

**SAFETY DATA SHEET**  
according to Regulation (EC) No. 1907/2006

**Product: Ethylene Thiourea**

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SDS No.: 100022-100 (Version 4.0) \_\_\_\_\_ Date 29.09.2014 (Cancel and replace : 19.09.2014)

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1. Identification of the product**

**Substance name:** Ethylene Thiourea  
**REACH Registration Number:** 01-2119541697-28-0000  
**EC Nr:** 202-506-9  
**CAS-No.:** 96-45-7

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

**Use of the Substance/Mixture :**

<b>Sector of use :</b>	<b>Product category :</b>
Manufacture of General Rubber Goods <b>SU11:</b> Manufacture of rubber products	<b>PC0:</b> Cross-linking agent, <b>PC19:</b> Intermediate
Manufacture of Tyres <b>SU11:</b> Manufacture of rubber products	<b>PC0:</b> Cross-linking agent, <b>PC19:</b> Intermediate
Manufacture of Masterbatches <b>SU 10:</b> Formulation	<b>PC19:</b> Intermediate
Formulation and repackaging <b>SU 10:</b> Formulation	<b>PC19:</b> Intermediate
Metalworking - anti corrosion <b>SU14:</b> Manufacture of basic metals, including alloys	<b>PC0:</b> Corrosion inhibitor

**1.3. Details of the supplier of the safety data sheet**

Supplier: Charkit Chemical Corporation  
32 Haviland Street  
South Norwalk, CT 06854 USA  
Tel. 1-203-299-3220

**1.4. Emergency telephone number**

Chemtrec: 1-800-424-9300, Intl: 1-703-527-3887

**2. HAZARDS IDENTIFICATION**

**2.1. Classification of the substance or mixture**

**Classification (REGULATION (EC) No 1272/2008):**

Oral: Acute toxicity, 4, H302  
Reproductive toxicity, 1B, H360  
Oral: Target Organ Systemic Toxicant - Repeated exposure, 1, Thyroid gland, H372  
Carcinogenicity, 2, H351

**Classification (Directive 67/548/EEC):**

Xn; R22  
T; Repr.Cat.2; R61  
R48/20/22  
Carc.Cat.3; R40

**Additional information:**

For the full text of the R, H, EUH-phrases mentioned in this Section, see Section 16.

**2.2. Label elements**

Label elements (REGULATION (EC) No 1272/2008):

No. in ANNEXE : 613-039-00-9

Hazardous components which must be listed on the label:

ethylene thiourea; imidazolidine-2-thione; 2-imidazoline-2-thiol

Hazard pictograms:



Signal word:

**Danger**

Hazard statements:

Harmful if swallowed.

May damage fertility or the unborn child.

Causes damage to organs through prolonged or repeated exposure. Suspected of causing cancer.

H302

H360

H372

H351

Precautionary statements:

**Prevention:**

P201 : Obtain special instructions before use.

P281 : Use personal protective equipment as required.

**Response:**

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

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

**Disposal:**

P501 : Dispose of contents/ container to an approved incineration plant.

2.3. Other hazards : None.

**Other:**

Results of PBT and vPvB assessment : According to REACH regulation, annex XIII, this mixture contains no substance meeting PBT and vPvB criteria.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Mixture based on:

Chemical Name <sup>1</sup>	EC-No.	CAS-No.	Concentration	Classification Directive 67/548/EEC	Classification REGULATION (EC) No 1272/2008
Imidazolidine-2-thione	202-506-9	96-45-7	96 - 98%	Repr.Cat.2; R61 Xn; R22 R40 R48/20/22	Acute Tox. 4 (Oral); H302 Repr. 1B; H360D STOT RE 1; H372 Carc. 2; H351
Distillates (petroleum), hydrotreated light paraffinic	265-158-7	64742-55-8	1 - 2%	Nota L: DMSO <3% Carc.Cat.2; R45	AH 1; H304 Nota L: DMSO <3%

<sup>1</sup>: See chapter 14 for Proper Shipping Name

4. FIRST AID MEASURES

4.1. & 4.2. Description of necessary first-aid measures & Most important symptoms/effects, acute and delayed:

**General advice:**

Take off immediately all contaminated clothing.

**Inhalation:**

Move to fresh air. Oxygen or artificial respiration if needed. Consult a physician.

**Skin contact:**

Wash off immediately with soap and plenty of water.

**Eye contact:**

Wash well-open eyes immediately, abundantly and thoroughly with water. Consult an ophthalmologist immediately.

**Ingestion:**

If swallowed, do not induce vomiting - seek medical advice.

