

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : Zinco Spray ASTM

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

Use of the substance/mixture : Cold galvanizing zinc spray

1.3. Details of the supplier of the safety data sheet

SOPRIN S.r.l.
 Via dell'Industria 106
 31052 Maserada Sul Piave (TV), - Italy
 T (+39) 0422 521025 - F (+39) 0422 521060
soprin@soprin.it (Alessandro Padovan)

1.4. Emergency telephone number

Emergency number : (+39) 0422 521025

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Flam. Aerosol 1	H222
Skin Irrit. 2	H315
Eye Irrit. 2	H319
STOT SE 3	H336
STOT RE 2	H373
Asp. Tox. 1	H304
Aquatic Chronic 2	H411

Full text of hazard classes and H-statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H222 - Extremely flammable aerosol
 H304 - May be fatal if swallowed and enters airways
 H315 - Causes skin irritation
 H319 - Causes serious eye irritation
 H336 - May cause drowsiness or dizziness
 H373 - May cause damage to organs through prolonged or repeated exposure
 H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US) :

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 P211 - Do not spray on an open flame or other ignition source
 P251 - Pressurized container: Do not pierce or burn, even after use
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray
 P264 - Wash thoroughly after handling
 P271 - Use only outdoors or in a well-ventilated area
 P273 - Avoid release to the environment
 P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P301+P310 - If swallowed: Immediately call a poison center/doctor/...
 P302+P352 - If on skin: Wash with plenty of water/...
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P314 - Get medical advice/attention if you feel unwell
 P331 - Do NOT induce vomiting
 P332+P313 - If skin irritation occurs: Get medical advice/attention

Zinco Spray ASTM

Safety Data Sheet

P337+P313 - If eye irritation persists: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P391 - Collect spillage
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Acetone	(CAS No) 67-64-1	25 - 29	Flam. Liq. 2, H225
Hydrocarbons, C4	(CAS No) 87741-01-3	25 - 29	Not classified
zinc powder - zinc dust (stabilized)	(CAS No) 7440-66-6	12.5 - 14	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Propane	(CAS No) 74-98-6	9 - 10.5	Flam. Gas 1, H220 Compressed gas, H280
Xylenes (o-, m-, p- isomers)	(CAS No) 1330-20-7	5 - 6.5	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315
n-Butyl acetate	(CAS No) 123-86-4	5 - 6.5	Flam. Liq. 2, H225
Aluminum	(CAS No) 7429-90-5	2.5 - 3	Not classified
Ethyl acetate	(CAS No) 141-78-6	0.6 - 0.7	Flam. Liq. 2, H225

Full text of hazard classes and H-statements : see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.
First-aid measures after skin contact	: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.
First-aid measures after eye contact	: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.
First-aid measures after ingestion	: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorized by a doctor.

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

Symptoms/injuries after inhalation	: May cause drowsiness or dizziness.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: May be fatal if swallowed and enters airways.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.
Unsuitable extinguishing media	: None.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Extremely flammable aerosol. If overheated, aerosol cans can deform, explode and be propelled considerable distances. Put a protective helmet on before approaching the fire. Do not breathe combustion products.
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Zinco Spray ASTM

Safety Data Sheet

Explosion hazard : Explosive.

5.3. Advice for firefighters

Firefighting instructions : Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear.

Protection during firefighting : Firefighters should wear full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site. Send away individuals who are not suitably equipped. Wear protective gloves / protective clothing / eye protection / face protection.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Stop the flow of material, if this is without risk.

Methods for cleaning up : Use inert absorbent material to soak up leaked product. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in section 13 of this SDS.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid bunching of electrostatic charges. Do not spray on flames or incandescent bodies. Vapours may catch fire and an explosion may occur; vapor accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Do not eat, drink or smoke during use. Do not breathe spray.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a place where adequate ventilation is ensured, away from direct sunlight at a temperature below 50°C / 122°F, away from any combustion sources.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Acetone (67-64-1)		
ACGIH	ACGIH TWA (ppm)	250 ppm
ACGIH	ACGIH STEL (ppm)	500 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	2400 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
IDLH	US IDLH (ppm)	2500 ppm (10% LEL)
NIOSH	NIOSH REL (TWA) (mg/m ³)	590 mg/m ³
NIOSH	NIOSH REL (TWA) (ppm)	250 ppm
Xylenes (o-, m-, p- isomers) (1330-20-7)		
ACGIH	ACGIH TWA (ppm)	100 ppm
ACGIH	ACGIH STEL (ppm)	150 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	435 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	100 ppm
zinc powder - zinc dust (stabilized) (7440-66-6)		
Not applicable		
Aluminum (7429-90-5)		
ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³ (respirable particulate matter)

