



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

1.1 Product identifier

Trade name: STARCOAT QC

**1.2** Relevant identified uses of the substance or mixture: Coating Uses advised against: Uses other than those recommended

1.3. Details of the supplier of the safety data sheet

Supplier AXTER LTD, West Road, Ransomes Europark, Ipswich IP3 9SX UK

Tel: +44 (0) 1473 724056, 8.00 am to 5.30 pm, Monday to Friday

Email: info@axterltd.co.uk

**1.4 Emergency telephone** + 44 1473 724056 (NOT 24HRS - 8am - 5.30pm, Monday to Friday)

In the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergency

department.

## **Section 2: Hazards identification**

## 2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008



GHS02 Flammable

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 Health Hazard

Skin Sens. 1 H317 May cause an allergic skin reaction.

Resp. Sens. 1 May cause allergy or asthma symptoms or breathing difficulties

if inhaled

#### 2.2 Label elements

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

The product is classified and labelled according to the CLP regulation.

#### Hazard pictograms



GHS02



GHS08

Signal word Danger

**Contains** Aromatic polyurethane polymer

**Hazard statements** 

H226 Flammable liquid and vapour
H317 May cause an allergic skin reaction

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

**Precautionary statements** 

P210 Keep away from heat, hot surfaces, sparks, open flames and other

ignition surfaces. - No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray

P280 Wear protective gloves/protective clothing/eye protection/face protection
P284 [In case of inadequate ventilation] wear respiratory protection

P321 Specific treatment (see label)

P342+P311 If experiencing respiratory symptoms, contact doctor

or poison centre

P370+P378 In case of fire, use correct extinguisher



#### **EUH** statements

**EUH208** 

Contains 4,4'diphenylmethane diisocyanate, oligomers. May produce an allergic reaction.

#### 2.3 Other hazards

In normal use conditions and in its original form, the product itself does not involve any other risk for health and the environment.

## **Section 3: Composition/information on ingredients**

#### 3.1 Substances

N/A

#### 3.2 Mixtures

Substances posing a danger to health or the environment in accordance with the Regulation (EC) No. 1272/2008, assigned a Community exposure limit in the workplace and classified as PBT/vPvB, or included in the Candidate List:

			(*) Classification – Regula	ntion (EC) No 1272/2008
Identifies	Name	Concentrate	Classification	Specific Concentration Limit
CAS No. 96328-90-4 EC No. 692-819-0	Aromatic polyurethane polymer	1-75%	Resp. Sens. 1, H334; Skin Sens. 1, H317	-
Index No. 607-195-00-7 CAS No. 108-65-6 EC No. 203-603-9 Reg No. 01-2119475791- 29-XXXX	[1] 2-methoxy-1-methylethyl acetate	2.5-10%	Flam. Liq. 3, H226	-
Index No. 601-022-00-9 CAS No. 1330-20-7 EC No. 215-535-7 Reg No. 01-2119488216- 32-XXXX	[1] xylene (mixture of isomers)	1-10%	Acute Tox. 4 *, H312; Acute Tx. 4*, H332; Flam. Liq. 3, H226; Skin Irrit. 2, H315	-
Index No. 601-023-00-4 CAS No. 100-41-4 EC No. 202-849-4 Reg No. 01-2119489370- 35-XXXX	[1] ethylbenzene	1-10%	Acute Tox. 4*, H332; Asp. Tox. 1, H304; Flam. Liq. 2, H225; STOT RE 2, H373 (hearing organs)	-
CAS No. 25686-28-6 EC No. 500-040-3 Reg No. 01-2119457013- 49	4,4'diphenylmethane diisocyanate, oligomers	0.1-1%	Acute Tox. 4, H332; Carc. 2, H351; Eye Irrit. 2, H319; Resp. Sens. 1, H334; Skin Irrit. 2, H315; Skin Sens. 1B, H317; Skin Sens. 1, H317; STOT RE 2, H373; STOT SE 3, H335	-

<sup>(\*)</sup> The complete text of the H phrases is given in Section 16.

