



PIGAL s.r.l.

Revision nr. 2

Dated 6/6/2016

ZINCO CHIARO SPRAY

Printed on 06/06/2016

Page n. 1/14

Safety data sheet

SECTION 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Code: C00284
Product name: ZINCO CHIARO SPRAY

1.2. Relevant identified uses of the substance or mixture and uses advised against
Intended use: Protective/antirust, resins and solvents based "Aerosol".

1.3. Details of the supplier of the safety data sheet

Name: PIGAL s.r.l.
Full address: Via G. Rossa, 2
District and Country: 40053 VALSAMOGGIA - Crespellano (BO)
ITALIA
Tel. +39 051969068
Fax +39 051969353

e-mail address of the competent person
responsible for the Safety Data Sheet: health.safety@pigal.it; pigalab@pigal.it

1.4. Emergency telephone number

For urgent inquiries refer to: +39 051969068 ore ufficio/office hours (8.30-13; 14-17.30) 118 (contattare il centro antiveneni più vicino)/please contact your near local poison control center

SECTION 2. Hazards identification.

2.1. Classification of the substance or mixture.

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

2.1.1. Regulation 1272/2008 (CLP) and following amendments and adjustments.

Hazard classification and indication:

Aerosol 1	H222 H229
Eye Irrit. 2	H319
STOT SE 3	H336
Aquatic Chronic 2	H411

The full wording of the hazard (H) phrases is given in section 16 of the sheet.

2.2. Label elements.

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words:

Danger

Hazard statements:

H222 Extremely flammable aerosol.
H229 Pressurized container: may burst if heated.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
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.
P271 Use only outdoors or in a well-ventilated area.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.
P501 Dispose of contents / container according to local regulations.

Contains:

ACETONE
 METHYL ACETATE
 N-BUTYL ACETATE

2.3. Other hazards.

Information not available.

SECTION 3. Composition/information on ingredients.

3.1. Substances.

Information not relevant.

3.2. Mixtures.

Contains:

Identification.
METHYL ACETATE
Conc. %.
Classification 1272/2008 (CLP).

CAS. 79-20-9

18 - 19,5

Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3
H336, EUH066

EC. 201-185-2

INDEX. 607-021-00-X

Reg. no. 01-2119459211-47

PROPANE


CAS. 74-98-6

18 - 19,5

Flam. Gas 1 H220, Note U

EC. 200-827-9

INDEX. 601-003-00-5

	PIGAL s.r.l.	Revision nr. 2 Dated 6/6/2016
	ZINCO CHIARO SPRAY	Printed on 06/06/2016 Page n. 3/14

N-BUTYL ACETATE

CAS. 123-86-4 13,5 - 15 Flam. Liq. 3 H226, STOT SE 3 H336, EUH066
EC. 204-658-1
INDEX. 607-025-00-1

BUTANE

CAS. 106-97-8 9 - 10,5 Flam. Gas 1 H220, Note C U
EC. 203-448-7
INDEX. 601-004-00-0

ZINC POWDER (STABILIZED)

CAS. 7440-66-6 4,5 - 5 Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410
EC. 231-175-3
INDEX. 030-001-01-9

Isobutane

CAS. 75-28-5 4 - 4,5 Flam. Gas 1 H220, Press. Gas H280, Note C U
EC. 200-857-2
INDEX. 601-004-00-0

METHANOL

CAS. 67-56-1 2,5 - 3 Flam. Liq. 2 H225, Acute Tox. 3 H301, Acute Tox. 3 H311, Acute Tox. 3 H331, STOT SE 1 H370
EC. 200-659-6
INDEX. 603-001-00-X
Reg. no. 01-2119433307-44

ACETONE

CAS. 67-64-1 2 - 2,5 Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066
EC. 200-662-2
INDEX. 606-001-00-8
Reg. no. 01-2119471330-49

Note: Upper limit is not included into the range.

The full wording of the hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures.

4.1. Description of first aid measures.


EYES: 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.
SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.
INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.
INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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

For symptoms and effects caused by the contained substances, see chap. 11.

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

Information not available.

	PIGAL s.r.l.	Revision nr. 2 Dated 6/6/2016
	ZINCO CHIARO SPRAY	Printed on 06/06/2016 Page n. 4/14

SECTION 5. Firefighting measures.

5.1. Extinguishing media.

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2. Special hazards arising from the substance or mixture.

