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

1.1 Product identifier

- Trade name ECO2FUME® FUMIGANT GAS

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

Uses of the Substance/Mixture

- Fumigant

1.3 Details of the supplier of the safety data sheet

Company

CYTEC AUSTRALIA HOLDINGS PTY LTD.
Suite 1, Level 1, 21 Solent Cct.,
Baulkham Hills, 2153 Australia
Telephone: +61 2 9846 6200

E-mail address

manager.sds@solvay.com

1.4 Emergency telephone number

MULTI LINGUAL EMERGENCY NUMBER (24/7)

Europe/Latin America/Africa:+44 1235 239 670 (UK)

Middle East/Africa speaking Arabic: +44 1235 239 671 (UK)

Asia Pacific : +65 3158 1074 (Singapore)

China : 400 120 6011 (toll-free, access from China only)

North America : +1 800 424 9300

Poisons information

- "For advice, contact a Poison Information Center (e.g. phone Australia 13 1126) or a doctor (at once)"

Disclaimer

The ® indicates a Registered Trademark in the United States and also be registered, subject of an application for registration, or a trademark in other countries.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Work Health and Safety Regulation 2011

- Gases under pressure , Liquefied gas	H280: Contains gas under pressure; may explode if heated.
- Acute toxicity , Category 3	H331: Toxic if inhaled.
- Skin irritation , Category 2	H315: Causes skin irritation.
- Eye irritation , Category 2A	H319: Causes serious eye irritation.

SUSMP (AU)

- Schedule 7: Dangerous Poison

2.2 Label elements

Work Health and Safety Regulation 2011

CAS-No. 7803-51-2 phosphine

Pictogram

Gas cylinder

Skull and crossbones

Signal word

- Danger

Hazard statements

- H280	Contains gas under pressure; may explode if heated.
- H315	Causes skin irritation.
- H319	Causes serious eye irritation.
- H331	Toxic if inhaled.

Precautionary statements

Prevention

- P261	Avoid breathing gas.
- P264	Wash skin thoroughly after handling.
- P271	Use only outdoors or in a well-ventilated area.
- P280	Wear protective gloves/ eye protection/ face protection.

Response

- P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
- P304 + P340 + P311	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician.
- P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P332 + P313	If skin irritation occurs: Get medical advice/ attention.
- P337 + P313	If eye irritation persists: Get medical advice/ attention.
- P362	Take off contaminated clothing and wash before reuse.

Storage

- P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
- P405	Store locked up.
- P410 + P403	Protect from sunlight. Store in a well-ventilated place.

Disposal

- P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards which do not result in classification

- Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.

SECTION 3: Composition/information on ingredients

3.1 Substance

- Not applicable, this product is a mixture.

3.2 Mixture

- Chemical nature — Physical mixture of phosphine and carbon dioxide

Information on Components and Impurities

Chemical name	CAS-No.	GHS Classification	Concentration [%]
Carbon dioxide	124-38-9	Acute toxicity, Category 4 ; H332	98

Phosphine	7803-51-2	Flammable gases, Category 1A ; H220 Gases under pressure, Compressed gas ; H280 Acute toxicity, Category 1 ; H330 Skin corrosion, Sub-category 1B ; H314 Serious eye damage, Category 1 ; H318	2
Non-hazardous ingredients *			Balance

* (Ingredients present at non-hazardous concentrations, according to criteria of SWAC (Australia) based on available information).

SECTION 4: First aid measures

4.1 Description of first aid measures

In case of inhalation

- Quickly move the person away from the contaminated area. Make the affected person rest.
- Immediate medical attention is required.
- Show this sheet to the doctor.

In case of skin contact

- Remove contaminated clothing and shoes.
- Immediate medical attention is required.
- Wash off with soap and water.

- Wash off immediately with plenty of water for at least 15 minutes.

In case of eye contact

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- Keep eye wide open while rinsing.
- Show this sheet to the doctor.
- Always obtain medical advice, even if there are no symptoms.

In case of ingestion

- Not applicable

4.2 Most important symptoms and effects, both acute and delayed

In case of inhalation

Symptoms
- Fatigue
- discomfort in the chest

Symptoms
- Weakness
- Vomiting
- chest pain
- Diarrhoea
- Difficulty in breathing

Symptoms
- pulmonary oedema
- Dizziness
- Cyanosis
- Unconsciousness

Effects
- Serious effects on health can appear after exposure, even death.
- The effects will depend on target organs.

