

ATRIAFLOOR CONSOLIDANTE

Safety Data Sheet — English translation of the Italian original · Compliant with Annex II of REACH — Regulation 2015/830 ·
Manufacturer: Colorificio ATRIA S.r.l., Partanna (TP), Italy · Revision n.4 of 23/01/2019 (supersedes revision 3 of 19/03/2018) · Product
code: 08.WFL.9106

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

1.1. Product identifier

Code:	08.WFL.9106
Name:	Atrifloor Consolidante
Chemical name and synonyms:	non-yellowing water-based epoxy-amide

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

Description/Use:	water-based consolidating primer for absorbent surfaces.
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1.3. Details of the supplier of the safety data sheet

Company name:	COLORIFICIO ATRIA S.R.L.
Address:	Contrada Camarro Formeca
Town and Country:	91028 PARTANNA (TP), ITALY tel. +39 0924 49500 fax +39 0924 921250
E-mail of the competent person responsible for the safety data sheet:	franco@atria.it
Party responsible for placing on the market:	Colorificio Atria Srl
US distributor:	ATRIA USA / Euro Star Enterprises LLC 17811 Davenport Road Suite 12, Dallas TX 75252, USA sales@atria-usa.com — +1 972-965-5881

1.4. Emergency telephone number

For urgent information contact: Colorificio Atria Srl — Technical Office +39 0924 49500, hours 08.00–13.00 / 14.30–17.00, excluding holidays.

US contact: ATRIA USA 972-965-5881 (business hours).

Italian Poison Control Centres (CAV):

"Osp. Pediatrico Bambino Gesù" Rome	Piazza Sant'Onofrio, 4	Telephone 06 68593726
Az. Osp. Univ. Foggia, Foggia	V.le Luigi Pinto, 1	Telephone 0881-732326
Az. Osp. "A. Cardarelli" Naples	Via A. Cardarelli, 9	Telephone 081-7472870
CAV Policlinico "Umberto I" Rome	V.le del Policlinico, 155	Telephone 06-49978000
CAV Policlinico "A. Gemelli" Rome	Largo Agostino Gemelli, 8	Telephone 06-3054343
Az. Osp. "Careggi" U.O. Medical Toxicology, Florence	Largo Brambilla, 3	Telephone 055-7947819
CAV National Centre of Toxicological Information, Pavia	Via Salvatore Maugeri, 10	Telephone 0382-24444
Osp. Niguarda Ca' Granda, Milan	Piazza Ospedale Maggiore, 3	Telephone 02-66101029
Azienda Ospedaliera Papa Giovanni XXII, Bergamo	Piazza OMS, 1	Telephone 800883300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions of Regulation (EC) 1272/2008 (CLP) (and subsequent amendments and adaptations). The product therefore requires a safety data sheet compliant with the provisions of Regulation (EU) 2015/830. Any additional information concerning risks to health and/or the environment is given in sections 11 and 12 of this sheet.

Classification and hazard statements:

Skin sensitisation, Category 1	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, chronic toxicity, Category 3	H412	Harmful to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms:	[pictogram shown as image in the original — GHS07, exclamation mark]
Signal words:	Warning

Hazard statements:

H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.
EUH205	Contains epoxy constituents. May produce an allergic reaction.
EUH208	Contains: 2,4,7,9-tetramethyldec-5-yne-4,7-diol. May produce an allergic reaction.

Precautionary statements:

P501	Dispose of contents/container in accordance with local, regional, national and international regulations.
P102	Keep out of reach of children.
P280	Wear protective gloves.
P101	If medical advice is needed, have product container or label at hand.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.

Contains:	Formaldehyde, oligomeric reaction products (designation as printed in the original: "Formaldeide oligomeric reazion")
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2.3. Other hazards

