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

1.1. Product identifier

Product form	:	Substance
Substance name	:	BENZENE
EC-No.	:	200-753-7
CAS-No.	:	71-43-2
REACH registration No	:	Total Olefins Antwerp (01-2119447106-44-0003) - Total Petrochemicals & Refining (01-2119447106-44-0000) - TP France (01-2119447106-44-0004)
Synonyms	:	71-43-2
Product group	:	-

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

1.2.1. Relevant identified uses

Main use category	:	Professional use
Use of the substance/mixture	:	Intermediates

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

REFINING & CHEMICALS BRANCH
TOTAL PETROCHEMICALS & REFINING SA/NV
Rue de l'Industrie 52 Nijverheidsstraat - B-1040 BRUSSELS - BELGIUM
T +32 (0)2.288.91.11
rc.fer-sds@total.com - www.total.com

1.4. Emergency telephone number

Emergency number : Emergency call Carechem 24 International :
• for English speaking countries: +44 (0) 1235 239 670
• for Europe (in local languages): + 33 1 49 00 00 49
• for Africa and Middle East: + 44 (0) 1235 239 671• for China:
+ 86 10 5100 3039
• for Asia Pacific (Hong-Kong, Singapore, Taiwan, Philippines, India, Vietnam, Sri Lanka, Japan, Korea, Malaysia, Indonesia, Thailand) :
+ 65 3158 1074

Country	Organisation/Company	Address	Emergency number	Comment
	National Poisons Emergency number		08 45 46 47	
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 2	H225
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Germ cell mutagenicity, Category 1B	H340
Carcinogenicity, Category 1A	H350
Specific target organ toxicity — Repeated exposure, Category 1	H372
Aspiration hazard, Category 1	H304
Hazardous to the aquatic environment — Chronic Hazard, Category 3	H412

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Highly flammable liquid and vapour. May cause cancer. May cause genetic defects. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. Harmful to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS02 GHS08 GHS07

Signal word (CLP) : Danger

Hazard statements (CLP) : H225 - Highly flammable liquid and vapour.
H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H340 - May cause genetic defects.
H350 - May cause cancer.
H372 - Causes damage to organs through prolonged or repeated exposure.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP) : P201 - Obtain special instructions before use.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243 - Take precautionary measures against static discharge.
P262 - Do not get in eyes, on skin, or on clothing.
P273 - Avoid release to the environment.
P281 - Use personal protective equipment as required.
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P341 - IF INHALED: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P309+P311 - IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
P403+P235 - Store in a well-ventilated place. Keep cool.

2.3. Other hazards

Other hazards not contributing to the classification : In use, may form flammable/explosive vapour-air mixture. Handling this product may result in electrostatic accumulation. Use proper grounding procedures.

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : BENZENE

CAS-No. : 71-43-2

EC-No. : 200-753-7

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Benzene	(CAS-No.) 71-43-2 (EC-No.) 200-753-7	> 99.75	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Muta. 1B, H340 Carc. 1A, H350 STOT RE 1, H372 Asp. Tox. 1, H304

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Get medical advice/attention if you feel unwell.

First-aid measures after inhalation	:	Remove person to fresh air and keep comfortable for breathing. Call a physician immediately. If breathing is difficult, give oxygen. If breathing stops, give artificial respiration. Place under medical observation.
First-aid measures after skin contact	:	Take off immediately all contaminated clothing. Wash with plenty of water/…. Get medical advice if skin irritation persists.
First-aid measures after eye contact	:	Immediately rinse with water for a prolonged period while holding the eyelids wide open. Consult an eye specialist.
First-aid measures after ingestion	:	Do not give anything to drink. Do not induce vomiting. If swallowed, rinse mouth with water (only if the person is conscious). Take immediately victim to hospital.

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

Symptoms/effects	:	Refer to § 11 for more details on effects.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Carbon dioxide. Dry powder. Foam.
Unsuitable extinguishing media	:	Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Explosion hazard	:	Heavier than air, vapours may travel long distances along ground, ignite and flash back to source. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.
Hazardous decomposition products in case of fire	:	Toxic fumes. Carbon oxides (CO, CO2). Aldehydes. Polycyclic-aromatic hydrocarbons (PAH). Carbon (C). Ketones.

5.3. Advice for firefighters

Protection during firefighting	:	Complete protective clothing. Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	:	Notify fire brigade and environmental authorities. Evacuate unnecessary personnel. Use water spray or fog for cooling exposed containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	:	No flames, no sparks. Eliminate all sources of ignition. Do not smoke. Use special care to avoid static electric charges. Prevent any contact with hot surfaces.