- If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.
- In case of inhalation, irritation/corrosion of the respiratory tract.
- Risk of respiratory disorder
- May cause irreversible skin damage.
- Chronic exposure may cause dermatitis.
- May cause irreversible eye damage.
- Loss of the eye

Symptoms

- Symptoms will depend on the target organs.
- Inhalation may provoke the following symptoms:
- Cough
- Breathing difficulties
- Irritation
- Redness
- Swelling of tissue
- May cause respiratory tract irritation.
- Dermatitis
- Causes skin burns.
- Lachrymation
- Conjunctivitis
- Causes eye burns.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

- If breathed in, move person into fresh air.

- Be aware to maintain life support if necessary.
- Immediate medical attention is required.
- Consult with an ophthalmologist immediately in all cases.
- Burns must be treated by a physician.
- Treat symptomatically.
- Contact a poison control center.
- Keep under medical supervision for at least 48 hours.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

- Keep containers and surroundings cool with water spray.

5.2 Special hazards arising from the substance or mixture

- Dense white fumes are given off which may obscure the area.

5.3 Advice for firefighters

Special protective equipment for firefighters

- Wear full protective clothing and self-contained breathing apparatus.
- Hazchem Code 2XE

Specific fire fighting methods

- Cool containers/tanks with water spray.

Further information

- Control the use of water due to environmental risk (see section 6).

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Where exposure level is known, wear approved respirator suitable for level of exposure.
- Where exposure level is not known, wear approved, positive pressure, self-contained respirator.
- Do not breathe gas.
- Wear self-contained breathing apparatus and protective suit.
- If spillage occurs on the public highway, indicate the danger and notify the authorities (police, fire brigade).
- Evacuate personnel to safe areas.
- Remove all sources of ignition.
- Only qualified personnel equipped with suitable protective equipment may intervene.
- Stop the leak as quickly as possible (using non-sparking tools).
- Mechanically ventilate the spillage area, whilst avoiding the formation of explosive concentrations.

6.2 Environmental precautions

- Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

- Keep container tightly closed.
- Ventilate the area.

6.4 Reference to other sections

- For personal protection see section 8.
- For disposal considerations see section 13.

Dangerous Goods - Emergency Response Guidebook (ERG) (AU ERG2018)

Guide : 123

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Wear protective gloves/ protective clothing/ eye protection/ face protection.
- Wash hands after handling.
- Do not breathe gas.
- The gas deadens the sense of smell. Do not depend on odor to detect presence of gas.
- Keep cylinder out of sun and away from heat.
- Keep cylinder in an upright position and protect from falling.
- Cylinders must be handled in accordance with industry standards for compressed gases.

Hygiene measures

- Handle in accordance with good industrial hygiene and safety practice.
- Wash hands before breaks and at the end of workday.
- When using do not eat, drink or smoke.
- Eye wash bottles or eye wash stations in compliance with applicable standards.
- Ensure that eyewash stations and safety showers are close to the workstation location.
- Keep away from food and drink.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Recommended storage temperature: < 60 °C

- The building should be adequately ventilated and equipped with a continuous monitoring and alarm system.
- Keep in a dry, cool and well-ventilated place.
- Store in a fireproof area.
- Indoor storage in a separate building with no other occupancy is suitable.
- The indoor storage of toxic gases is prohibited in some jurisdictions.
- Store in upright position only.
- It is recommended that both full and used cylinders be stored outdoors in a dedicated and properly designed and labeled storage area, away from other building ventilation intakes.
- The storage of these gases in occupied spaces is not recommended.
- This area should be secured, locked and have a well-drained, firm and level surface, preferably reinforced concrete.
- To guarantee safety keep according to Storage temperature and conditions.

Australian AS 1940 Storage Classification

- (Not applicable)

7.3 Specific end use(s)

- no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with national occupational exposure limits

Components	Value type	Value	Basis
Carbon dioxide	TWA	5,000 ppm 9,000 mg/m3	Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment
Carbon dioxide	STEL	30,000 ppm 54,000 mg/m3	Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment
Carbon dioxide	TWA	12,500 ppm 22,500 mg/m3	Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment
Carbon dioxide	STEL	30,000 ppm 54,000 mg/m3	Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment
Phosphine	TWA	0.3 ppm 0.42 mg/m3	Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment
Phosphine	STEL	1 ppm 1.4 mg/m3	Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment

Components with other occupational exposure limits

Components	Value type	Value	Basis
Carbon dioxide	TWA	5,000 ppm	USA. ACGIH Threshold Limit Values (TLV)

Carbon dioxide	STEL	30,000 ppm	USA. ACGIH Threshold Limit Values (TLV)
Phosphine	TWA	0.05 ppm	USA. ACGIH Threshold Limit Values (TLV)
Phosphine	C	0.15 ppm	USA. ACGIH Threshold Limit Values (TLV)

8.2 Exposure controls

Control measures

Engineering measures

- Ensure adequate ventilation.
- Apply technical measures to comply with the occupational exposure limits.
- Use a closed system process where feasible.

