

## Chlorendic Anhydride PE1 +

Material number C001

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

#### 1.1 Product identifier

Trade name: Chlorendic Anhydride PE1+  
REACH registration No.: 01-2119911956-30-0000  
CAS-Number: 115-27-5  
EC-number: 204-077-3  
Index-number: 607-101-00-4

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

##### 1.2.1 Relevant identified uses:

Industrial applications: Hardener for epoxy resins, paints, and coatings.  
Other non-specified industry: Flame retardant in unsaturated polyester resins.

1. Receipt and storage of raw materials  
SU 10; PROC 1, 3, 8b; PC 32; ERC 2
2. Blending or dissolving or dispersion  
SU 10; PROC 2, 4, 5; PC 32; AC 32; ERC 2
3. Filtering and filling  
SU 10; PROC 8a, 9; PC 32; ERC 2
4. Waste management  
SU 23; PROC 3, 8b; ERC 2
5. Use in closed batch process (synthesis or formulation)  
SU 3; PROC 3; PC 32; ERC 2
6. Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)  
SU 3; PROC 5; PC 32
7. Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities  
PROC 8b, 9; PC 32; ERC 2
8. Research and development  
PROC 15; PC 32; ERC 2

##### 1.2.2 Uses advised against:

No specific uses advised against have been identified.

#### 1.3 Details of the supplier of the safety data sheet

Company name: Velsicol Chemical Ireland Ltd  
Charter House  
Street/POB-No.: 5 Pembroke Row  
Postal Code, city: Dublin 2  
Republic of Ireland  
WWW: [www.velsicol.com](http://www.velsicol.com)  
Telephone: +353 1 477 3143  
Telefax: +353 1 402 9587  
Dept. responsible for information: [sfriedman@velsicol.com](mailto:sfriedman@velsicol.com)

#### 1.4 Emergency telephone number

Telephone: +49 51 92 98970 (08:00– 17:00 CET) or  
CHEMTREC, Telephone: +1 703 527 3887 (24h; from USA: +1 800 424 9300)

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### 2.1.1 Classification according to EC regulation 1272/2008 (CLP)

Skin Irrit. 2; H315	Causes skin irritation.
Eye Irrit. 2; H319	Causes serious eye irritation.
Skin Sens. 1; H317	May cause an allergic skin reaction.
Carc. 2; H351	Suspected of causing cancer.
STOT SE 3; H335	May cause respiratory irritation.
Chron. 3; H412	Harmful to aquatic life with long lasting effects.

#### 2.2 Label elements

##### Labelling according to Regulation (EC) No 1272/2008 (CLP)

Hazard pictograms



Signal word: **Warning**

Hazard statements:

- H315: Causes skin irritation.
- H317: May cause an allergic skin reaction.
- H319: Causes serious eye irritation.
- H335: May cause respiratory irritation
- H351: Suspected of causing cancer.
- H412: Harmful to aquatic life with long lasting effects.

Precautionary statements:

- P261: Avoid breathing dust.
- P273: Avoid release to the environment.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
- P308 + P313: IF exposed or concerned: Get medical advice/attention.
- P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Special labelling

- EUH 401: To avoid risks to human health and the environment, comply with the instructions for use.

#### 2.3 Other hazards

No risks worthy of mention.

### SECTION 3: Composition / information on ingredients

#### 3.1 Substances

Chemical characterization:	C9 H2 Cl6 O3
Chemical name:	1,4,5,6,7,7-Hexachlorobicyclo [2,2,1] hept-5-ene-2,3-dicarboxylic anhydride
CAS-Number:	115-27-5
EC-number:	204-077-3
Index-number:	607-101-00-4
Purity:	>95%

Specific Concentration limits, M-Factors, Acute Toxicity Estimates (ATE)

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Eye Irrit. 2; H319: C ≥ 1 %  
STOT SE 3; H335: C ≥ 1 %  
Skin Irrit. 2; H315: C ≥ 1 %

### Hazardous impurities

Chemical Name	Common name and synonyms	EC number	% by Weight
Bicyclo[2.2.1]hept-5-ene-2,3-dicarboxylic acid, 1,4,5,6,7,7-hexachloro-	Chlorendic Acid	204-078-9	<3.0
Maleic anhydride	2,5-Furandione	203-571-6	<1.0
Chlorobenzene	Benzene, chloro-	203-628-5	<5.0

### 3.2. Mixtures

Not a mixture

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### 4.1.1 General information:

Inhalation and skin contact are expected to be the primary routes of occupational exposure to chlorendic anhydride. This material is irritating to the eyes, skin and respiratory tract.