**Protection of first-aiders:**

In case of insufficient ventilation, wear suitable respiratory equipment.

4.3. Indication of immediate medical attention and special treatment needed, if necessary : No data available.

**5. FIREFIGHTING MEASURES**

5.1. Extinguishing media

**Suitable extinguishing media:** Water spray, Foam, Dry powder

**Unsuitable extinguishing media:** All other extinguishants

5.2. Special hazards arising from the substance or mixture:

Thermal decomposition gives ; Sulphur oxides, Nitrogen oxides (NOx)

5.3. Advice for firefighters:

**Specific methods:**

Remove all sources of ignition. Suppress gases, fumes and/or dust with water spray jet.

**Special protective actions for fire-fighters:**

Wear self-contained breathing apparatus and protective suit.

**6. ACCIDENTAL RELEASE MEASURES**

6.1. Personal precautions, protective equipment and emergency procedures:

Avoid contact with skin and eyes and inhalation of dust.

6.2. Environmental precautions:

Do not let product enter drains. Do not contaminate surface water.

6.3. Methods and materials for containment and cleaning up:

**Recovery:**

Shovel or sweep up. Recover the product and place in a dry labelled container.

**Elimination:**

Destroy the product by incineration (in accordance with local and national regulations).

6.4. Reference to other sections: None.

**7. HANDLING AND STORAGE**

7.1. Precautions for safe handling:

**Technical measures/Precautions:**

Storage and handling precautions applicable to products: Dust forming. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. Provide water supplies, ocular fountains and showers near the point of use.

**Hygiene measures:**

General industrial hygiene practice. Avoid contact with skin, eyes and clothing. Avoid breathing dust.

Wash hands after handling. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities:

Keep in a well-ventilated place. Keep in a dry place. Store protected from moisture.

**Incompatible products:**

Strong acids, Oxidizing agents

**Packaging material:**

**Recommended:** Paper bags, Big bags.

7.3. **Specific end use(s):** None.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters:

#### Exposure Limit Values (dust)

Source	Date	Value type	Value (ppm)	Value (mg/m3)	Remarks
ACGIH (US)	02 2012	TWA		10	Inhalable particles.
ACGIH (US)	02 2012	TWA	-	3	Respirable particles.

Exposure Limit Values Not relevant

#### Derived No Effect Level (DNEL): IMIDAZOLIDINE-2-THIONE :

End Use	Inhalation	Ingestion	Skin contact
Workers	0,07 mg/m3 (LT, SE)		1,7 mg/kg (LT, SE)
Consumers	0,01 mg/m3 (LT, SE)	0,0085 mg/kg (LT, SE)	0,85 mg/kg (LT, SE)

LE : Local effects, SE : Systemic effects, LT : Long term, ST : Short term

Predicted No Effect Concentration: No data available.

### 8.2. Exposure controls:

#### General protective measures:

#### Personal protective equipment:

Respiratory protection:

Hand protection:

Eye/face protection:

Skin and body protection:

Ensure sufficient air exchange and/or exhaust in work areas

Environmental exposure controls: See chapter 6

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

Effective dust mask.  
Impervious gloves  
Tightly fitting safety goggles  
At the workplace : Protective suit.

#### Appearance:

#### Physical state (20°C):

#### Form:

#### Colour:

#### Granulometry:

solid  
powder  
white  
D50 : 0,026 mm  
D10 : 0,010 mm  
D90 : 0,045 mm  
characteristic  
No data available.  
Not applicable  
199 °C (OECD Test Guideline 102)

#### Odour:

#### Olfactory threshold:

#### pH:

#### Melting point/range :

#### Boiling point/boiling range:

#### Flash point:

#### Evaporation rate:

#### Flammability (solid, gas):

Flammability:

Lower flammable limit :

Upper flammable limit :

No data available.  
Not applicable  
No data available.  
Non flammable product (Standard A10)  
No data available  
No data available  
No data available  
< 1,33 hPa , at 25 °C (OECD Test Guideline 104)  
No data available.  
1,36 g/cm3 , at 20 °C  
452 kg/m3 , at 20 °C  
27,4 g/l at 20 °C (OECD Test Guideline 105)

#### Vapour pressure:

#### Vapour density:

#### Density:

#### Bulk density:

#### Water solubility:

MLPC International

<b>Partition coefficient: n-octanol/water:</b>	<b>Oxidizing properties:</b>
<b>Auto-ignition temperature:</b>	IMIDAZOLIDINE-2-THIONE : log Kow : -0,67 , at 20 °C (OECD Test Guideline 107)
<b>Decomposition temperature:</b>	Not applicable
<b>Viscosity:</b>	240 °C
<b>Explosive properties:</b>	No data available.
Explosivity:	Not explosive, Not relevant (due to the chemical structure) No data available.