-

Individual protection measures

Respiratory protection

- Self-contained breathing apparatus in confined spaces/insufficient oxygen/in case of large uncontrolled emissions/in all circumstances when the mask and cartridge do not give adequate protection.
- Use only respiratory protection that conforms to international/ national standards.
- Wear a positive-pressure supplied-air respirator.
- Components with workplace control parameters

Hand protection

- Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
- Impervious gloves

Eye protection

- Chemical resistant goggles must be worn.

- Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and body protection

- Full protective suit
- Change working clothes after each workshift.
- Contaminated work clothing should not be allowed out of the workplace.

- Gas is not known to be absorbed through skin.

- Steel toed safety shoes are recommended for anyone handling compressed gas cylinders.

Hygiene measures

- Handle in accordance with good industrial hygiene and safety practice.
- Wash hands before breaks and at the end of workday.
- When using do not eat, drink or smoke.
- Eye wash bottles or eye wash stations in compliance with applicable standards.
- Ensure that eyewash stations and safety showers are close to the workstation location.
- Keep away from food and drink.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	gaseous
Form	Liquefied gas
Colour	colourless
Odour	garlic
Odour Threshold	No data available
Melting point/freezing point	sublimes
Initial boiling point and boiling range	sublimes
Flammability (solid, gas)	No data available
Flammability (liquids)	No data available
Flammability/Explosive limit	Lower flammability/explosion limit: The product is not flammable. Upper flammability/explosion limit: The product is not flammable.
Flash point	The product is not flammable.
Auto-ignition temperature	No data available
Decomposition temperature	No data available
pH	Not applicable
Viscosity	No data available
Solubility	Water solubility: slightly soluble
Partition coefficient: n-octanol/water	Not applicable
Vapour pressure	Not applicable
Density	Not applicable
Relative density	No data available
Relative vapor density	1.53 (25 °C)
Particle characteristics	No data available
Evaporation rate (Butylacetate = 1)	Not applicable

9.2 Other information

Oxidizing properties	Not considered as oxidizing
Self-ignition	Not applicable
Peroxides	The substance or mixture is not classified as organic peroxide.

Corrosion of Metals	Corrosive to copper and copper alloys.

SECTION 10: Stability and reactivity

10.1 Reactivity

- No data available

10.2 Chemical stability

- Stable

10.3 Possibility of hazardous reactions

- No data available

10.4 Conditions to avoid

- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Keep away from direct sunlight.

10.5 Incompatible materials

- Copper
- Brass
- Copper alloys
- Noble metals

10.6 Hazardous decomposition products

Hazardous decomposition products

- Carbon oxides
- Oxides of phosphorus

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity	Not classified as hazardous for acute oral toxicity according to GHS. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Acute inhalation toxicity	LC50 - 1 h (gas) 5,011 ppm - Rat Published data This product is classified as acute toxicity, category 3
Asphyxiation Hazard	This product is a simple asphyxiant.
Acute dermal toxicity	Not classified as hazardous for acute dermal toxicity according to GHS. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Acute toxicity (other routes of administration)	Not applicable
Skin corrosion/irritation	Skin irritation
Serious eye damage/eye irritation	Irritating to eyes.

Respiratory or skin sensitisation	Does not cause skin sensitisation. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data. Does not cause skin sensitisation. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

Mutagenicity

Genotoxicity in vitro	Product is not considered to be genotoxic According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Genotoxicity in vivo	Product is not considered to be genotoxic According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Carcinogenicity	The product is not considered to be carcinogenic. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

Toxicity for reproduction and development

Toxicity to reproduction/Fertility	The product is not considered to affect fertility.,According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Developmental Toxicity/Teratogenicity	The product is not considered to be toxic for development.,According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

STOT

STOT - single exposure	The substance or mixture is not classified as specific target organ toxicant, single exposure according to GHS criteria. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
STOT - repeated exposure	The substance or mixture is not considered to cause damage to organs through prolonged or repeated exposure. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data. The product itself has not been tested.

