



SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : VALVE & INJECTOR CLEAN

Product code : 75802northamerica

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

Additive

1.3. Details of the supplier of the safety data sheet

Registered company name : MOTUL.

Address : 119 BOULEVARD FELIX FAURE.93300.AUBERVILLIERS CEDEX.FRANCE.

Telephone : +33 (0)1.48.11.70.00. Fax : +33 (0)1.48.33.28.79.

Email: motul_hse@motul.fr

1.4. Emergency telephone number : +44 (0) 1235 239 670.

Association/Organisation : .

Other emergency numbers

BRAZIL : +55 11 3197 5891 / COLOMBIA : +57 1 508 7337 / ARGENTINA : +54 11 5984 3690 / CHILE : +562 2582 9336

Ireland : +353 1 8092566

UNITED STATES: 001 866 928 0789 / CANADA: 001 800 579 7421 / MEXICO : +52 55 5004 8763 / MIDDLE EAST - AFRICA : +44 1235 239671

24 hours a day, 7 days a week

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

HCS compliant.

Flammable liquid, Category 3 (Flam. Liq. 3).

Acute inhalation toxicity, Category 4 (Acute Tox. 4).

Skin irritation, Category 2 (Skin Irrit. 2).

Carcinogenicity, Category 2 (Carc. 2).

Specific target organ toxicity (single exposure), Category 3 (STOT SE 3).

Aspiration hazard, Category 1 (Asp. Tox. 1).

2.2. Label elements

HCS compliant.

Hazard pictograms :



GHS02



GHS07



GHS08

Signal Word :

DANGER

Product identifiers :

CAS 64742-48-9

HYDROCARBONS, C9-C11, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS

CAS 64742-94-5

SOLVENT NAPHTHA (PETROLEUM), HEAVY AROM.

CAS 91-20-3

NAPHTHALENE

Hazard statements :

H226

Flammable liquid and vapour.

H304

May be fatal if swallowed and enters airways.

H315

Causes skin irritation.

H332

Harmful if inhaled.

H336

May cause drowsiness or dizziness.

H351	Suspected of causing cancer .
Precautionary statements - General :	
P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
Precautionary statements - Prevention :	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary statements - Response :	
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
P302 + P352	IF ON SKIN: Wash with plenty of water
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor/.../if you feel unwell.
P331	Do NOT induce vomiting.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
Precautionary statements - Storage :	
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
Precautionary statements - Disposal :	
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

No data available.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS**3.2. Mixtures****Composition :**

Identification	HCS	Nota	%
CAS: 64742-48-9 EC: 919-857-5 REACH: 01-2119463258-33 HYDROCARBONS, C9-C11, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS	GHS07, GHS08, GHS02 Dgr Flam. Liq. 3, H226 Asp. Tox. 1, H304 STOT SE 3, H336		50 <= x % < 100
CAS: 1330-20-7 EC: 215-535-7 XYLENE	GHS07, GHS02 Wng Flam. Liq. 3, H226 Acute Tox. 4, H312 Skin Irrit. 2, H315 Acute Tox. 4, H332	[1]	10 <= x % < 25
CAS: 64742-94-5 EC: 265-198-5 REACH: 01-2119463588-24 SOLVENT NAPHTHA (PETROLEUM), HEAVY AROM.	GHS07, GHS08 Dgr Asp. Tox. 1, H304 STOT SE 3, H336		2.5 <= x % < 10
CAS: 91-20-3 EC: 202-049-5 NAPHTHALENE	GHS07, GHS08 Wng Acute Tox. 4, H302 Carc. 2, H351	[1] [2]	0 <= x % < 1

(Full text of H-phrases: see section 16)

Information on ingredients :

- [1] Substance for which maximum workplace exposure limits are available.
[2] Carcinogenic, mutagenic or reprotoxic (CMR) substance.

SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

4.1. Description of first aid measures

In the event of exposure by inhalation :

In the event of massive inhalation, remove the person exposed to fresh air. Keep warm and at rest.

If the person is unconscious, place in recovery position. Notify a doctor in all events, to ascertain whether observation and supportive hospital care will be necessary.

If breathing is irregular or has stopped, effect mouth-to-mouth resuscitation and call a doctor.

Do not proceed with mouth-to-mouth or mouth-to-nose resuscitation. Use the appropriate equipment.

Remove the victim to fresh air. If the symptoms persist, call a physician.

In the event of splashes or contact with eyes :

Wash immediately and abundantly with water, including under the eyelids.

In the event of splashes or contact with skin :

Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner.

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.

Immediately remove all soiled clothing.

Wash immediately and abundantly with soap and water.

In the event of swallowing :

Do not give the patient anything orally.