On the basis of available data, the product does not contain PBT or vPvB substances in percentage greater than 0.1%.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
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Bis-A/F Epoxy Resin CAS 25068-38-6 EC — INDEX —	$18 \leq x < 19.5$	EUH401
1-METHYL-2-METHOXYETHYL ACETATE (2-methoxy-1-methylethyl acetate) CAS 108-65-6 EC 203-603-9 INDEX 607-195-00-7 Reg. no. 01-2119475791-29	$15 \leq x < 16.5$	Flam. Liq. 3 H226
Formaldehyde, oligomeric reaction products CAS 9003-36-5 EC 500-006-8 INDEX — Reg. no. 01-2119454392-40	$4.5 \leq x < 5$	Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 2 H411
2-ETHYLHEXANOIC ACID CAS 149-57-5 EC 205-743-6 INDEX 607-230-00-6	$0.8 \leq x < 0.9$	Repr. 2 H361d
Benzyltrimethylamine CAS 103-83-3 EC 203-149-1 INDEX —	$0.8 \leq x < 0.9$	Flam. Liq. 3 H226, Repr. 2 H361d, Acute Tox. 3 H331, Acute Tox. 4 H302, Acute Tox. 4 H312, Skin Corr. 1B H314, Eye Dam. 1 H318, Aquatic Chronic 3 H412
Nonylphenol, branched, ethoxylated CAS 68412-54-4 EC 500-209-1 INDEX —	$0.6 \leq x < 0.7$	Eye Irrit. 2 H319, Skin Irrit. 2 H315, Aquatic Chronic 2 H411
ETHYLENE GLYCOL CAS 107-21-1 EC 203-473-3 INDEX 603-027-00-1	$0.5 \leq x < 0.6$	Acute Tox. 4 H302
2,4,7,9-tetramethyldec-5-yne-4,7-diol CAS 126-86-3 EC 204-809-1 INDEX — Reg. no. 01-2119954390-39	$0.5 \leq x < 0.6$	Eye Dam. 1 H318, Skin Sens. 1 H317, Aquatic Chronic 3 H412

The full text of the hazard (H) statements is given in section 16 of the sheet.

SECTION 4: First aid measures

4.1. Description of first aid measures

EYES: Remove any contact lenses. Wash immediately with plenty of water for at least 30/60 minutes, opening the eyelids wide. Consult a physician immediately.

SKIN: Remove contaminated clothing. Shower immediately. Consult a physician immediately.

INGESTION: Give as much water as possible to drink. Consult a physician immediately. Do not induce vomiting unless expressly authorised by the physician.

INHALATION: Call a physician immediately. Move the person to fresh air, away from the site of the accident. If breathing stops, give artificial respiration. Take suitable precautions for the rescuer.

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

No specific information on symptoms and effects caused by the product is known.

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

Information not available

SECTION 5: Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING MEDIA

Choose the extinguishing media most suitable for the specific situation.

UNSUITABLE EXTINGUISHING MEDIA

None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS DUE TO EXPOSURE IN CASE OF FIRE

The product is neither flammable nor combustible.

5.3. Advice for firefighters

EQUIPMENT

Normal fire-fighting clothing, such as an open-circuit compressed-air self-contained breathing apparatus (EN 137), flame-retardant suit (EN 469), flame-retardant gloves (EN 659) and firefighter boots (HO A29 or A30).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Stop the leak if there is no danger. Wear suitable protective equipment (including the personal protective equipment referred to in section 8 of the safety data sheet) in order to prevent contamination of skin, eyes and personal clothing. These indications apply both to processing workers and to emergency responders.

6.2. Environmental precautions

Prevent the product from entering sewers, surface waters and groundwater.

6.3. Methods and material for containment and cleaning up

Draw up the spilled product into a suitable container. Assess the compatibility of the container to be used with the product, checking section 10. Absorb the remainder with inert absorbent material. Ensure sufficient ventilation of the place affected by the leak. Disposal of contaminated material must be carried out in accordance with the provisions of point 13.

6.4. Reference to other sections

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Keep away from heat, sparks and open flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of flashback. Avoid the accumulation of electrostatic charges. Do not eat, drink or smoke during use. Remove contaminated clothing and protective equipment before entering areas where food is eaten. Avoid release of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a cool, well-ventilated place, away from heat sources, open flames, sparks and other ignition sources. Keep containers away from any incompatible materials, checking section 10.

7.3. Specific end use(s)

Information not available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Regulatory references:

GBR	United Kingdom	EH40/2005 Workplace exposure limits
ITA	Italy	Legislative Decree of 9 April 2008, No. 81
EU	OEL EU	Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2018

1-METHYL-2-METHOXYETHYL ACETATE — Threshold limit value

Type	Country	TWA/8h		STEL/15min		Notes
		mg/m3	ppm	mg/m3	ppm	
WEL	GBR	274	50	548	100	
VLEP	ITA	275	50	550	100	SKIN
OEL	EU	275	50	550	100	SKIN

2-ETHYLHEXANOIC ACID — Threshold limit value

Type	Country	TWA/8h		STEL/15min		Notes
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH		5				

ETHYLENE GLYCOL — Threshold limit value

Type	Country	TWA/8h		STEL/15min		Notes
		mg/m3	ppm	mg/m3	ppm	
WEL	GBR	52	20	104	40	
VLEP	ITA	52	20	104	40	SKIN
OEL	EU	52	20	104	40	SKIN
TLV-ACGIH			25		50	
TLV-ACGIH				10		INHAL (inhalable fraction)

Legend:

(C) = CEILING; INALAB = Inhalable fraction; RESPIR = Respirable fraction; TORAC = Thoracic fraction.