Zinco Spray ASTM

Safety Data Sheet

Aluminum (7429-90-5)		
OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ (total dust) 5 mg/m ³ (respirable fraction)
NIOSH	NIOSH REL (TWA) (mg/m ³)	10 mg/m ³ (total dust) 5 mg/m ³ (respirable dust)
Propane (74-98-6)		
OSHA	OSHA PEL (TWA) (mg/m ³)	1800 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
IDLH	US IDLH (ppm)	2100 ppm (10% LEL)
NIOSH	NIOSH REL (TWA) (mg/m ³)	1800 mg/m ³
NIOSH	NIOSH REL (TWA) (ppm)	1000 ppm
Ethyl acetate (141-78-6)		
ACGIH	ACGIH TWA (ppm)	400 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	1400 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	400 ppm
IDLH	US IDLH (ppm)	2000 ppm (10% LEL)
NIOSH	NIOSH REL (TWA) (mg/m ³)	1400 mg/m ³
NIOSH	NIOSH REL (TWA) (ppm)	400 ppm
n-Butyl acetate (123-86-4)		
ACGIH	ACGIH TWA (ppm)	50 ppm
ACGIH	ACGIH STEL (ppm)	150 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	710 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	150 ppm
IDLH	US IDLH (ppm)	1700 ppm (10% LEL)
NIOSH	NIOSH REL (TWA) (mg/m ³)	710 mg/m ³
NIOSH	NIOSH REL (TWA) (ppm)	150 ppm
NIOSH	NIOSH REL (STEL) (mg/m ³)	950 mg/m ³
NIOSH	NIOSH REL (STEL) (ppm)	200 ppm
Hydrocarbons, C4 (87741-01-3)		
Not applicable		

8.2. Exposure controls

Appropriate engineering controls	: Local exhaust and general ventilation must be adequate to meet exposure standards.
Hand protection	: Use impervious gloves for hand protection.
Eye protection	: Wear protective goggles.
Skin and body protection	: Wear suitable working clothes.
Respiratory protection	: If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Aerosol.
Color	: Silver
Odor	: Solvent
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available

Zinco Spray ASTM

Safety Data Sheet

Boiling point	: No data available
Flash point	: 0 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 0.78 kg/l
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

None

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Will not occur.

10.4. Conditions to avoid

Avoid overheating. Heat, flame and sparks. Avoid exposure to moisture, sources of heat and naked flames.

10.5. Incompatible materials

Strong reducing or oxidizing agents, strong acids or alkalis, hot material.

10.6. Hazardous decomposition products

Oxides of carbon on combustion. Fumes and acrid vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Acetone (67-64-1)	
LD50 oral rat	5800 mg/kg
LD50 dermal rabbit	> 15700 mg/kg
LC50 inhalation rat (mg/l)	50100 mg/m ³ (Exposure time: 8 h)
Xylenes (o-, m-, p- isomers) (1330-20-7)	
LD50 oral rat	3500 mg/kg
LD50 dermal rabbit	> 4350 mg/kg
LC50 inhalation rat (mg/l)	29.08 mg/l/4h
ATE US (oral)	4300 mg/kg
ATE US (dermal)	1100 mg/kg
Propane (74-98-6)	
LC50 inhalation rat (mg/l)	658 mg/l/4h
Ethyl acetate (141-78-6)	
LD50 oral rat	5620 mg/kg
LD50 dermal rabbit	> 18000 mg/kg