9.2. Other data:

<b>Solubility in other solvents:</b>	Alcohols	,	Acetone	,	Chloroform	Soluble	in:
<b>Surface tension:</b>	65,7		mN/m		at	23	°C
<b>pKA:</b>	None.						
<b>Molecular weight:</b>	102 g/mol						

10. STABILITY AND REACTIVITY

10.1. & 10.2. Reactivity & Chemical stability:

Product stable in the absence of moisture

10.3. Possibility of hazardous reactions: No data available.

10.4. Conditions to avoid:

Store protected from moisture and heat. Protect from light. Keep away from direct sunlight.

10.5. Incompatible materials to avoid:

Acids

10.6. Hazardous decomposition products:

**Thermal decomposition:**

Decomposition temperature: 240 °C

Thermal decomposition gives : Carbon oxides, Sulphur oxides, Nitrogen oxides (NOx)

11. TOXICOLOGICAL INFORMATION

All available data on this product and/or the components quoted in section 3 and/or the analogue substances/metabolites have been taken into account for the hazard assessment.

11.1. Information on toxicological effects:

Acute toxicity:

**Inhalation:** Based on the available information, it is not possible to conclude on the hasard potential of this mixture.

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :  
• In animals : No mortality/4 h/Rat: 5,53 mg/l (Method: OECD Test Guideline 403) (Aerosol)

**Ingestion:** According to its composition, can be considered as : Harmful if swallowed.

IMIDAZOLIDINE-2-THIONE :  
• In animals : LD50/Rat: 940 mg/kg

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :  
• In animals : No mortality/Rat: 5.000 mg/kg (Method: OECD Test Guideline 401)

**Dermal:** According to its composition, can be considered as : Slightly harmful in contact with skin

IMIDAZOLIDINE-2-THIONE :  
• In animals : LD50/Rat: > 2.000 mg/kg (Method: OECD Test Guideline 402)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :  
• In animals : No mortality/Rabbit: 5.000 mg/kg (Method: OECD Test Guideline 402)

Local effects ( Corrosion / Irritation / Serious eye damage ):

**Skin contact:** According to its composition, can be considered as : Non irritating to skin

IMIDAZOLIDINE-2-THIONE :  
• In animals : No skin irritation (OECD Test Guideline 404, Rabbit)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :  
• In animals : Slightly irritating to skin. (Rabbit, Exposure time: 24 h)

**Eye contact:** **According to its composition, can be considered as : Not irritating to the eyes.**

IMIDAZOLIDINE-2-THIONE :  
• In animals : Mild eye irritation (OECD Test Guideline 405, Rabbit)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :  
• In animals : No eye irritation (OECD Test Guideline 405, Rabbit)

**Respiratory or skin sensitisation:**

**Inhalation:** No data available.

**Skin contact:** **According to its composition, can be considered as : Not a skin sensitizer**

IMIDAZOLIDINE-2-THIONE :  
• In man : Some cases of cutaneous sensitization reported  
• In animals : Not a skin sensitizer (Mouse)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :  
• In animals : Not a skin sensitizer (Method : OECD Test Guideline 406 Guinea pig maximization test)

**CMR effects :**

**Mutagenicity:** **According to its composition, can be considered as : Not genotoxic**

**In vitro**

IMIDAZOLIDINE-2-THIONE :  
Ames test in vitro: Overall not genotoxic (Method: OECD Test Guideline 471)  
Chromosome aberration test in vitro: Inactive (Method: OECD Test Guideline 473)  
In vitro gene mutations test on mammalian cells: Active (Method: OECD Test Guideline 476)  
DNA repair test on rats hepatocytes: Inactive

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :  
Ames test in vitro: Inactive (Method: OECD Test Guideline 471)  
In vitro test for chromosomal abnormalities on CHO cells: Inactive (Method: OECD Test Guideline 473)  
In vitro gene mutations test on mammalian cells: Inactive (Method: OECD Test Guideline 476)

**In vivo**

IMIDAZOLIDINE-2-THIONE :  
In vivo micronucleus test: Inactive  
unscheduled DNA synthesis assay: Inactive

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :  
Micronucleus test in vivo mouse: Inactive (Method: OECD Test Guideline 474)