6.1.1. For non-emergency personnel

Protective equipment	:	Do not attempt to take action without suitable protective equipment. Gloves. Safety glasses.
Emergency procedures for non-emergency personnel	:	Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment. Breathing apparatus.
Emergency procedures for emergency responders	:	Evacuate unnecessary personnel. Eliminate all ignition sources if safe to do so.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	:	If spilled, may cause the floor to be slippery. Sweep up or vacuum up the product. Dike for recovery or absorb with appropriate material. Take up liquid spill into absorbent material, e.g.: sand, saw dust. On water, recover/skim from surface and pour out in disposal container.
Other information	:	Dispose of contaminated material at an authorized site. Notify authorities if product enters sewers or public waters.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Ensure good ventilation of the work station. In use, may form flammable/explosive vapour-air mixture. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge during blending and transfer operations. Explosion-free electrical equipment and lighting with earth.
Hygiene measures	:	Do not eat, drink or smoke when using this product. Keep away from food and drink. Always wash hands after handling the product. Take off contaminated clothing.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Proper grounding procedures to avoid static electricity should be followed.
Storage conditions	:	Store in a well-ventilated place. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Containers (tanks) should be grounded and provided with adequate pressure relief valve. Explosive vapour/air mixtures may be formed.
Incompatible materials	:	Strong oxidizing agents. acids. Bases.
Storage area	:	Store away from heat. Earth the equipment. Store in a well-ventilated place.
Packaging materials	:	Stainless steel.

7.3. Specific end use(s)

Recommended to professional users.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Benzene (71-43-2)		
Ireland	OEL (8 hours ref) (mg/m³)	3 mg/m³
Ireland	OEL (8 hours ref) (ppm)	1 ppm
United Kingdom	WEL TWA (mg/m³)	3.25 mg/m³
United Kingdom	WEL TWA (ppm)	1 ppm
United Kingdom	WEL STEL (mg/m³)	9.75 mg/m³ (calculated)
United Kingdom	WEL STEL (ppm)	3 ppm (calculated)
USA - ACGIH	ACGIH TWA (ppm)	0.5 ppm
USA - ACGIH	ACGIH STEL (ppm)	2.5 ppm
USA - ACGIH	Biological Exposure Indices (BEI)	25 µg/g creatinine (Medium: urine - Time: end of shift - Parameter: S-Phenylmercapturic acid (background)) 500 µg/g creatinine (Medium: urine - Time: end of shift - Parameter: t,t-Muconic acid (background))

BENZENE (71-43-2)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	23.4 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1.9 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	0.140 µg/kg bw/day
Long-term - systemic effects, inhalation	3.25 µg/m³
Long-term - systemic effects, dermal	234 µg/kg bw/day
PNEC (Water)	
PNEC aqua (freshwater)	1.9 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	33 mg/kg dwt
PNEC (Soil)	
PNEC soil	4.8 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	39 mg/l

8.2. Exposure controls

Appropriate engineering controls:

The substance is flammable and therefore the following conditions must be met to ensure safe use: “Risks are controlled by storage and use under conditions which avoid all ignition sources.”
. Ensure adequate ventilation. Safety shower. Eye fountain.

Personal protective equipment:

Gas mask with filter type A.

Hand protection:

hydrocarbons resistant gloves. In case of repeated or prolonged contact wear gloves. recommended material: fluorinated polymer. polyvinyl alcohol. Layer thickness : all thicknesses. Breakthrough time : > 480 min. EN 374-3. In the event of contact with the liquid: Nitrile rubber gloves. Layer thickness : > 0,30 mm. Breakthrough time : > 60 min. EN 374-3. Gloves may degrade in contact with this chemical.

• Carefully check the glove for cracks or damage before reusing it, dispose of gloves where the penetration time is exceeded. • The penetration time depends on temperature, glove material, thickness and construction.
Penetration time is measured against EN 374 in laboratory conditions corresponding to permanent static contact and is not necessarily representative of the risk in the workplace. Contact the gloves' supplier for further information on the selection and resistance of gloves.

Eye protection:

Safety glasses. Do not wear contact lenses

Skin and body protection:

Wear suitable protective clothing. Safety foot-wear

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended

Environmental exposure controls:

Avoid release to the environment. Assure that emissions are compliant with all applicable air pollution control regulations.