#### 4.1.2 Following inhalation:

Remove to under fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

#### 4.1.3 Following skin contact:

Immediately wash skin with soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Destroy contaminated shoes.

#### 4.1.4 Following eye contact:

Immediately flush with plenty of water for at least 15 minutes. Get medical attention immediately.

#### 4.1.5 Following ingestion:

Get medical attention. Inducing vomiting as directed by medical personnel. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

#### 4.1.6 Self-protection of the first aider:

Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust. Do not get in eyes, on skin, or on clothing. Contaminated work clothing should not be allowed out of the workplace. Get medical attention immediately.

#### 4.1.7 Notes for the doctor:

Not available.

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

Severely irritate to eyes. Causes skin irritation. May cause respiratory irritation. Suspected of causing cancer through oral exposure.

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

Treat symptomatically

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

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- Flammability Properties: Non-flammable.
- Suitable extinguishing media: Extinguishing is to be in accordance with the surrounding fire.
- Unsuitable extinguishing media: Not applicable.

### 5.2 Special hazards arising from the substance or mixture

Fine dust.

This product contains up to 5% occluded Chlorobenzene, which can present a fire hazard if sufficient oxygen and a source of ignition is present.

### 5.3 Advice for firefighters

- Special protective equipment for firefighters:  
Advice for fire-fighters: Wear self-contained breathing apparatus, protective clothing and rubber boots.
- Additional information:  
Non-flammable; No explosion. Avoid breathing dust.  
Do not allow fire water to penetrate into surface or ground water.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Use suitable personal protective equipment to protect skin and eyes. Ventilate affected area.  
Avoid generation of dust. Avoid breathing dust.

### 6.2 Environmental precautions

Do not allow to enter into ground-water, surface water or drains.  
In case of entry into waterways, soil or drains, inform the responsible authorities.

### 6.3 Methods and material for containment and cleaning up

Stop leak if safe to do so.  
Collect in closed and suitable containers for disposal. Dispose of this material and its container to hazardous or special waste collection point.  
Avoid generation of dust.  
Remove residual product with water and detergent. Avoid release to the environment.

### 6.4 Reference to other sections

Refer additionally to chapter 8 and 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### 7.1.1 Recommendations for safe handling

- Protective measures: Do not handle until all safety precautions have been read and understood.  
Wear suitable protective clothing, gloves and eye/face protection.
- Protective measures at dust formation: Provide good ventilation. Avoid breathing dust.
- Environmental measures: Avoid release to the environment.

#### 7.1.2 Advices on general occupational hygiene

Avoid contact with skin and eyes. Change contaminated clothing. When using do not eat, drink or smoke.  
Wash hands before breaks and after work.

### 7.2 Conditions for safe storage, including any incompatibilities

#### 7.2.1 Requirements for storerooms and containers

Store at room temperature in a dry and well ventilated area. Keep container tightly closed. Keep away from food, drink and animal feeding stuffs.

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This product contains up to 5% occluded Chlorobenzene, which can present a fire hazard if sufficient oxygen and a source of ignition is present. Ground containers and equipment to avoid static charge accumulation and/or use an inert atmosphere to prevent combustion.

**7.2.2 Storage Class**

Protect from humidity and water.

**7.3 Specific end use(s)**

End use name	Substance supplied to that use
Receipt and storage of raw materials	as such (substance itself)
Blending / dissolving of dispersion	as such (substance itself)
Filtering and filling	in a mixture
Waste management	in a mixture
Use in closed batch process	as such (substance itself)
Mixing or blending batches	as such (substance itself)
Transfer of substance	in a mixture
Research and development.	as such (substance itself)

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**8.1.1 The national occupational exposure limit values**

**Chlorendic Anhydride:**

contains no occupational exposure limit values.

**Chlorendic Acid:**

No data on occupational exposure levels were available.