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Seek medical attention immediately, showing the label.

If swallowed accidentally, do not allow to drink, do not induce vomiting and transfer to hospital immediately by ambulance. Show the label to the doctor.

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

No data available.

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

No data available.

SECTION 5 : FIREFIGHTING MEASURES

Flammable.

Chemical powders, carbon dioxide and other extinguishing gas are suitable for small fires.

5.1. Extinguishing media

Keep packages near the fire cool, to prevent pressurised containers from bursting.

Suitable methods of extinction

Prevent the effluent of fire-fighting measures from entering drains or waterways.

Dry agent, foam, carbon dioxide.

Unsuitable methods of extinction

High volume water jet

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)

- carbon dioxide (CO₂)

5.3. Advice for firefighters

Fire-fighting personnel are to be equipped with autonomous insulating breathing apparatus.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

Spilled product may make surfaces slippery.

For non first aid worker

Avoid inhaling the vapors.

Avoid any contact with the skin and eyes.

If a large quantity has been spilled, evacuate all personnel and only allow intervention by trained operators equipped with safety apparatus.

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

If the product contaminates waterways, rivers or drains, alert the relevant authorities in accordance with statutory procedures

Use drums to dispose of collected waste in compliance with current regulations (see section 13).

6.3. Methods and material for containment and cleaning up

Clean preferably with a detergent, do not use solvents.

6.4. Reference to other sections

No data available.

SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

7.1. Precautions for safe handling

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

Remove contaminated clothing and protective equipment before entering eating areas.

Avoid contact with eyes.

No special precaution apart from the observance of hygiene rules

Fire prevention :

Handle in well-ventilated areas.

Prevent the formation of flammable or explosive concentrations in air and avoid vapor concentrations higher than the occupational exposure limits.

Never inhale this mixture.

Prevent the accumulation of electrostatic charges with connections to earth.

The mixture can become electrostatically charged : always earth during decanting operations. Wear antistatic shoes and clothing and floors should be electrically non-conductive.

Use the mixture in premises free of naked flames or other sources of ignition and ensure that electrical equipment is suitably protected.

Keep packages tightly closed and away from sources of heat, sparks and naked flames.

Do not use tools which may produce sparks. Do not smoke.

Prevent access by unauthorised personnel.

Take precautionary measures against static discharges by bonding and grounding equipment.

No smoking.

Recommended equipment and procedures :

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Avoid inhaling vapors.

Avoid inhaling vapors. Carry out any industrial operation which may give rise to this in a sealed apparatus.

Provide vapor extraction at the emission source and also general ventilation of the premises.

Also provide breathing apparatus for certain short tasks of an exceptional nature and for emergency interventions.

In all cases, recover emissions at source.

Avoid exposure - obtain special instructions before use.

Ensure good ventilation at the workplace

Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the mixture is used.

Never open the packages under pressure.

Do not breathe fumes, vapour, spray.

7.2. Conditions for safe storage, including any incompatibilities

Store between 5°C and 40°C in a dry, well ventilated place.

Only use hydrocarbon-resistant containers, joints and pipes.

Storage

Keep out of reach of children.

Keep the container tightly closed in a dry, well-ventilated place.

Keep away from food and drink, including those for animals.

Keep away from all sources of ignition - do not smoke.

Keep well away from all sources of ignition, heat and direct sunlight.

Avoid accumulation of electrostatic charges.

Packaging

Always keep in packaging made of an identical material to the original.

7.3. Specific end use(s)

No data available.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Control parameters****Occupational exposure limits :**

- European Union (2017/2398, 2017/164, 2009/161, 2006/15/CE, 2000/39/CE, 98/24/CE) :

CAS	VME-mg/m ³ :	VME-ppm :	VLE-mg/m ³ :	VLE-ppm :	Notes :
1330-20-7	221	50	442	100	Peau

- ACGIH TLV (American Conference of Governmental Industrial Hygienists, Threshold Limit Values, 2010) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
1330-20-7	100 ppm	150 ppm		A4; BEI	
91-20-3	10 ppm	15 ppm		Skin; A4	

- Germany - AGW (BAuA - TRGS 900, 29/01/2018) :

CAS	VME :	VME :	Excess	Notes
1330-20-7		100 ppm 440 mg/m ³		2(II)
91-20-3		0,1 ppm 0,5 E mg/m ³		1(I)

- France (INRS - ED984 :2016) :

CAS	VME-ppm :	VME-mg/m ³ :	VLE-ppm :	VLE-mg/m ³ :	Notes :	TMP No :
1330-20-7	50	221	100	442	*	4 Bis, 84, *
91-20-3	10	50	-	-	C3	-

- UK / WEL (Workplace exposure limits, EH40/2005, 2011) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
1330-20-7	50 ppm 220 mg/m ³	100 ppm 441 mg/m ³		Sk, BMGV	

8.2. Exposure controls**Appropriate engineering controls**

Ensure adequate ventilation, if possible with extractor fans at work posts and appropriate general extraction.