Experience with human exposure

Experience with human exposure : Inhalation
No data is available on the product itself.

Experience with human exposure : Skin contact
No data is available on the product itself.

Experience with human exposure : Eye contact
No data is available on the product itself.

Experience with human exposure : Ingestion
No data is available on the product itself.

CMR effects

Carcinogenicity
phosphine — Not classified as a carcinogen according to GHS criteria

Mutagenicity
phosphine — Not classified as mutagen according to GHS criteria.

Teratogenicity
phosphine — Not classified as toxic for the reproduction (development) according to GHS criteria

Reproductive toxicity
phosphine — Not classified as toxic for the reproduction (fertility and/or development) according to GHS criteria

Aspiration toxicity — No aspiration toxicity classification, According to the available data on the components, According to the classification criteria for mixtures.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic Compartment

Acute toxicity to fish	The product itself has not been tested.
Acute toxicity to daphnia and other aquatic invertebrates	The product itself has not been tested.
Toxicity to aquatic plants	The product itself has not been tested.
Toxicity to microorganisms	The product itself has not been tested.
Chronic toxicity to fish	The product itself has not been tested.
Chronic toxicity to daphnia and other aquatic invertebrates	The product itself has not been tested.

Sediment compartment

Toxicity to benthic organisms	The product itself has not been tested.

Terrestrial Compartment

Toxicity to soil dwelling organisms	The product itself has not been tested.
Toxicity to terrestrial plants	The product itself has not been tested.
Toxicity to above ground organisms	The product itself has not been tested.

M-Factor

phosphine	Acute aquatic toxicity = 100 (according to the Globally Harmonized System (GHS))

12.2 Persistence and degradability

Abiotic degradation

Stability in water	Conclusion is not possible for a mixture as a whole.
Photodegradation	Conclusion is not possible for a mixture as a whole.
Other Physico-Chemical reactions	Conclusion is not possible for a mixture as a whole.

Physical- and photo-chemical elimination

Physico-chemical removability	Conclusion is not possible for a mixture as a whole.

Biodegradation

Biodegradability	As (bio)degradability is not relevant for mixtures, all the components of the mixture were assessed individually (rapid degradability assessment available below).
Ratio BOD/COD	Conclusion is not possible for a mixture as a whole.
Ratio BOD/ThOD	Conclusion is not possible for a mixture as a whole.
Biochemical Oxygen Demand (BOD)	Conclusion is not possible for a mixture as a whole.
Dissolved organic carbon (DOC)	Conclusion is not possible for a mixture as a whole.
Chemical Oxygen Demand (COD)	Conclusion is not possible for a mixture as a whole.
Adsorbed organic bound halogens (AOX)	Conclusion is not possible for a mixture as a whole.

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water

phosphine	Not applicable (inorganic substance)
Bioconcentration factor (BCF)	No data available

12.4 Mobility in soil

Adsorption potential (Koc)	Conclusion is not possible for a mixture as a whole.
Known distribution to environmental compartments	No data available
12.5 Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Global warming potential

carbon dioxide	Regulatory basis: Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) of the United Nations Framework Convention on Climate Change (UNFCCC) 20-year global warming potential: 1 100-year global warming potential: 1 500-year global warming potential: 1 Radiative efficiency: 0.000013 Wm2ppb Additional Information: Major Greenhouse Gases

Ecotoxicity assessment

Short-term (acute) aquatic hazard	Very toxic to aquatic life. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Long-term (chronic) aquatic hazard	No chronic environmental hazard identified. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product Disposal

- The Company encourages the recycle, recovery and reuse of materials, where permitted. If disposal is necessary, The Company recommends that organic materials, especially when classified as hazardous waste, be disposed of by thermal treatment or incineration at approved facilities. All local and national regulations should be followed.

SECTION 14: Transport information

Road and Rail transport ADG (Australia)

14.1 UN number	UN 3162
14.2 Proper shipping name	LIQUEFIED GAS, TOXIC, N.O.S. (Phosphine)
14.3 Transport hazard class Label(s)	2.3 2.3
14.4 Packing group Packing group Hazchem Code	 2XE
14.5 Environmental hazards **Marine pollutant**	YES

14.6 Special precautions for user
For personal protection see section 8.

IMDG

14.1 UN number	UN 3162
14.2 Proper shipping name	LIQUEFIED GAS, TOXIC, N.O.S. (Phosphine)
IMDG Code segregation group	Not Relevant
14.3 Transport hazard class	2.3
Label(s)	2.3
14.4 Packing group	
Packing group	
14.5 Environmental hazards	YES
Marine pollutant	
14.6 Special precautions for user	
EmS	F-C , S-U

For personal protection see section 8.