**Chlorobenzene:**

Exposure Limits: ACGIH TWA: 10 ppm or 46 mg/m<sup>3</sup>. OSHA PEL: 75ppm or 350 mg/m<sup>3</sup>

**Maleic anhydride:**

United Kingdom, WEL - TWA: 1 mg/m<sup>3</sup>, WEL - STEL: 3 mg/m<sup>3</sup>

United States: TWA: 0.25 ppm from OSHA/NIOSH; TWA: 0.25 ppm from ACGIH.

**8.1.2 Recommended monitoring procedures**

N/A

**8.1.3 Air contaminants occupational exposure limit values**

N/A

**8.1.4 The relevant DNELs and PNECs**

**DN(M)ELs for workers**

Exposure pattern	Route	DNEL / DMEL	(Corrected) Dose descriptor
Acute - systemic effects	Dermal	43 mg/kg bw/day	NOAEL: 1,290 mg/kg bw/day (based on AF of 30)
Acute - systemic effects	Inhalation	299 mg/m <sup>3</sup>	NOAEC: 8,970 mg/m <sup>3</sup> (based on AF of 30)
Acute - local effects	Dermal	1 mg/cm <sup>2</sup>	LOAEL: 50 mg/cm <sup>2</sup> (based on AF of 50)
Acute - local effects	Inhalation	299 mg/m <sup>3</sup>	NOAEC: 8,970 mg/m <sup>3</sup> (based on AF of 30)
Long-term - systemic effects	Dermal	3.7 mg/kg bw/day	NOAEL: 1,110.0 mg/kg bw/day (based on AF of 300)
Long-term - systemic effects	Inhalation	15 mg/m <sup>3</sup>	NOAEC: 4,500 mg/m <sup>3</sup> (based on AF of 300)
Long-term - local effects	Dermal	0.56 mg/cm <sup>2</sup>	NOAEL: 100.80 mg/cm <sup>2</sup> (based on AF of 180)
Long-term - local effects	Inhalation	33.23 mg/m <sup>3</sup>	NOAEC: 9,969.00 mg/m <sup>3</sup> (based on AF of 300)

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**DN(M)ELs for the general population**

Exposure pattern	Route	DNEL / DMEL	(Corrected) Dose descriptor
Acute - systemic effects	Dermal	21 mg/kg bw/day	NOAEL: 1,260 mg/kg bw/day (based on AF of 60)
Acute - systemic effects	Inhalation	149 mg/m <sup>3</sup>	NOAEC: 8,940 mg/m <sup>3</sup> (based on AF of 60)
Acute - systemic effects	Oral	21 mg/kg bw/day	NOAEL: 1,260 mg/kg bw/day (based on AF of 60)
Acute - local effects	Dermal	0.5 mg/cm <sup>2</sup>	LOAEL: 50.0 mg/cm <sup>2</sup> (based on AF of 100)
Acute - local effects	Inhalation	0.042 mg/m <sup>3</sup>	NOAEC: 50.400 mg/m <sup>3</sup> (based on AF of 1200)
Long-term - systemic effects	Dermal	3 mg/kg bw/day	NOAEL: 1,080 mg/kg bw/day (based on AF of 360)
Long-term - systemic effects	Inhalation	12 mg/m <sup>3</sup>	NOAEC: 4,320 mg/m <sup>3</sup> (based on AF of 360)
Long-term - systemic effects	Oral	1.1 mg/kg bw/day	NOAEL: 396.0 mg/kg bw/day (based on AF of 360)
Long-term - local effects	Dermal	0.28 mg/cm <sup>2</sup>	NOAEL: 100.80 mg/cm <sup>2</sup> (based on AF of 360)
Long-term - local effects	Inhalation	16.62 mg/m <sup>3</sup>	NOAEL: 9,972.00 mg/m <sup>3</sup> (based on AF of 600)

**PNECs**

Environmental protection target	PNEC	Remark
Fresh water	0.097 mg/L	Extrapolation method: assessment factor  The LC50 from Acute toxicity to Algae, 97.2 mg/l, was used. This is the worst-case scenario for aquatic toxicity.
Marine water	0.0097 mg/L	
Intermittent release	0.97 mg/L	
Sediment (fresh water)	0.097 mg/kg dw	
Sediment (marine water)	0.0097 mg/kg dw	
Soil (Terrestrial)	0.106 mg/kg dw	Extrapolation method: partition coefficient
Food chain (Oral, mammals)	2.51 mg/kg food	The endpoint used was 90 day sub-acute oral toxicity to rats which gave a result of 226 mg/kg bw/day and has an assessment factor of 90.
Sewage treatment	16.23 mg/L	Extrapolation method: assessment factor