Other information:

Substance is manufactured and used as an intermediate and distributed under strictly controlled conditions in that it is rigorously contained by technical means during its whole lifecycle (Regulation 1907/2006, Article 17 §3). The substance is handled under Strictly Controlled Conditions as defined under REACH Article 18(4) throughout its life cycle. Specifically the substance is rigorously contained by technical means during its whole lifecycle; procedural and control technologies are used to minimise emissions and any resulting exposures; only properly trained and authorised personnel handle the substance; special procedures such as purging and washing are applied during cleaning and maintenance works, in cases of accident and where waste is generated, procedural and/or control technologies are used to minimise emissions and the resulting exposures; and substance-handling procedures are well documented and strictly supervised by the site operator. In addition, exposure is controlled by regular ambient monitoring of substance at the workplace.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Molecular mass	:	78 g/mol
Colour	:	Colourless.
Odour	:	Aromatic.
Odour threshold	:	No data available
pH	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	5.5 °C
Freezing point	:	No data available
Boiling point	:	80 °C
Flash point	:	-11 °C
Auto-ignition temperature	:	498 °C
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	100 hPa (20°C)
Relative vapour density at 20 °C	:	2.7
Relative density	:	No data available
Density	:	872 - 882 kg/m³
Solubility	:	insoluble. Water: 1780 mg/l
Log Pow	:	No data available
Viscosity, kinematic	:	< 1 mm²/s
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available

Explosive limits : 1.2 - 8 vol %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapour.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

No flames, no sparks. Eliminate all sources of ignition. High temperature. Heat.

10.5. Incompatible materials

Strong oxidizing agents. Acids. Bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Additional information : Inhalation may affect the nervous system causing headache, possibly dizziness, nausea, weakness, loss of coordination and unconsciousness

Benzene (71-43-2)	
LD50 oral rat	930 (930 - 6400) mg/kg
LD50 dermal rabbit	> 8272 mg/kg
LC50 inhalation rat	34.4 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitisation : Not classified

Additional information : Based on available data, the classification criteria are not met

Germ cell mutagenicity : May cause genetic defects.

Carcinogenicity - Description : May cause cancer.

Reproductive toxicity : Not classified

Additional information : Based on available data, the classification criteria are not met

STOT-single exposure : Not classified

STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : May be fatal if swallowed and enters airways.

Additional information : In case of accidental swallowing, due to its low viscosity, the product may be aspired into the lung and induce a chemical pneumonitis developing over a few hours

BENZENE (71-43-2)	
Viscosity, kinematic	< 1 mm²/s

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects. Do not allow product to spread into the environment.

Ecology - air : Product evaporates when in contact with the air.

Ecology - water : the product spreads out on the surface of the water, a small fraction of the constituents may be dissolved.

Benzene (71-43-2)	
LC50 fish 1	10.7 - 14.7 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 fish 2	5.3 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
EC50 Daphnia 1	8.76 - 15.6 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 Daphnia 2	10 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 other aquatic organisms 1	29 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata)

Benzene (71-43-2)	
NOEC chronic fish	0.8 mg/l

12.2. Persistence and degradability

BENZENE (71-43-2)	
Persistence and degradability	Inherently biodegradable.

12.3. Bioaccumulative potential

Benzene (71-43-2)	
BCF fish 1	3.5 - 4.4
Log Pow	1.83

12.4. Mobility in soil

BENZENE (71-43-2)	
Ecology - soil	Avoid sub-soil penetration. it may pass through the soil and is likely to contaminate ground water.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Hazardous waste. Dispose of in accordance with relevant local regulations. Use only registered transporters. Do not discharge the product into the environment. Empty containers should be taken for recycling, recovery or waste in accordance with local regulation.

Additional information : Handle empty containers with care because residual vapours are flammable.

SECTION 14: Transport information

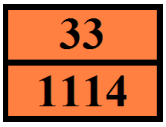
In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN Number				
1114	1114	1114	1114	1114
14.2. UN proper shipping name				
BENZENE	BENZENE	Benzene	BENZENE	BENZENE
Transport document description				
UN 1114 BENZENE, 3, II, (D/E)	UN 1114 BENZENE, 3, II (-11°C c.c.)	UN 1114 Benzene, 3, II	UN 1114 BENZENE, 3, II	UN 1114 BENZENE, 3, II
14.3. Transport hazard class(es)				
3	3	3	3	3
				
14.4. Packing Group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine Pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : F1
Limited quantities (ADR) : 1l
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P001, IBC02, R001
Mixed packing provisions (ADR) : MP19

Portable tank and bulk container instructions (ADR)	:	T4
Portable tank and bulk container special provisions (ADR)	:	TP1
Tank code (ADR)	:	LGBF
Vehicle for tank carriage	:	FL
Transport category (ADR)	:	2
Special provisions for carriage - Operation (ADR)	:	S2, S20
Hazard identification number (Kemler No.)	:	33
Orange plates	:	
Tunnel restriction code (ADR)	:	D/E
EAC code	:	3WE
APP code	:	A(fl)

- Transport by sea (IMDG)

Limited quantities (IMDG)	:	1 L
Excepted quantities (IMDG)	:	E2
Packing instructions (IMDG)	:	P001
IBC packing instructions (IMDG)	:	IBC02
Tank instructions (IMDG)	:	T4
Tank special provisions (IMDG)	:	TP1
EmS-No. (Fire)	:	F-E
EmS-No. (Spillage)	:	S-D
Stowage category (IMDG)	:	B
Flash point (IMDG)	:	-11°C c.c.

