reportable quantity (RQ): 5000 lbs.

Releases of CERCLA hazardous substances, in quantities equal to or greater than their reportable quantity (RQ), are subject to reporting to the National Response Center under CERCLA. Such releases are also subject to state and local reporting under section 304 of Emergency Planning and Community Right-to-Know Act (EPCRA), also known as SARA Title III.

- Superfund Amendments and Reauthorization Act (SARA Title III):

· 302/304 Extremely Hazardous Substances (EHS) for Emergency release notification (40CFR 355): No.

· 313 Reportable Ingredients (40CFR 372):

Zinc powder (stabilized)

Xylene (mixture of isomers)

· 311/312 Hazard Categories (40CFR 370): Yes.

- Toxic Substance Control Act (TSCA):

All chemical substances in this product comply with all applicable rules or order under TSCA.

- California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):

This product does not contain chemical substances known to the State of California to cause cancer or reproductive toxicity.

OTHER REGULATIONS:

Other local legislations:

The receiver should verify the possible existence of local regulations applicable to the chemical.



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SECTION 16 : OTHER INFORMATION

TEXT OF THE PHRASES AND NOTES REFERENCED IN SECTIONS 2 AND/OR 3:

Hazard statements according the Regulation (EC) No. 1272/2008-487/2013 (CLP), Anexo III:

H220 Extremely flammable gas. H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H280 Contains gas under pressure: may explode if heated. H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H312 Harmful in contact with skin. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. 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. EUH066 Repeated exposure may cause skin dryness or cracking. H373i May cause damage to organs through prolonged or repeated exposure if inhaled. H373o May cause damage to organs through prolonged or repeated exposure if swallowed.

ADVICES ON ANY TRAINING APPROPRIATE FOR WORKERS:

It is recommended for all staff that will handle this product to carry out a basic training in occupational risk and prevention, in order to provide understanding and interpretation of material safety data sheets and labelling of products as well.

MAIN LITERATURE REFERENCES AND SOURCES FOR DATA:

- European Chemicals Agency: ECHA, <http://echa.europa.eu/>
- Access to European Union Law, <http://eur-lex.europa.eu/>
- Industrial Solvents Handbook, Ibert Mellan (Noyes Data Co., 1970).
- Threshold Limit Values, (AGCIH, 2013).
- European agreement on the international carriage of dangerous goods by road, (ADR 2015).
- International Maritime Dangerous Goods Code IMDG including Amendment 36-12 (IMO, 2012).

ABBREVIATIONS AND ACRONYMS:

List of abbreviations and acronyms that can be used (but not necessarily used) in this material safety data sheet:

- DSD: Dangerous Substances Directive.
- DPD: Dangerous Preparations Directive.
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals of the United Nations.
- CLP: European regulation on Classification, Labelling and Packaging of substances and chemical mixtures.
- CAS: Chemical Abstracts Service (Division of the American Chemical Society).
- UVCB: Substances of Unknown or Variable composition, complex reaction products or biological materials).
- VOC: Volatile Organic Compounds.
- LD50: Lethal dose, 50 percent.
- LC50: Lethal concentration, 50 percent.
- UN: United Nations Organisation.
- ADR: European agreement concerning the international carriage of dangerous goods by road.
- RID: Regulations concerning the international transport of dangerous goods by rail.
- IMDG: International Maritime code for Dangerous Goods.
- IATA: International Air Transport Association.
- ICAO: International Civil Aviation Organization.

SAFETY DATA SHEET REGULATIONS:

Safety Data Sheet in accordance with the requirements of the OSHA Hazard Communication Standard, 29CFR 1910.1200.

HISTORY:

Version: 1

Date of compilation:

13/05/2016

The information of this Safety Data Sheet, is based on the present state of knowledge and on current UE and national laws, as the users' working conditions are beyond our knowledge and control. The product is not to be used for other purposes than those specified, without first obtaining written handling instruction. It is always the responsibility of the user to take all necessary steps in order to fulfil the demand laid down in the local rules and legislation. The information in this Material Safety Data Sheet is meant as a description of the safety requirements of the product and it is not to be considered as a guarantee of the product's properties.