#### **Section 4: First aid measures**

## 4.1 Description of first aid measures General information

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

<sup>\*</sup> See Regulatoin (EC) No. 1272/2008, Annex VI, section 1.2

<sup>[1]</sup> Substance with a community workplace exposure limit (see section 8.1)



**After inhalation** Take the victim into the open air; keep them warm and calm.

If breathing is irregular or stops, perform artificial respiration. In case of unconsciousness place patient stably in side position for transportation. Take affected persons into fresh air and keep

them quiet. Seek medical treatment.

After skin contact Remove contaminated clothing. Immediately wash with water and

soap and rinse thoroughly. Never use solvents or thinners.

If skin irritation continues, consult a doctor.

After eye contact Remove contact lenses, if present and if it is easy to do. Wash eyes

with plenty of clean and cool water for at least 10 minutes while

pulling eyelids up. Then consult a doctor.

**After swallowing** If accidentally ingested, seek immediate medical attention.

Keep calm. Never induce omitting.

**4.2 Most important symptoms** It may cause an allergic reaction, dermatitis, redness or

inflammation of the skin.

It may cause an allergic reaction in the respiratory system. Chronic

exposure can lead to asthma.

Indication of any immediate
4.3 medical attention and special

and effects, both acute

treatment needed

and delayed

Never administer anything orally to persons who are unconscious. If the person vomits, clear the respiratory tract. Keep the person comfortable. Turn him/her over to the left side and stay there while waiting for medical care. In case of doubt or when symptoms of

feeling unwell persist, get medical attention.

## **Section 5: Firefighting measures**

Flammable product, the necessary prevention measures should be taken in order to avoid risks. In case of fire, the following measures are recommended.

#### 5.1 Extinguishing media

**Suitable extinguishing agents:** CO<sub>2</sub>, extinguishing powder. In case of more serious fires, also alcohol-resistant foam and water spray.

**Unsuitable extinguishing media:** Do not use a direct stream of water to extinguish. In the presence of electrical voltage, you cannot use water or foam as extinguishing media.

## 5.2 Special hazards arising from the substance or mixture

Fire can cause thick, black smoke. As a result of thermal decomposition, dangerous products can form: carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>). Exposure to combustion or decomposition products can be harmful to your health. Flammable vapours or gases may occur during fire.

**Advice for firefighters:** Use water to cool tanks, cisterns, or containers close to the heat source or fire. Take wind direction into account. Prevent the products used to fight the fire from going into drains, sewers, or waterways. Follow the instructions given in the emergency or fire evacuation plans if available.

**Fire protection equipment:** According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and boots. During extinction and depending on the magnitude and proximity to the fire, additional protective equipment such as chemical protection gloves, heat-reflecting suits or gas-tight suits may be required.



#### Section 6: Accidental release measures

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

Ensure adequate ventilation



Keep away from ignition sources.

Use respiratory protective device against the effects of fumes/dust/aerosol.

Wear protective equipment.

Keep unprotected persons away.

#### 6.2 Environmental precautions

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in the case of seepage into water course or sewage system.

## 6.3 Methods and material for containment and cleaning up

Pick up the spill with non-combustible absorbent materials (soil, sand, vermiculite, diatomite, etc.). Pour the product and the absorbent in an appropriate container. The contaminated area should be immediately cleaned with an appropriate de-contaminator. Pour the decontaminator on the remains in an opened container and let it act various days until no further reaction is produced.

#### 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## Section 7: Handling and storage

### 7.1 Precautions for safe handling

Fumes are heavier than air and can spread across the ground. These can form explosive mixtures with air. Prevent fume concentrations above workplace exposure limits. Ensure good ventilation/exhaustion at the workplace. The product must only be used in areas where all unprotected flames and other ignition points have been eliminated. Cool down container when heated. Cool containers exposed to heat with water. Emergency cooling must be provided in the event of an ambient fire. Product can be electrostatically charged. Use anti-static footwear and clothing. Floors must be conductors. Do not eat, or smoke or drink in application area. Avoid heat. Do not refill residue into storage receptacles. Never use pressure to empty the containers. Keep product in original containers.