**Carcinogenicity:** **According to its composition : Suspected of causing cancer.**

IMIDAZOLIDINE-2-THIONE :  
• In animals : Carcinogenic effects shown experimentally in animals  
Target organs: Thyroid gland (Rat, 2 years, By oral route)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :  
• In animals : Absence of carcinogenic effects (Method: OECD Test Guideline 451, mice, Chronic, dermal route)

**Reproductive toxicity:**

**Fertility:** **Based on the available information, it is not possible to conclude on the hasard potential of this mixture.**

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :  
• In animals : Reproduction Test: No toxicity to reproduction  
NOAEL ( Parental toxicity ): 1.000 mg/kg bw/day  
NOAEL ( Fertility ): 1.000 mg/kg bw/day  
(Method: OECD Test Guideline 421, Rat, By oral route)

**Foetal development:** **According to its composition, can be considered as : May damage the unborn child.**

IMIDAZOLIDINE-2-THIONE :  
• In animals : Exposure during pregnancy: Teratogenic effects.  
(By oral route)  
NOAEL ( Developmental Toxicity ): 5 mg/kg bw/day  
NOAEL ( Maternal Toxicity ): 40 mg/kg bw/day  
(Rat)

NOAEL ( Developmental Toxicity ): 100 mg/kg bw/day  
NOAEL ( Maternal Toxicity ): < 100 mg/kg bw/day  
(Mouse)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :  
In animals : Absence of toxic effects for foetal development.

NOAEL ( Developmental Toxicity ): 2.000 mg/kg bw/day  
NOAEL ( Maternal Toxicity ): < 125 mg/kg bw/day  
(Method: OECD Test Guideline 414, Rat, dermal route)

**Specific target organ toxicity :**

**Single exposure :**

**Inhalation:**

**Dust inhalation: Possible irritation of respiratory system**

**Repeated exposure:**

**The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.**

Target Organs : Thyroid gland

• In animals :

IMIDAZOLIDINE-2-THIONE :

By oral route: Target organs: Thyroid gland, NOAEL= 1,7 mg/kg (Method: OECD Test Guideline 408, Rat, 3 months)

By inhalation: Target organs: Thyroid gland, NOAEL= 0,01 mg/l (Method: OECD Test Guideline 412, Rat, 28 d)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :

• In animals :

By inhalation: No effect is reported.

NOAEL= > 1 mg/l (Rat, 4 Weeks) (Aerosol)

dermal route: No effect is reported.

NOAEL= > 2.000 mg/kg (Method: OECD Test Guideline 411, Rat, 3 months)

By oral route: (Results obtained on a similar product).

Target organs: Reproductive organs, Stomach, Liver, Thymus, NOAEL= < 125 mg/kg (Method: OECD Test Guideline 408, Rat, 3 months)

Not applicable

**12. ECOLOGICAL INFORMATION**

Ecotoxicology Assessment:

**Aspiration hazard:**

All available data on this product and/or the components quoted in section 3 and/or the analogue substances/metabolites have been taken into account for the hazard assessment.

Acute aquatic toxicity : Harmful to aquatic life.

**12.1. Toxicity :**

**Fish:**

IMIDAZOLIDINE-2-THIONE :

**Slightly harmful to fish**

LC50, 96 h (Poecilia reticulata (guppy)) : 7.500 mg/l (Method: OECD Test Guideline 203)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :

LL50, 96 h (Pimephales promelas (fathead minnow)) : > 100 mg/l (Method: OECD Test Guideline 203)

**Aquatic invertebrates:**

**Harmful to daphnia.**

IMIDAZOLIDINE-2-THIONE :

LC50, 48 h (Daphnia magna (Water flea)) : 26 mg/l (Method: OECD Test Guideline 202, Immobilization)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :

LL50, 48 h (Daphnia magna (Water flea)) : > 10.000 mg/l (Method: OECD Test Guideline 202, pH: 7,7, Immobilization)

**Aquatic plants:**

**Slightly harmful to algae**

IMIDAZOLIDINE-2-THIONE :

72 h (Pseudokirchneriella subcapitata (green algae)) : > 100 mg/l (Method: OECD Test Guideline 201, growth rate inhibition)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :

LL50, 72 h (Pseudokirchneriella subcapitata (microalgae)) : > 100 mg/l (Method: OECD Test Guideline 201, growth rate inhibition)

**Microorganisms:**

IMIDAZOLIDINE-2-THIONE :

EC50, 3 h (Activated sludge) : > 100 mg/l (Method: OECD Test Guideline 209, Respiration inhibition of activated sludge)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :

NOEC, 4 d (Photobacterium phosphoreum) : > 1,93 mg/l (Method: DIN 38412)