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

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.

5.3. Advice for firefighters.

GENERAL INFORMATION

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.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures.

6.1. Personal precautions, protective equipment and emergency procedures.

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.

6.2. Environmental precautions.

Do not disperse in the environment.

6.3. Methods and material for containment and 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 point 13.

6.4. Reference to other sections.


Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage.

7.1. 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; vapour 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.

	PIGAL s.r.l.	Revision nr. 2 Dated 6/6/2016
	ZINCO CHIARO SPRAY	Printed on 06/06/2016 Page n. 5/14

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

7.3. Specific end use(s).

Information not available.

SECTION 8. Exposure controls/personal protection.

8.1. Control parameters.

Regulatory References:

United Kingdom	EH40/2005 Workplace exposure limits. Containing the list of workplace exposure limits for use with the Control of Substances Hazardous to Health Regulations (as amended).
Éire	Code of Practice Chemical Agent Regulations 2011.
OEL EU	Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC.
TLV-ACGIH	ACGIH 2012

METHYL ACETATE

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
WEL	UK	616	200	770	250
TLV-ACGIH		606	200	757	250

PROPANE

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV-ACGIH			1000		

N-BUTYL ACETATE

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
WEL	UK	724	150	966	200
OEL	IRL	710	150	950	200
TLV-ACGIH		713	150	950	200

BUTANE


Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
WEL	UK	1450	600	1810	750
OEL	IRL		1000		750
TLV-ACGIH			1000		

METHANOL

Threshold Limit Value.

Type	Country	TWA/8h	STEL/15min
------	---------	--------	------------

	PIGAL s.r.l.		Revision nr. 2
	ZINCO CHIARO SPRAY		Dated 6/6/2016 Printed on 06/06/2016 Page n. 6/14

		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH		262	200	328	250	
OEL	IRL	260	200			SKIN
OEL	EU	260	200			SKIN
WEL	UK	266	200	333	250	SKIN

ACETONE

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
WEL	UK	1210	500	3620	1500
OEL	IRL		500		
OEL	EU	1210	500		
TLV-ACGIH			500		750

Predicted no-effect concentration - PNEC.

Normal value for the terrestrial compartment	29,5	mg/kg
Normal value in fresh water	10,6	mg/l
Normal value for water, intermittent release	21	mg/l
Normal value in marine water	1,06	mg/l
Normal value for fresh water sediment	30,4	mg/kg
Normal value for marine water sediment	3,04	mg/kg
Normal value of STP microorganisms	100	mg/l

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers.			Chronic systemic	Effects on workers		Chronic local	Chronic systemic
	Acute local	Acute systemic	Chronic local		Acute local	Acute systemic		
Oral.			VND	62 mg/kg				
Inhalation.			VND	200 mg/m3	2420 mg/m3	VND	VND	1210 mg/m3
Skin.			VND	62 mg/kg			VND	186 mg/kg

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

ZINC POWDER (STABILIZED)

MAK: 0.1 mg / m³ Peak limitation category: I (4) (inhalable fraction)

MAK: 2 mg / m³ Peak limitation category: I (2) (respirable fraction)

risk group for pregnancy: C (DFG 2009).

Isobutane - TLV TWA = 1000 ppm VLE short = 1000 ppm.


8.2. Exposure controls.

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

	PIGAL s.r.l.	Revision nr. 2 Dated 6/6/2016
	ZINCO CHIARO SPRAY	Printed on 06/06/2016 Page n. 7/14

HAND PROTECTION

Use protective gloves that guarantee total protection, eg. PVC, neoprene.

SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, a mask with a type AX filter combined with a type P filter should be worn (see standard EN 14387).

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

ACETONE - Specific note about DPI

Recommended material for gloves: butyl and natural (latex). Butyl rubber, natural rubber (latex). For protection against splashes: PVC gloves.

SECTION 9. Physical and chemical properties.

9.1. Information on basic physical and chemical properties.


Appearance	liquid (pressurized)
Colour	silver
Odour	characteristic of solvent
Odour threshold.	Not available.
pH.	Not available.
Melting point / freezing point.	Not available.
Initial boiling point.	Not available.
Boiling range.	Not available.
Flash point.	< 0 °C.
Evaporation Rate	Not available.
Flammability of solids and gases	flammable gas
Lower inflammability limit.	Not available.
Upper inflammability limit.	Not available.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	Not available.
Vapour density	Not available.
Relative density.	0,75 - 0,8
Solubility	immiscible with water
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature.	Not available.
Decomposition temperature.	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

9.2. Other information.

VOC (Directive 1999/13/EC) :	590,85
VOC (volatile carbon) :	0
Can pressure:	4,0 bar after filling at 20°C

SECTION 10. Stability and reactivity.