TLV of the solvent mixture:	1 mg/m ³
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8.2. Exposure controls

Considering that the use of adequate technical measures should always take priority over personal protective equipment, ensure good ventilation of the workplace by means of effective local extraction. For the choice of personal protective equipment, seek advice from your chemical suppliers if necessary. Personal protective equipment must bear the CE marking attesting its conformity with the regulations in force.

Provide an emergency shower with eye/face wash station.

HAND PROTECTION

Protect hands with category III work gloves (ref. standard EN 374). For the final choice of work-glove material, the following must be considered: compatibility, degradation, breakthrough time and permeation. In the case of preparations, the resistance of work gloves to chemical agents must be verified before use, as it is not predictable. Gloves have a wear time that depends on the duration and manner of use.

SKIN PROTECTION

Wear long-sleeved work clothing and category II professional-use safety footwear (ref. Directive 89/686/EEC and standard EN ISO 20344). Wash with soap and water after removing protective clothing.

EYE PROTECTION

It is advisable to wear hermetically sealed protective goggles (ref. standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) of the substance or of one or more of the substances present in the product is exceeded, it is advisable to wear a mask with a type A filter whose class (1, 2 or 3) must be chosen in relation to the limit concentration of use (ref. standard EN 14387). Should gases or vapours of a different nature and/or gases or vapours with particles (aerosol, fumes, mists, etc.) be present, combined-type filters must be provided. The use of respiratory protection equipment is necessary if the technical measures adopted are not sufficient to limit the worker's exposure to the threshold values considered. The protection offered by masks is in any case limited. If the substance in question is odourless or its olfactory threshold is higher than its TLV-TWA, and in emergencies, wear an open-circuit compressed-air self-contained breathing apparatus (ref. standard EN 137) or a fresh-air-hose breathing apparatus (ref. standard EN 138). For the correct choice of respiratory protective device, refer to standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

Emissions from production processes, including those from ventilation equipment, should be controlled for the purposes of compliance with environmental-protection legislation.

Product residues must not be discharged without control into waste water or watercourses.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	viscous liquid
Colour	colourless
Odour	characteristic
Odour threshold	Not available
pH	Not available
Melting point or freezing point	Not available
Initial boiling point	Not available

Boiling range	Not available
Flash point	> 60 °C
Evaporation rate	Not available
Flammability of solids and gases	Not available
Lower flammability limit	Not available
Upper flammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	Not available
Vapour density	0.9 – 1
Relative density	Not available
Solubility	insoluble
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Thixotropic
Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information

Total solids (250°C / 482°F)	24.44 %
VOC (Directive 2010/75/EC):	15.50 %
VOC (volatile carbon):	8.37 %

SECTION 10: Stability and reactivity

10.1. Reactivity

There are no particular hazards of reaction with other substances under normal conditions of use.

1-METHYL-2-METHOXYETHYL ACETATE

Stable under normal conditions of use and storage.

With air it may slowly form peroxides which explode with rising temperature.

ETHYLENE GLYCOL

Absorbs moisture from the air. Decomposes at temperatures above 200°C/392°F.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

The vapours may form explosive mixtures with air.

1-METHYL-2-METHOXYETHYL ACETATE

May react violently with: oxidising substances, strong acids, alkali metals.

ETHYLENE GLYCOL

Risk of explosion on contact with: perchloric acid. May react dangerously with: chlorosulfonic acid, sodium hydroxide, sulfuric acid, phosphorus pentasulfide, chromium (III) oxide, chromyl chloride, potassium perchlorate, potassium dichromate, sodium peroxide, aluminium. Forms explosive mixtures with: air.

10.4. Conditions to avoid

Avoid overheating. Avoid the accumulation of electrostatic charges. Avoid any ignition source.

ETHYLENE GLYCOL

Avoid exposure to: heat sources, open flames.

10.5. Incompatible materials

1-METHYL-2-METHOXYETHYL ACETATE

Incompatible with: oxidising substances, strong acids, alkali metals.

10.6. Hazardous decomposition products

Thermal decomposition, or fire, may release gases and vapours potentially harmful to health.

ETHYLENE GLYCOL

May develop: hydroxyacetaldehyde, glyoxal, acetaldehyde, methane, carbon monoxide, hydrogen.

SECTION 11: Toxicological information

In the absence of experimental toxicological data on the product itself, any health hazards of the product have been assessed on the basis of the properties of the substances contained, in accordance with the criteria laid down by the reference regulations for classification. Therefore, consider the concentration of the individual hazardous substances possibly cited in section 3 in order to assess the toxicological effects arising from exposure to the product.