14.7 Transport in bulk vessels according to IMO instruments
No data available

IATA

14.1 UN number	UN 3162
14.2 Proper shipping name	Not permitted for transport
14.3 Transport hazard class	Not permitted for transport
14.4 Packing group	
14.5 Environmental hazards	YES
Marine pollutant	
14.6 Special precautions for user	
Packing instruction (cargo aircraft)	Not permitted for transport
Packing instruction (passenger aircraft)	Not permitted for transport

For personal protection see section 8.

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transport regulations for hazardous materials, it would be advisable to check their validity with your sales office.

SECTION 15: Regulatory information

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

Poison Schedule (SUSMP Australia)

- Schedule 7: Dangerous Poison

Notification status

Inventory Information	Status
United States TSCA Inventory	- All substances listed as active on the TSCA inventory - This product is regulated under the United States Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).
Canadian Domestic Substances List (DSL)	- Listed on Inventory
Australian Inventory of Industrial Chemicals (AIIC)	- Listed on Inventory: Listed introduction
Japan. CSCL - Inventory of Existing and New Chemical Substances	- Listed on Inventory
Korea. Korean Existing Chemicals Inventory (KECI)	- Listed on Inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	- Listed on Inventory
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	- Listed on Inventory
Taiwan Chemical Substance Inventory (TCSI)	- Listed on Inventory
New Zealand. Inventory of Chemical Substances	- All components are listed on the NZIoC inventory. Additional HSNO obligations may apply. Please refer to Section 15 of SDS for New Zealand.
EU. European Registration, Evaluation, Authorization and Restriction of Chemical (REACH)	- When purchased from a Solvay legal entity based in the EEA (""European" "Economic Area""), this product is compliant with the registration" provisions of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt, and/or registered. When purchased from a legal entity outside of the EEA, please contact your local representative for additional information.
Korea. Act on Registration and Evaluation of Chemicals	- When purchased from a Solvay legal entity based in Korea, this product is compliant with "Act on Registration and Evaluation of Chemicals" (AREC or K-REACH, Article 10) as all its components are either excluded, exempt, and/or (pre)registered. When purchased from a legal entity outside of Korea, please contact your local representative for additional information.

SECTION 16: Other information

Full text of H-Statements

- H220: Extremely flammable gas.
- H280: Contains gas under pressure; may explode if heated.
- H314: Causes severe skin burns and eye damage.
- H315: Causes skin irritation.
- H318: Causes serious eye damage.
- H319: Causes serious eye irritation.
- H330: Fatal if inhaled.

- H331: Toxic if inhaled.
- H332: Harmful if inhaled.
- H400: Very toxic to aquatic life.

Key or legend to abbreviations and acronyms used in the safety data sheet

- C: Ceiling limit
- STEL: Exposure standard - short term exposure limit
- TWA: Exposure standard - time weighted average
- ca.: approximately
- ADR: European Agreement on International Carriage of Dangerous Goods by Road.
- ADN: European Agreement on the International Carriage of Dangerous Goods by Inland Waterways.
- RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
- IATA: International Air Transport Association.
- ICAO-TI: Technical Instructions for Safe Transport of Dangerous Goods by Air.
- IMDG: International Maritime Dangerous Goods.
- TWA: Time weighted average
- ATE: Estimated value of acute toxicity
- EC: European Community number
- CAS: Chemical Abstracts Service.
- LD50: Substance that causes 50% (half) death in the test animals group (Median Fatal Dose).
- LC50: Substance concentration causing 50% (half) death in the test animals group.
- EC50: Effective Concentration of the substance causing the maximum of 50%.
- PBT: Persistent, Bioaccumulative and Toxic substance.
- vPvB: Very Persistent and Very Bioaccumulative.
- GHS/CLP/SEA: Classification, labeling, packaging regulation
- DNEL: Derived No Effect Level
- PNEC: Predicted No Effect Concentration
- STOT: Specific Target Organ Toxicity

Not all acronyms listed above are referenced in this SDS.

Further information

- Distribute new edition to clients

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in any other manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.