10.1. Reactivity.

	PIGAL s.r.l.	Revision nr. 2 Dated 6/6/2016
	ZINCO CHIARO SPRAY	Printed on 06/06/2016 Page n. 8/14

There are no particular risks of reaction with other substances in normal conditions of use.

ACETONE: decomposes under the effect of heat.

N-BUTYL ACETATE: decomposes readily with water, especially when warm.

10.2. Chemical stability.

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions.

No hazardous reactions are foreseeable in normal conditions of use and storage.

ZINC POWDER: risk of explosion on contact with: ammonium nitrate, ammonium sulphide, barium peroxide, lead nitride, chlorates, chromium trioxide, sodium hydroxide solutions, oxidising agents, performic acid, acids, tetrachloromethane, water. May react dangerously with alkali hydroxides, bromine pentafluoride, calcium chloride solution, fluorine, hexachloroethane, nitrobenzene, potassium dioxide, carbon disulphide, silver. Reacts with acids and strong alkalis developing hydrogen.

ACETONE: risk of explosion on contact with: bromine trifluoride, difluoro dioxide, hydrogen peroxide, nitrosyl chloride, 2-methyl-1,3 butadiene, nitromethane, nitrosyl perchlorate. Can react dangerously with: potassium tert-butoxide, alkaline hydroxides, bromine, bromoform, isoprene, sodium, sulphur dioxide, chromium trioxide, chromyl chloride, nitric acid, chloroform, peroxymonosulphuric acid, phosphoryl chloride, chromosulphuric acid, fluorine, strong oxidising agents. Develops flammable gases with nitrosyl perchlorate.

N-BUTYL ACETATE: risk of explosion on contact with: strong oxidising agents. Can react dangerously with alkaline hydroxides, potassium tert-butoxide. Forms explosive mixtures with the air.

10.4. Conditions to avoid.

Avoid overheating.

ZINC POWDER: Upon heating, toxic fumes are formed.

ACETONE: avoid exposure to sources of heat and naked flames.

N-BUTYL ACETATE: avoid exposure to moisture, sources of heat and naked flames.

10.5. Incompatible materials.

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

ZINC POWDER: water, strong alkalis and acids.

ACETONE: acid and oxidising substances.

N-BUTYL ACETATE: water, nitrates, strong oxidising agents, acids and alkalis and potassium tert-butoxide.

10.6. Hazardous decomposition products.

ACETONE: ketenes and other irritating compounds.

SECTION 11. Toxicological information.

11.1. Information on toxicological effects.


In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification. It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

Acute effects: stinging eyes. Symptoms may include: rubescence, edema, pain and lachrymation.

Vapour inhalation may moderately irritate the upper respiratory tract. Contact with skin may cause slight irritation.

Ingestion may cause health problems, including stomach pain and sting, nausea and sickness.

This product contains highly volatile substances, which may cause serious depression of the central nervous system (CNS) and have negative effects, such as drowsiness, dizziness, slow reflexes, narcosis.

	PIGAL s.r.l.	Revision nr. 2 Dated 6/6/2016
	ZINCO CHIARO SPRAY	Printed on 06/06/2016 Page n. 9/14

ZINC POWDER - The substance can be absorbed into the body by inhalation and by swallowed. Vapours evaporation at 20 ° C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when aerodisperso. L ' inhalation of fumes may cause a particular fever known as metal fume fever . The effects may be delayed (see Notes). Repeated or prolonged contact with skin may cause dermatitis.

ACUTE HAZARDS / SYMPTOMS

INHALATION Metallic taste and metal fume fever . Symptoms may be delayed .

SKIN Dry skin .

Ingestion Abdominal pain. Nausea . Vomiting.

NOTES: Zinc may contain trace concentrations of arsenic to which the development of hydrogen can also form toxic arsine gas (see ICSC 0001 and ICSC 0222) . Reacts violently with fire extinguishing agents such as water, halogenated , foam and carbon dioxide. The symptoms of metal fume fever do not become manifest until several hours later . Rinse thoroughly with water contaminated clothes (fire hazard) .