DN(M)EL: Derived No(Minimal) Effect Level; NOAEL(C): No-observed-adverse-effect level (concentration), PNEC: Predicted No-Effect Concentration; AF: Assessment Factor

**8.2 Exposure controls**

**8.2.1 Appropriate engineering controls:**

Provide ventilation if necessary to minimize exposure. If practical use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

**8.2.2 Personal protective measures:**

Do not eat, drink, or smoke whilst working. Keep away from foodstuffs, beverages and feed. Remove all contaminated clothing. Wash hands before breaks and at the end of work.

**Respiratory protection**

A full-face piece respirator with dual organic vapour and particulate matter cartridge is recommended.

**Hand Protection**

Chemical resistant coveralls, gloves and boot covers. If gloves are damaged during use, remove immediately and wash hands before replacing with new gloves.

**Eye and face protection**

Safety glasses and /or face cover should be worn when handling this substance.

**Skin protection**

Aprons or coveralls are recommended. These should be changed after use or if contaminated. Suggested

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protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

### 8.2.3 Environmental exposure controls:

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state:	Solid, Crystalline
Colour:	White
Odour:	Strong odour of aromatic hydrocarbons
Odour threshold:	Unknown
pH:	Not available
Melting point/ range:	235 - 239 °C
Boiling point/range:	266.5 - 322 °C
Flash point:	Not applicable
Flammability:	Non-flammable
Auto-ignition temperature:	Not applicable
Explosive properties:	Not explosive
Vapour pressure:	at 25 °C: 0,00268 Pa
Vapour density:	no data available
Density:	at 20 °C: 1,76 g/cm <sup>3</sup> (Pycnometer)
Solubility:	Easily soluble in: Acetone; Soluble in: Methanol, diethyl ether, n-octanol
Water solubility:	at 20 °C: <= 0,0025 g/L
Partition coefficient n-octanol/water:	at 25 °C: -1.59 log Kow (Chlorendic acid)
Appreciable bio-accumulation is not to be expected (log Po/w 1-3).	
Thermal decomposition:	no data available
Viscosity, dynamic:	no data available
Viscosity, kinematic:	not applicable
Explosive properties:	no data available
Oxidizing characteristics:	no data available
Dissociation Constant:	Study not undertaken as Chlorendic Anhydride readily hydrolyses
Particle size distribution (median value):	0,1% w/w < 10 µm

### 9.2 Other information

Molecular weight:	approx. 371 g/mol
Evaporation rate:	Not applicable
Decomposition temperature:	Not available
Oxidising properties:	Not oxidising
Vapour density:	not available
Surface tension:	72 mN/m (20°C, 450 mg/L aqueous solution). The product hydrolyses quickly in the presence of water to: Chlorendic acid

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Not a reactive substance and no reactive hazards are expected.  
No hazardous reaction when handled and stored according to provisions.

### 10.2 Chemical stability

Product is stable under normal storage conditions.  
The product hydrolyses quickly in the presence of water to: Chlorendic acid

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**10.3 Possibility of hazardous reactions**

No dangerous reactions are known.

**10.4 Conditions to avoid**

Protect from moisture contamination. Protect from heat and direct sunlight.

**10.5 Incompatible materials**

Oxidizing or reducing agents, strong bases, acids.

**10.6 Hazardous decomposition products**

No decomposition when used properly.

**SECTION 11: Toxicological information**

**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

115-27-5, Chlorendic Anhydride:

**(a) Acute toxicity**

This substance is not classified as acute toxic for all exposure route listed below:

Acute Toxicity	Effect Dos /Concentration
Acute Oral Toxicity	LD50: 2562 mg/kg bw (male) LD50: 2130 mg/kg bw (female)
Acute dermal toxicity	LD50: 10000 - 20000 mg/kg bw
Acute inhalative toxicity (dust/mist)	LC50: > 203 mg/l

**(b) Skin corrosion/irritation**

Causes skin irritation

**(c) Serious eye damage/irritation**

Causes serious eye irritation

Irritation parameter	Basis	Time point	Score	Max. score	Reversibility	Remarks
overall irritation score	mean	14 days	16.4	17.3	no data	Rabbit

**(d) Respiratory/skin sensitisation**

May cause an allergic skin reaction

**(e) Germ cell mutagenicity**

Chlorendic Anhydride is not classified as genetically toxic as all study results are negative.