- Air transport (IATA)

PCA Excepted quantities (IATA)	:	E2
PCA Limited quantities (IATA)	:	Y341
PCA limited quantity max net quantity (IATA)	:	1L
PCA packing instructions (IATA)	:	353
PCA max net quantity (IATA)	:	5L
CAO packing instructions (IATA)	:	364
CAO max net quantity (IATA)	:	60L
ERG code (IATA)	:	3H

- Inland waterway transport

Classification code (ADN)	:	F1
Limited quantities (ADN)	:	1 L
Excepted quantities (ADN)	:	E2
Carriage permitted (ADN)	:	T
Equipment required (ADN)	:	PP, EX, A
Ventilation (ADN)	:	VE01
Number of blue cones/lights (ADN)	:	1

- Rail transport

Classification code (RID)	:	F1
Limited quantities (RID)	:	1L
Excepted quantities (RID)	:	E2
Packing instructions (RID)	:	P001, IBC02, R001
Mixed packing provisions (RID)	:	MP19
Portable tank and bulk container instructions (RID)	:	T4
Portable tank and bulk container special provisions (RID)	:	TP1
Tank codes for RID tanks (RID)	:	LGBF
Transport category (RID)	:	2

Colis express (express parcels) (RID) : CE7
Hazard identification number (RID) : 33

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	Benzene
3(a) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F	BENZENE - Benzene
3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	BENZENE - Benzene
3(c) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1	BENZENE
5. Benzene	BENZENE - Benzene
28. Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as Carcinogen category 1A or 1B (Table 3.1) or Carcinogen category 1 or 2 (Table 3.2) and listed as follows: Carcinogen category 1A (Table 3.1)/Carcinogen category 1 (Table 3.2) listed in Appendix 1 Carcinogen category 1B (Table 3.1)/Carcinogen category 2 (Table 3.2) listed in Appendix 2	BENZENE - Benzene
29. Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as Germ cell Mutagen category 1A or 1B (Table 3.1) or Mutagen category 1 or 2 (Table 3.2) and listed as follows: Mutagen category 1A (Table 3.1)/Mutagen category 1 (Table 3.2) listed in Appendix 3 Mutagen category 1B (Table 3.1)/Mutagen category 2 (Table 3.2) listed in Appendix 4	BENZENE - Benzene
40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.	Benzene

BENZENE is not on the REACH Candidate List

BENZENE is not on the REACH Annex XIV List

Other information, restriction and prohibition regulations : REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

15.1.2. National regulations

Listed on ELINCS (European List of Notified Chemical Substances)
Listed on the Korean ECL (Existing Chemicals List)
Complies the United States TSCA (Toxic Substances Control Act) inventory
Listed on the Canadian DSL (Domestic Substances List)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS)
Listed on the China Inventory of Existing Chemical Substances (IECSC)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on NZIoC (New Zealand Inventory of Chemicals)

15.2. Chemical safety assessment

Substance is manufactured and used as an intermediate and distributed under strictly controlled conditions in that it is rigorously contained by technical means during its whole lifecycle (Regulation 1907/2006, Article 17 §3).
The substance is handled under Strictly Controlled Conditions as defined under REACH Article 18(4) throughout its life cycle. Specifically the substance is rigorously contained by technical means during its whole lifecycle; procedural and control technologies are used to minimise emissions and any resulting exposures; only properly trained and authorised personnel handle the substance; special procedures such as purging and washing are applied during cleaning and maintenance works, in cases of accident and where waste is generated, procedural and/or control technologies are used to minimise emissions and the resulting exposures; and substance-handling procedures are well documented and strictly supervised by the site operator. In addition, exposure is controlled by regular ambient monitoring of substance at the workplace.

SECTION 16: Other information

Training advice	:	Training staff on good practice. Manipulations are to be done only by qualified and authorised persons.
Other information	:	Use good personal hygiene practices.

Full text of H- and EUH-statements:

Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 1A	Carcinogenicity, Category 1A
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Muta. 1B	Germ cell mutagenicity, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H340	May cause genetic defects.
H350	May cause cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

SDS EU (REACH Annex II)

This information applies to the PRODUCT AS SUCH and conforming to specifications of TOTAL.
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. However the revision of some data is in progress.
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.