Personnel shall wear regularly laundered overalls.

Personal protection measures, such as personal protective equipment

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :



Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles in accordance with standard EN166.

- Hand protection

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN374.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question : other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Recommended properties :

- Impervious gloves in accordance with standard EN374

- Body protection

Avoid skin contact.

Wear suitable protective clothing.

Suitable type of protective clothing :

In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605 to prevent skin

contact.

In the event of a risk of splashing, wear protective clothing against chemical risks (type 6) in accordance with EN13034 to prevent skin contact.

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

- Respiratory protection

Avoid breathing vapours.

If the ventilation is insufficient, wear appropriate breathing apparatus.

When workers are confronted with concentrations that are above occupational exposure limits, they must wear a suitable, approved, respiratory protection device.

Anti-gas and vapour filter(s) (Combined filters) in accordance with standard EN14387 :

- A1 (Brown)

Breathing apparatus only when aerosol or spray are formed.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

General information :

Physical state :	Fluid liquid.
Color:	Amber

Important health, safety and environmental information

pH :	Not relevant.
Flash Point Interval :	23°C (73.4 °F) <= FP <= 60°C (140 °F)
Flash Point :	42.00 °C.
Vapour pressure (50°C) :	Below 110 kPa (1.10 bar).
Density :	= 1
Water solubility :	Insoluble.
Viscosity:	v < 7 mm ² /s (40°C)

9.2. Other information

No data available.

SECTION 10 : STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Any apparatus likely to produce a flame or to have a metallic surface at high temperature (burners, electric arcs, furnaces etc.) must not be allowed on the premises.

Avoid :

- accumulation of electrostatic charges.

- heating

- heat

- flames and hot surfaces

Keep away from heat and from sources of ignition

Take precautionary measures against static discharges.

10.5. Incompatible materials

Strong oxidants

Acids

10.6. Hazardous decomposition products

The thermal decomposition may release/form :

- carbon monoxide (CO)

- carbon dioxide (CO₂)

SECTION 11 : TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Harmful by inhalation.

May cause irreversible damage to the skin; namely inflammation of the skin or the formation of erythema and eschar or oedema following

exposure up to four hours.

Narcotic effects may occur, such as drowsiness, narcosis, decreased alertness, loss of reflexes, lack of coordination or dizziness.

Effects may also occur in the form of violent headaches or nausea, judgement disorder, giddiness, irritability, fatigue or memory disturbance.

Suspected human carcinogen.

Aspiration toxicity includes severe acute effects such as chemical pneumonia, varying degrees of pulmonary injury or death following aspiration.

11.1.1. Substances

Acute toxicity :

XYLENE (CAS: 1330-20-7)

Dermal route : LD50 = 1100 mg/kg

Inhalation route (n/a) : LC50 = 11 mg/l
Duration of exposure : 4 h

NAPHTHALENE (CAS: 91-20-3)

Oral route : LD50 = 500 mg/kg

HYDROCARBONS, C9-C11, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS (CAS: 64742-48-9)

Oral route : LD50 > 8000 mg/kg
Species : Rat

Dermal route : LD50 > 4000 mg/kg
Species : Rat

Inhalation route (n/a) : LC50 > 18.5 mg/l

11.1.2. Mixture

Acute toxicity :

Inhalation route (Vapours) : Harmful by inhalation.
Duration of exposure : 4 h
LC50 = 17.67 mg/l

Skin corrosion/skin irritation :

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non allergic contact dermatitis and absorption through the skin.

Serious damage to eyes/eye irritation :

Mild eye irritation

Aspiration hazard :

May be fatal if swallowed and enters airways.

Aspiration toxicity includes severe acute effects such as chemical pneumonia, varying degrees of pulmonary injury or death following aspiration.

"Inhalation of vapours may cause irritation of the respiratory system in very susceptible persons."

May cause lung damage if swallowed

Monograph(s) from the IARC (International Agency for Research on Cancer) :

CAS 1330-20-7 : IARC Group 3 : The agent is not classifiable as to its carcinogenicity to humans.

SECTION 12 : ECOLOGICAL INFORMATION

The product must not be allowed to run into drains or waterways.