11.1. Information on toxicological effects

Metabolism, kinetics, mechanism of action and other information

1-METHYL-2-METHOXYETHYL ACETATE

The main route of entry is dermal, while the respiratory route is less important given the product's low vapour pressure.

Information on likely routes of exposure

1-METHYL-2-METHOXYETHYL ACETATE

WORKERS: inhalation; skin contact.

ETHYLENE GLYCOL

WORKERS: inhalation; skin contact.

GENERAL POPULATION: inhalation of ambient air; skin contact with products containing the substance.

Immediate, delayed and chronic effects from short- and long-term exposure

1-METHYL-2-METHOXYETHYL ACETATE

Above 100 ppm there is irritation of the ocular, nasal and oropharyngeal mucous membranes. At 1000 ppm, balance disturbances and severe eye irritation are noted. Clinical and biological examinations performed on exposed volunteers did not reveal abnormalities. The acetate produces greater skin and eye irritation by direct contact. No chronic effects on humans are reported (INCR, 2010).

ETHYLENE GLYCOL

By ingestion it initially stimulates the central nervous system; a phase of depression then follows. Kidney damage may occur, with anuria and uraemia. The symptoms of overexposure are: vomiting, drowsiness, laboured breathing, convulsions. The lethal dose for humans is approximately 1.4 ml/kg.

Interactive effects

Information not available

ACUTE TOXICITY

LC50 (Inhalation) of the mixture:	> 20 mg/l
LD50 (Oral) of the mixture:	Not classified (no relevant component)
LD50 (Dermal) of the mixture:	Not classified (no relevant component)

1-METHYL-2-METHOXYETHYL ACETATE

LD50 (Oral) 8530 mg/kg Rat

LD50 (Dermal) > 5000 mg/kg Rat

ETHYLENE GLYCOL

LD50 (Oral) > 2000 mg/kg Rat

LD50 (Dermal) 9530 mg/kg Rabbit

2-ETHYLHEXANOIC ACID

LD50 (Oral) 2043 mg/kg Rat

LD50 (Dermal) > 2000 mg/kg Rat

SKIN CORROSION / SKIN IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / EYE IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION

Skin sensitiser.

May produce an allergic reaction. Contains: 2,4,7,9-tetramethyldec-5-yne-4,7-diol

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

ETHYLENE GLYCOL

The available studies have not shown carcinogenic potential. In a 2-year carcinogenesis study conducted by the US National Toxicology Program (NTP), in which ethylene glycol was administered in the diet, "no evidence of carcinogenic activity" was observed in male and female B6C3F1 mice (NTP, 1993).

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

SPECIFIC TARGET ORGAN TOXICITY (STOT) — SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

SPECIFIC TARGET ORGAN TOXICITY (STOT) — REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class. Viscosity: Thixotropic

SECTION 12: Ecological information

The product is to be considered hazardous to the environment and is harmful to aquatic organisms, with long-term adverse effects on the aquatic environment.

12.1. Toxicity

Information not available

12.2. Persistence and degradability

1-METHYL-2-METHOXYETHYL ACETATE Solubility in water	> 10000 mg/l Rapidly degradable
ETHYLENE GLYCOL Solubility in water	1000 – 10000 mg/l Rapidly degradable
2-ETHYLHEXANOIC ACID Solubility in water	1400 mg/l Rapidly degradable

12.3. Bioaccumulative potential

1-METHYL-2-METHOXYETHYL ACETATE Partition coefficient: n-octanol/water	1.2
ETHYLENE GLYCOL Partition coefficient: n-octanol/water	-1.36
2-ETHYLHEXANOIC ACID Partition coefficient: n-octanol/water	2.96

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain PBT or vPvB substances in percentage greater than 0.1%.

12.6. Other adverse effects

Information not available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Reuse where possible. Product residues are to be considered hazardous special waste. The hazardousness of waste partly containing this product must be assessed in accordance with the legislative provisions in force. Disposal must be entrusted to a company authorised for waste management, in compliance with national and, where applicable, local regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be sent for recovery or disposal in compliance with national waste-management regulations.

SECTION 14: Transport information

The product is not to be considered hazardous pursuant to the provisions in force concerning the transport of dangerous goods by road (ADR), by rail (RID), by sea (IMDG Code) and by air (IATA).