**(f) Carcinogenicity**

Suspected of causing cancer though oral exposure

Chlorendic anhydride will rapidly hydrolyse to chlorendic acid in the presence of water. The National Toxicology Program (NTP) has concluded that there is clear evidence of carcinogenicity (cancer) in a feeding study of rats and mice using chlorendic acid. International Agency for Research on Cancer (IARC) has given chlorendic acid an overall evaluation of 2B (possibly carcinogenic).

**(g) Reproductive toxicity**

Chlorendic anhydride is not classified as toxic to reproduction as negative results were obtained in the reproductive and spermatogenetic studies in animals.

**Adverse effects on sexual function and fertility:**

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Species	Result /Evaluation
Mouse	NOEL (Fetal mortality): > 223 mg/kg bw/day (actual dose received)

**Adverse effects on developmental toxicity:**

Species	Result / Evaluation
Rats	NOEL: 400 mg/kg bw/day (actual dose received); NOEL (maternal toxicity): 100 mg/kg bw/day (nominal)

- (h) **STOT-single exposure**  
May cause respiratory irritation
- (i) **STOT-repeated exposure**  
Not classified
- (j) **Aspiration hazard**  
This substance is a solid.

**108-31-6, Maleic anhydride in RTECS (#ON3675000):**

Dermal, guinea pig: LD50 = >20 gm/kg;  
Draize test, rabbit, eye: 1% Severe;  
Oral, mouse: LD50 = 465 mg/kg;  
Oral, rabbit: LD50 = 875 mg/kg;  
Oral, rat: LD50 = 400 mg/kg;  
Skin, rabbit: LD50 = 2620 mg/kg.

**115-28-6, Chlorendic Acid in RTECS (#RB9000000):**

Draize test, rabbit, eye: 250 ug/24H Severe;  
Draize test, rabbit, skin: 500 mg/24H Mild.

The National Toxicology Program (NTP) has concluded that there is clear evidence of carcinogenicity (cancer) in a feeding study of rats and mice using Chlorendic acid. International Agency for Research on Cancer (IARC) has given Chlorendic acid an overall evaluation of 2B (possibly carcinogenic).

**108-90-7, Chlorobenzene:**

Oral, LD50, Rat: 1110 mg/kg;  
Oral, LD50, Mouse: 2300 mg/kg.

**11.2 Information on other hazards**

No data available.

**SECTION 12: Ecological information**

**12.1 Toxicity**

Aquatic toxicity: Aquatic Chronic 3, Harmful to aquatic life with long lasting effects.

Acute (short-term) fish toxicity:

- LC50 Oncorhynchus mykiss: 422,7 mg/L/96h (EU Method C. 1)
- LC50 Lepomis macrochirus (Bluegill): 422,7 mg/L/96h (EU Method C.1)
- LC50 (freshwater fish): 422.7 mg/L

Acute Daphnia toxicity:

- EC50 Daphnia magna (Big water flea): 110,7 mg/L/48h (EU Method C.2)

Acute (short-term) toxicity to crustacea:

- EC50/LC50: 110,7 mg/L/48h

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Algae toxicity (acute):

- EC50/LC50: 97.2 mg/L/72h (Algal Inhibition test)
- EC10/LC10 or NOEC: 48,4 mg/L/72h (Algal Inhibition test)

Algae toxicity (chronic):

- EC50: >97, 2mg/L

Predicted No Effect Concentration (PNEC)							
Fresh water	Marine water	Intermittent release	Sediment (fresh water)	Sediment (marine water)	Soil (Terrestrial)	STP (sewage treatment plant)	Oral (mammals)
0.097 mg/L	0.0097 mg/L	0.97 mg/L	0.097 mg/kg dw	0.0097 mg/kg dw	0.106 mg/kg dw	16.23 mg/L	2.51 mg/kg food

**12.2 Persistence and degradability**

Further details:

Abiotic degradation:

- Chlorendic Anhydride hydrolyzed with water (Product: Chlorendic acid).
- Water solubility (Chlorendic acid): 0,499 mg/L.

Biodegradation:

- Chlorendic Anhydride: Not bio-degradable.
- Chlorendic acid: Potentially biologically degradable.