Zinco Spray ASTM

Safety Data Sheet

Ethyl acetate (141-78-6)	
ATE US (oral)	5620 mg/kg
n-Butyl acetate (123-86-4)	
LD50 oral rat	10768 mg/kg
LD50 dermal rabbit	> 17600 mg/kg
LC50 inhalation rat (ppm)	390 ppm/4h
ATE US (oral)	10768 mg/kg
Hydrocarbons, C4 (87741-01-3)	
LC50 inhalation rat (mg/l)	658 mg/l/4h
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Xylenes (o-, m-, p- isomers) (1330-20-7)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: May cause drowsiness or dizziness.
Specific target organ toxicity – repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1. Toxicity

Acetone (67-64-1)	
LC50 fish 1	4.74 - 6.33 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	10294 - 17704 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 fish 2	6210 - 8120 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 2	12600 - 12700 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Xylenes (o-, m-, p- isomers) (1330-20-7)	
LC50 fish 1	13.4 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	3.82 mg/l (Exposure time: 48 h - Species: water flea)
LC50 fish 2	2.661 - 4.093 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 2	0.6 mg/l (Exposure time: 48 h - Species: Gammarus lacustris)

Ethyl acetate (141-78-6)	
LC50 fish 1	220 - 250 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	560 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 fish 2	484 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])

n-Butyl acetate (123-86-4)	
LC50 fish 1	100 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
LC50 fish 2	17 - 19 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Acetone (67-64-1)	
BCF fish 1	0.69
Log Pow	-0.24

Xylenes (o-, m-, p- isomers) (1330-20-7)	
BCF fish 1	0.6 - 15
Log Pow	2.77 - 3.15

Zinco Spray ASTM

Safety Data Sheet

Propane (74-98-6)	
Log Pow	2.3
Ethyl acetate (141-78-6)	
BCF fish 1	30
Log Pow	0.6
n-Butyl acetate (123-86-4)	
Log Pow	1.81 (at 23 °C)
Hydrocarbons, C4 (87741-01-3)	
Log Pow	<= 2.8

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1950 Aerosols (Zinc Powder), 2.1

UN-No.(DOT) : UN1950

Proper Shipping Name (DOT) : Aerosols
Zinc Powder

Class (DOT) : 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115

Hazard labels (DOT) : 2.1 - Flammable gas



Dangerous for the environment : Yes

Marine pollutant : Yes



DOT Packaging Non Bulk (49 CFR 173.xxx) : None

DOT Packaging Bulk (49 CFR 173.xxx) : None

DOT Special Provisions (49 CFR 172.102) : N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.

DOT Packaging Exceptions (49 CFR 173.xxx) : 306

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 75 kg

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 150 kg

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

DOT Vessel Stowage Other : 48 - Stow "away from" sources of heat, 87 - Stow "separated from" Class 1 (explosives) except Division 14, 126 - Segregation same as for Class 9, miscellaneous hazardous materials

Other information : No supplementary information available.

Zinco Spray ASTM

Safety Data Sheet

SECTION 15: Regulatory information

15.1. US Federal regulations

Acetone (67-64-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

CERCLA RQ	5000 lb
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Xylenes (o-, m-, p- isomers) (1330-20-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313

CERCLA RQ	100 lb
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SARA Section 313 - Emission Reporting	1 %
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Aluminum (7429-90-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313

SARA Section 313 - Emission Reporting	1 % (dust or fume only)
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Propane (74-98-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Ethyl acetate (141-78-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

CERCLA RQ	5000 lb
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n-Butyl acetate (123-86-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

CERCLA RQ	5000 lb listed under Butyl acetate
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15.2. US State regulations

Acetone (67-64-1)

U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Xylenes (o-, m-, p- isomers) (1330-20-7)

U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Aluminum (7429-90-5)

U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Propane (74-98-6)

U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Ethyl acetate (141-78-6)

U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

n-Butyl acetate (123-86-4)

U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Zinco Spray ASTM

Safety Data Sheet

SECTION 16: Other information

Full text of H-phrases:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Asp. Tox. 1	Aspiration hazard Category 1
Compressed gas	Gases under pressure Compressed gas
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Aerosol 1	Flammable aerosol Category 1
Flam. Gas 1	Flammable gases Category 1
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids Category 3
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H220	Extremely flammable gas
H222	Extremely flammable aerosol
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H280	Contains gas under pressure; may explode if heated
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H336	May cause drowsiness or dizziness
H373	May cause 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

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