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Not applicable

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

Information not relevant

SECTION 15: Regulatory information

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

Seveso Category — Directive 2012/18/EC: None

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

Product

Point	3
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Substances contained

Point	46	Nonylphenol, branched, ethoxylated
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Substances in the Candidate List (Art. 59 REACH)

Nonylphenol, branched, ethoxylated

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to export notification requirement, Reg. (EC) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Health checks (medical surveillance)

Workers exposed to this chemical agent hazardous to health must undergo health surveillance carried out in accordance with the provisions of Art. 41 of Legislative Decree (D.Lgs.) 81 of 9 April 2008, unless the risk to the worker's safety and health has been assessed as irrelevant, in accordance with Art. 224 paragraph 2.

D.Lgs. 152/2006 and subsequent amendments

Emissions according to Part V, Annex I:

TAB. D	Class 3	00.50 %
WATER		26.00 %

15.2. Chemical safety assessment

No chemical safety assessment has been prepared for the mixture or for the substances contained therein.

SECTION 16: Other information

Text of the hazard (H) statements referred to in sections 2–3 of the sheet:

Flam. Liq. 3	Flammable liquid, Category 3
Repr. 2	Reproductive toxicity, Category 2
Acute Tox. 3	Acute toxicity, Category 3
Acute Tox. 4	Acute toxicity, Category 4
Skin Corr. 1B	Skin corrosion, Category 1B

Eye Dam. 1	Serious eye damage, Category 1
Eye Irrit. 2	Eye irritation, Category 2
Skin Irrit. 2	Skin irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, Category 3
H226	Flammable liquid and vapour.
H361d	Suspected of damaging the unborn child.
H331	Toxic if inhaled.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH205	Contains epoxy constituents. May produce an allergic reaction.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service number
- EC50: Concentration giving effect to 50% of the test population
- CE (EC) NUMBER: Identification number in ESIS (European archive of existing substances)
- CLP: Regulation EC 1272/2008
- DNEL: Derived No-Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labelling of chemicals
- IATA DGR: Dangerous Goods Regulation of the International Air Transport Association
- IC50: Immobilisation concentration of 50% of the test population
- IMDG: International Maritime code for the transport of Dangerous Goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identification number in Annex VI of the CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent, Bioaccumulative and Toxic according to REACH
- PEC: Predicted Environmental Concentration
- PEL: Predicted Exposure Level
- PNEC: Predicted No-Effect Concentration
- REACH: Regulation EC 1907/2006
- RID: Regulation concerning the International carriage of Dangerous goods by rail
- TLV: Threshold Limit Value

- TLV CEILING: Concentration that must not be exceeded at any time during occupational exposure
- TWA STEL: Short-Term Exposure Limit
- TWA: Time-Weighted Average exposure limit
- VOC: Volatile Organic Compound
- vPvB: very Persistent and very Bioaccumulative according to REACH
- WGK: Water hazard class (Germany)

GENERAL BIBLIOGRAPHY:

1. Regulation (EC) 1907/2006 of the European Parliament (REACH)
2. Regulation (EC) 1272/2008 of the European Parliament (CLP)
3. Regulation (EU) 790/2009 of the European Parliament (I Atp. CLP)
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 of the European Parliament (II Atp. CLP)
6. Regulation (EU) 618/2012 of the European Parliament (III Atp. CLP)
7. Regulation (EU) 487/2013 of the European Parliament (IV Atp. CLP)
8. Regulation (EU) 944/2013 of the European Parliament (V Atp. CLP)
9. Regulation (EU) 605/2014 of the European Parliament (VI Atp. CLP)
10. Regulation (EU) 2015/1221 of the European Parliament (VII Atp. CLP)
11. Regulation (EU) 2016/918 of the European Parliament (VIII Atp. CLP)
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)

- 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
- IFA GESTIS website
- ECHA Agency website
- Database of SDS models for chemical substances — Italian Ministry of Health and Istituto Superiore di Sanità

Note for the user:

The information contained in this sheet is based on the knowledge available to us at the date of the latest version. The user must ensure the suitability and completeness of the information in relation to the specific use of the product. This document must not be interpreted as a guarantee of any specific property of the product. Since the use of the product does not fall under our direct control, it is the user's obligation to observe, under his own responsibility, the laws and provisions in force concerning hygiene and safety. No liability is accepted for improper use. Provide adequate training to personnel involved in the use of chemical products.

Changes with respect to the previous revision:

Variations were made to the following sections: 03.

This document is an English translation of the manufacturer's original Italian Safety Data Sheet (revision noted above), prepared by ATRIA USA / Euro Star Enterprises LLC, Dallas TX (sales@atria-usa.com, +1 972-965-5881) for the convenience of US customers. In case of discrepancy the Italian original prevails. The original is available on request.