**Aquatic toxicity / Long term toxicity:**

**Aquatic invertebrates:**

IMIDAZOLIDINE-2-THIONE :

NOEC, 21 d (Daphnia magna (Water flea)) : 3,2 mg/l (Method: OECD Test Guideline 211, Reproduction inhibition)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :

NOEC, 21 d (Daphnia magna (Water flea)) : 10 mg/l (Method: OECD Test Guideline 211, Growth inhibition/Reproduction inhibition)

**Aquatic plants:**

IMIDAZOLIDINE-2-THIONE :

NOEC r, 72 h (Pseudokirchneriella subcapitata (green algae)) : 100 mg/l (Method: OECD Test Guideline 201, growth rate inhibition)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :

NOEC r, 72 h (Pseudokirchneriella subcapitata) : 100 mg/l (Method: OECD Test Guideline 201, growth rate inhibition)

**12.2. Persistence and degradability :**

**In water:**

**Not hydrolysable**

**Biodegradation (In water):**

**Not readily biodegradable.**

IMIDAZOLIDINE-2-THIONE :

Not biodegradable  
(Method: OECD Test Guideline 301 F)

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC :

Not readily biodegradable.  
4 % after 28 d (Method: OECD Test Guideline 301 B)

**12.3. Bioaccumulative potential :**

IMIDAZOLIDINE-2-THIONE :

Partition coefficient: n-octanol/water: log Kow : -0,67 , at 20 °C (Method: OECD Test Guideline 107)

**12.4. Mobility in soil - Distribution among environmental compartments:**

**Surface tension:**

65,7 mN/m 23 °C

**12.5. Results of PBT and vPvB assessment :**

According to REACH regulation, annex XIII, this mixture contains no substance meeting PBT and vPvB criteria.

**12.6. Other adverse effects:** None known.

**13. DISPOSAL CONSIDERATIONS**

**13.1. Waste treatment:**

**Disposal of product:**

Destroy the product by incineration (in accordance with local and national regulations).

**Disposal of packaging:**

Destroy packaging by incineration at an approved waste disposal site (in accordance with local and national regulations).

**14. TRANSPORT INFORMATION**

**15. REGULATORY INFORMATION**

Safety data sheets: according to Regulation (EC) No. 1907/2006

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

**15.2. Chemical Safety Assessment:**



A Chemical Safety Assessment has been carried out for this substance. (Imidazolidine-2-thione)

**INVENTORIES:**

EINECS:	Conforms to
TSCA:	Conforms to
AICS:	Conforms to
DSL:	All components of this product are on the Canadian DSL.
ENCS (JP):	Conforms to
KECI (KR):	Conforms to
PICCS (PH):	Conforms to
IECSC (CN):	Conforms to
NZIOC:	Conforms to

**16. OTHER INFORMATION**

**Full text of R, H, EUH-phrases referred to under sections 2 and 3**

R22	Harmful if swallowed.
R40	Limited evidence of a carcinogenic effect.
R45	May cause cancer.
R48/20/22	Also harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
R61	May cause harm to the unborn child.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H360D	May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.

**Update:**

Safety datasheet sections which have been updated:	Type:
One or more exposure scenario were added., one or more exposure scenario have been changed: see dates and versions	Additions, Revisions

**Thesaurus:**

NOAEL : No Observed Adverse Effect Level (NOAEL)  
LOAEL : Lowest Observed Adverse Effect Level (LOAEL)  
bw : Body weight  
food : oral feed  
dw : Dry weight  
vPvB : very Persistent and very Bioaccumulative  
PBT : Persistent, Bioaccumulative and Toxic

This information applies to the PRODUCT AS SUCH and conforming to the specifications. In case of formulations or mixtures, it is necessary to ascertain that a new danger will not appear. The information contained is based on our knowledge of the product, at the date of publishing and it is given quite sincerely. Users are advised of possible additional hazards when the product is used in applications for which it was not intended. This sheet shall only be used and reproduced for prevention and security purposes. The references to legislative, regulatory and codes of practice documents cannot be considered as exhaustive. It is the responsibility of the person receiving the product to refer to the totality of the official documents concerning the use, the possession and the handling of the product. It is also the responsibility of the handlers of the product to pass on to any subsequent persons who will come into contact with the product (usage, storage, cleaning of containers, other processes) the totality of the information contained within this safety data sheet and necessary for safety at work, the protection of health and the protection of environment.

800839

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**NB: In this document the numerical separator of the thousands is the (point), the decimal separator is (comma).**