METHANOL: The minimal lethal dose following ingestion is considered to be in the range of 300-1000 mg/kg. Ingestion of as little as 4-10 ml methanol in adults may cause permanent blindness (IPCS).

ACETONE - Symptoms for exposure to the substance may include: irritates the respiratory tract; High doses nausea, headache, confusion, dizziness, stupor to coma with miosis areagente. Possible liver and kidney damage. Irritating, may cause corneal damage. Irritating, for prolonged contact dermatitis can be determined.

Oral Toxicity: The consumption of 50 ml is in the throat only a feeling scorching. Consummation of higher amounts leads to gastroenteritis and drugging with possible damage to the liver and kidney.

Inhalation toxicity: acetone vapors cause irritation and dizziness. The persistence in the environment in which the concentration amounted to 2,000 ppm because already the first symptoms of narcosis which is manifested by symptoms of drunkenness, severe intoxication due to inhalation irritation, drooling, redness of the face and loss of consciousness . Threatened by damage to the kidney and liver.

Skin contact: Irritating to prolonged or repeated contact, may be determined dermatitis.

Eye Contact: Irritating, burning, can cause corneal damage. Normally you have transient irritation, severe damage to the cornea is described sporadically.

Target organ systemic toxicity - single exposure: may cause drowsiness or dizziness.

Target organ systemic toxicity - repeated exposure: may cause irreversible damage to the central nervous system (solvent-induced neurotoxicity). Injury to the liver and kidneys may occur. The substance may cause effects on the blood and bone marrow.

Allergy (Guinea pig) - fails.

Germ cell mutagenicity - Genotoxicity in vitro tests did not show mutagenic effects.

Mutagenicity: Salmonella typhimurium - negative; Escherichia coli - negative.

Germ cell mutagenicity: fail.

Genotoxicity in vivo (mouse) - fails.

Carcinogenicity: animal experiments have shown the non-carcinogenic.

Reproductive toxicity: no effect on reproduction; no deterioration of the reproductive capacity of the animals.

METHYL ACETATE

LD50 (ORAL) 3705 mg/kg RABBIT.

N-BUTYL ACETATE - OBSERVATION ON HUMAN

Vapors cause irritation of the eyes and nose. In case of repeated exposures, you have skin irritation, dermatitis (dryness and cracking of skin) and keratitis.

N-BUTYL ACETATE

LD50 (Oral). > 6400 mg/kg Rat

LD50 (Dermal). > 5000 mg/kg Rabbit

LC50 (Inhalation). 21,1 mg/l/4h Rat

ACETONE

LD50 (Oral). 5800 mg/kg Rat

LD50 (Dermal). 7400 mg/kg Rabbit

LC50 (Inhalation). 21,09 mg/l/8h Rat


METHANOL

LD50 (Oral) 5628 mg/kg Rat

LD50 (Skin) 15800 mg/kg Rabbit

SECTION 12. Ecological information.

This product is dangerous for the environment and is toxic for aquatic organisms. In the long term, it have negative effects on aquatic environment.

	PIGAL s.r.l.	Revision nr. 2 Dated 6/6/2016
	ZINCO CHIARO SPRAY	Printed on 06/06/2016 Page n. 10/14

12.1. Toxicity.

ZINC POWDER (STABILIZED)

LC50 - for Fish.

7,1 mg/l/96h *Nothobranchius guentheri*

EC50 - for Crustacea.

2,8 mg/l/48h *Daphnia magna*

ACETONE

LC50 - for Fish.

5540 mg/l/96h *Oncorincus mykiss*, *Salmo gairdneri*

EC50 - for Crustacea.

8800 mg/l/48h *Daphnia pulex*

Chronic NOEC for Crustacea.

2212 mg/l *Daphnia magna*/28d

Chronic NOEC for Algae / Aquatic Plants.

3400 mg/l *Chlorella pyrenoidosa*/48 h

12.2. Persistence and degradability.

ACETONE - Biodegradability: 90%, 28 days. Easily degradable.

Theoretical oxygen demand (ThOD): 84%, 5 days. Activated sludge: 100%, 4 days.

ACETONE

Rapidly biodegradable.

12.3. Bioaccumulative potential.

ACETONE - Low concentration in aquatic organisms based on the BCF value.