12.1. Toxicity

12.1.1. Substances

HYDROCARBONS, C9-C11, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS (CAS: 64742-48-9)

Fish toxicity : LC50 > 1000 mg/l
Species : Oncorhynchus mykiss
Duration of exposure : 96 h

Crustacean toxicity : EC50 > 1000 mg/l
Species : Daphnia magna
Duration of exposure : 48 h

Algae toxicity : ECr50 > 1000 mg/l
Species : Pseudokirchnerella subcapitata
Duration of exposure : 72 h

12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

12.2. Persistence and degradability**12.2.1. Substances**

HYDROCARBONS, C9-C11, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS (CAS: 64742-48-9)

Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

Not very mobile in soil.

The product is insoluble in water and will spread on the surface

Water soluble

Mobile in soil

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

Do not dispose of the product in the natural environment, effluents or surface waters.

SECTION 13 : DISPOSAL CONSIDERATIONS

The appropriate waste management of the mixture and/or its container must be determined in accordance with local regulations.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

SECTION 14 : TRANSPORT INFORMATION

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2017 - IMDG 2016 - ICAO/IATA 2017).

14.1. UN number

1993

14.2. UN proper shipping name

UN1993=FLAMMABLE LIQUID, N.O.S.

(hydrocarbons, c9-c11, n-alkanes, isoalkanes, cyclics, < 2% aromatics)

14.3. Transport hazard class(es)

- Classification :



3

14.4. Packing group

III

14.5. Environmental hazards

-

14.6. Special precautions for user

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	3	F1	III	3	30	5 L	274 601	E1	3	D/E

IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ		
	3	-	III	5 L	F-E,S-E	223 274 955	E1		
IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ
	3	-	III	355	60 L	366	220 L	A3	E1
	3	-	III	Y344	10 L	-	-	A3	E1

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

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

No data available.

SECTION 15 : REGULATORY INFORMATION

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

The following regulations have been used:

- OSHA Hazard Communication Standard 29 CFR 1910.1200

- Container information:

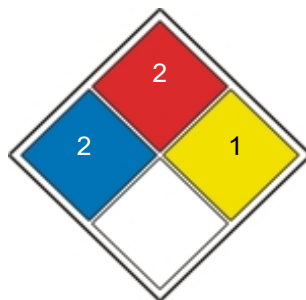
No data available.

- Particular provisions :

No data available.

- Standardised American system for the identification of hazards presented by the product in view of emergency procedures (NFPA 704) :

NFPA 704, Labelling: Health=2 Inflammability=2 Instability/Reactivity=1 Specific Risk=none



- Clean Water Act : Toxic Pollutants (CWA 307A)

CAS	Name
91-20-3	NAPHTHALENE

- Clean Water Act : Hazardous Substances (CWA 311)

CAS	Name
1330-20-7	XYLENE

- Clean Water Act : Hazardous Substances (CWA 304b)

CAS	Name
91-20-3	NAPHTHALENE
1330-20-7	XYLENE

- Clean Water Act : Priority Pollutants (CWA Priority)

CAS	Name
91-20-3	NAPHTHALENE

- Clean Air Act : Hazardous Air Pollutants (CAA 112(b) HAP (188))

CAS	Name
91-20-3	NAPHTHALENE
1330-20-7	XYLENE

- Clean Air Act : Organic Hazardous Air Pollutants National Emission Standards (CAA 112(b) HON (387))

CAS	Name
91-20-3	NAPHTHALENE
1330-20-7	XYLENE

- Clean Air Act : Protection of Stratospheric Ozone (CAA 602)

Unlisted.

- SARA 110

CAS	Name
1330-20-7	XYLENE

- SARA 302/304

Unlisted.

- SARA 313

CAS	Name
91-20-3	NAPHTHALENE
1330-20-7	XYLENE

- California proposition 65 : Chemicals known to the state to cause cancer or reproductive toxicity

CAS	Name
91-20-3	NAPHTHALENE (cancer)

- Massachusetts : Right to Know

CAS	Name
91-20-3	NAPHTHALENE
1330-20-7	XYLENE

- New Jersey : Right to Know

CAS	Name
91-20-3	NAPHTHALENE
1330-20-7	XYLENE

- Pennsylvania : Hazardous Substance

CAS	Name
91-20-3	NAPHTHALENE
1330-20-7	XYLENE

- Rhode Island : Hazardous substance list

CAS	Name
91-20-3	NAPHTHALENE
1330-20-7	XYLENE

- TSCA (Toxic Substances Control Act) - USA

All components are listed or exempted.

15.2. Chemical safety assessment

No data available.

SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

Wording of the phrases mentioned in section 3 :

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer .

Abbreviations :

CMR: Carcinogenic, mutagenic or reprotoxic.

ADR : European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

GHS02 : Flame

GHS07 : Exclamation mark

GHS08 : Health hazard

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.

HCS : Hazard Communication standard (OSHA).