**12.3 Bioaccumulative potential**

Partition coefficient n-octanol/water: 1,39 log Kow; No accumulation

Partition coefficient n-octanol/water: at 25 °C: -1,59 log Kow (Chlorendic acid)

Appreciable bio-accumulation is not to be expected (log Po/w 1-3).

**12.4 Mobility in soil**

Chlorendic Anhydride hydrolyzed with water (Product: Chlorendic acid) log Koc = 0,92 (Chlorendic acid)

**12.5 Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

**12.6 Other adverse effects**

General information: Do not allow to penetrate into soil, waterbodies or drains.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Product**

Waste key number: 07 01 99 = Wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals: Wastes not otherwise specified

MFSU = manufacture, formulation, supply and use

Recommendation: Ensure all waste water is collected and treated via a waste water treatment plant.

Dispose of contents/container in accordance with local/regional/national/international regulation.

**Contaminated packaging**

Dispose of waste in accordance with local/regional/national/international regulation.

**SECTION 14: Transport information**

**14.1 UN number**

Not applicable

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### 14.2 UN proper shipping name

ADR/RID, IMDG, IATA: Not restricted

### 14.3 Transport hazard class(es)

Not applicable

### 14.4 Packing group

Not applicable

### 14.5 Environmental hazards

Marine pollutant - IMDG: No

### 14.6 Special precautions for user

No dangerous good in sense of these transport regulations.

### 14.7 Maritime transport in bulk according to IMO instruments

No data available

## SECTION 15: Regulatory information

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

#### National regulations - EC member states

Not known.

#### National regulations - USA

TSCA Inventory: listed, active

TSCA HPVC: not listed

NFPA Hazard Rating:

Health: 3 (Serious), Fire: 0 (Minimal), Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 3 (Serious) - Chronic effects, Flammability: 0 (Minimal), Physical Hazard: 0 (Minimal)

Personal Protection: X = Consult your supervisor

### 15.2 Chemical Safety Assessment

For this substance a chemical safety assessment has been carried out.

## SECTION 16: Other information

### 16.1 Indication of changes

Review and updated Section 2 and 16, 2023-01-23

Revision according to COMMISSION REGULATION (EU) 2020/878, 2022-10-12

Review and minor format changes, 2022-05-23

Major update: change format on most sections. 2019-04-05

Modified Section 2 and 11: Delete H373, STOT SE 3., 2017-09-20

Delete DSD Classification and Labeling in sections 2 and 16, 2017-06-20

Changes in section 1: update REACH registration No. General revision, 2014-08-08

First Version of this format, 2013-02-12

### 16.2 Key literature references and sources for data

Dossier and Chemical Safety Report (CSR) submitted to ECHA under REACH  
EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP), 2015/830 & 2020/878  
Hazard Communication Standard (HCS)(29 CFR 1910.1200(g)) and Appendix D  
Hazardous Substance Data Bank (HSDB), National library of Medicine, #2920

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Product Data Sheet and SDS information from manufacturer.

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

### 16.3 Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Chlorendic Anhydride is not a mixture. But the impurity of Chlorendic Acid (EC-number 204-078-9) contributes to the following classification due to the concentration of it (<3% by weight) in the product:

Carc. 2; H351 suspected of causing cancer.

### 16.4 List of relevant hazard statements and/or precautionary statements which are not written out in full under Sections 2 to 15

#### Precautionary statements:

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P264: Wash contaminated skin thoroughly after handling.

P271: Use only outdoors or in a well-ventilated area.

P272: Contaminated work clothing should not be allowed out of the workplace.

P281: Use personal protective equipment as required.

P337 + P313: If eye irritation persists: Get medical advice/attention.

P332 + P313: If skin irritation occurs: Get medical advice/attention.

P362: Take off contaminated clothing and wash before reuse.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P308 + P313: IF exposed or concerned: Get medical advice/attention.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

P501: Dispose of contents/container in accordance with local/regional/national/international regulation

### 16.5 Contact Information

SDS or Regulatory information, contact:

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Phone: +1 901 323 6226, ext. 124

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Technical or Product Support Information, contact:

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Rosemont, IL 60018 U.S.A.

Phone: +1 847 635 3486

Fax: +1 847 298 9018

Email: sfriedman@velsicol.com

### 16.6 Further information: Notice to Reader

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision.

It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.