ACETONE

Partition coefficient: n-octanol/water.

-0,24 -

BCF.

3

12.4. Mobility in soil.

ACETONE - Media volatilization from water (Henry constant = $1.4 \text{ Pa} \cdot \text{m}^3 / \text{mol}$ at 20°C). Disperses by evaporation or dissolution within a day.

Based on the defined value Koc (absorption coefficient of the ground) = 1, it is assumed very high mobility within the soil.

12.5. Results of PBT and vPvB assessment.

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects.

ACETONE - Significant risk of reduction in the oxygen content in the water. Water hazard class 1 (German Regulation, self-assessment): slightly hazardous.

SECTION 13. Disposal considerations.

13.1. Waste treatment methods.

The valid EEC waste code are largely source-related; the manufacturer is, therefore, unable to specify waste codes for products used in various sectors. CER-code (suggested): 08 01 11.


Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Avoid littering. Do not contaminate soil, sewers and waterways.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

	PIGAL s.r.l.	Revision nr. 2 Dated 6/6/2016
	ZINCO CHIARO SPRAY	Printed on 06/06/2016 Page n. 11/14

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information.

These goods must be transported by vehicles authorized to the carriage of dangerous goods according to the provisions set out in the current edition of the Code of International Carriage of Dangerous Goods by Road (ADR) and in all the applicable national regulations. These goods must be packed in their original packagings or in packagings made of materials resistant to their content and not reacting dangerously with it. People loading and unloading dangerous goods must be trained on all the risks deriving from these substances and on all actions that must be taken in case of emergency situations.

Road and rail transport:

ADR/RID Class: 2 UN: 1950



Packing Group: -
Label: 2.1
Nr. Kemler: --
Limited Quantity: 1 L
Tunnel restriction code: (D)
Proper Shipping Name: AEROSOLS

Carriage by sea (shipping):

IMO Class: 2.1 UN: 1950



Packing Group: -
Label: 2.1
EMS: F-D, S-U
Marine Pollutant: YES
Proper Shipping Name: AEROSOLS (ZINC POWDER (STABILIZED))


Transport by air:

IATA: 2 UN: 1950



Packing Group: -
Label: 2.1
Cargo:
Packaging instructions: 203 Maximum quantity: 150 Kg
Pass.:
Packaging instructions: 203 Maximum quantity: 75 Kg
Special Instructions: A145, A167, A802
Proper Shipping Name: AEROSOLS

For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

	PIGAL s.r.l.	Revision nr. 2 Dated 6/6/2016
	ZINCO CHIARO SPRAY	Printed on 06/06/2016 Page n. 12/14

Trasporto di rinfuse secondo l'allegato II di MARPOL 73/78 ed il codice IBC - Non applicabile.

SECTION 15. Regulatory information.

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

Seveso category. 8, 9i

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.

Contained substance.

Point. 28-29 BUTANE

Substances in Candidate List (Art. 59 REACH).

None.

Substances subject to authorisation (Annex XIV REACH).

None.

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls.

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.


15.2. Chemical safety assessment.

No chemical safety assessment has been processed for the mixture and the substances it contains.

SECTION 16. Other information.

Text of hazard (H) indications mentioned in section 2-3 of the sheet:


Flam. Gas 1	Flammable gas, category 1
Aerosol 1	Aerosol, category 1
Aerosol 3	Aerosol, category 3
Flam. Liq. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3

	PIGAL s.r.l.	Revision nr. 2 Dated 6/6/2016
	ZINCO CHIARO SPRAY	Printed on 06/06/2016 Page n. 13/14

Press. Gas	Pressurised gas
Acute Tox. 3	Acute toxicity, category 3
STOT SE 1	Specific target organ toxicity - single exposure, category 1
Eye Irrit. 2	Eye irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurized container: may burst if heated.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H280	Contains gas under pressure; may burst if heated.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H370	Causes damage to organs.
H319	Causes serious eye 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.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

	PIGAL s.r.l.	Revision nr. 2 Dated 6/6/2016
	ZINCO CHIARO SPRAY	Printed on 06/06/2016 Page n. 14/14

GENERAL BIBLIOGRAPHY

1. Regulation (EU) 1907/2006 (REACH) of the European Parliament
2. Regulation (EU) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA website

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

The following sections were modified:

02 / 03 / 08 / 11 / 12 / 13 / 14 / 15 / 16.