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

#### Storage

Store according to local legislation.

Observe any warnings on the label.

Store the containers between 5-35°C.

Store in a dry and well ventilated area.

Store away from heat or sunlight.

Keep away from ignition points.

Keep away from oxidizing agents and from highly acidic or alkaline materials.

Do not smoke.

Containers should be placed vertically to prevent spills.

Classification and threshold amount of storage in accordance with Annex I to Direction 2012/18/EU (Seveso III)



Code	Description	Qualifying quantity (tonnes) for the application		
		Lower tier requirements	Upper tier requirements	
P5b	FLAMMABLE LIQUIDS	50	200	

## 7.3 Specific end use(s)

Not available

## **Section 8: Exposure controls/personal protection**

Additional information about design of technical facilities: No further data; see item 7.

#### 8.1 Control parameters

Name	CAS No.	Country	Limit Value	ppm	mg/m³
2-methoxy-1-methylethyl	108-65-6	European Union [1]	Eight hours:	50 (skin)	275 (skin)
acetate			Short Term:	100 (skin)	550 (skin)
		United Kingdom [2]	Eight hours:	50	274
			Short Term:	100	548
xylene (mixture of isomers)	1330-20-7	European Union [1]	Eight hours:	50 (skin)	221 (skin)
			Short Term:	100 (skin)	442 (skin)
		United Kingdom [2]	Eight hours:	50	220
			Short Term:	100	441
ethylbenzene 100		European Union [1]	Eight hours:	100 (skin)	442 (skin)
			Short Term:	200 (skin)	884 (skin)
		United Kingdom [2]	Eight hours:	100	441
			Short Term:	125	552

<sup>[1]</sup> According both Binding Occupational Exposure Limits (BOELVs) and Indicative Exposure Limits (IOELVs) adopted by Scientific Committee for Occupational Exposure Limits to Chemical Agents (SCOEL)

<sup>[2]</sup> According Limit Value (IOELV) list in 2nd Indicative Occupational Exposure adopted by Health and Safety Executive. The product does NOT contain substances with Biological Limit Values. Concentration levels DNEL/DMEL.



Name	DNEL / DMEL	Limit Value	Value
2-methoxy-1-methylethyl acetate	DNEL (workers)	Inhalation, long term, systemic effects	275 mg/m³
CAS No 108-65-6 EC No 203-603-9		Dermal, long term, systemic effects	153.5 mg/kg bw/day
	DNEL (population)	Inhalation, long term, systemic effects	33 mg/m³
		Dermal, long term, systemic effects	54.8 mg/kg bw/day
		Oral, long term, systemic effects	1.67 mg/kg bw/day
xylene (mixture of isomers)  CAS No 1330-20-7  EC No. 215-535-7	DNEL (workers)	Inhalation, long term, systemic effects	77 mg/m³
ethylbenzene  CAS No. 100-41-4  EC No. 202-849-4	DNEL (workers)	Inhalation, long term, systemic effects	77 mg/m <sup>3</sup>

DNEL Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated
 DMEL Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum

Name	Details	Value
2-methoxy-1-methylethyl acetate	Aqua (freshwater)	0.635 mg/L
CAS No 108-65-6 EC No 203-603-9	Aqua (marine water)	0.0635 mg/L
20110 200 000 0	Aqua (intermittent releases)	6.35 mg/L
	STP	100 mg/L
	Sediment (freshwater)	3.29 mg/kg sediment dw
	Sediment (marine water)	0.329 mg/kg sediment dw
	Soil	0.29 mg/kg soil dw

**PNEC** Predicted No Effect Concentration, concentration of the substance below which adverse effects are not expected in the environmental compartment.

## 8.2. Exposure controls

**Measures of a technical nature:** Provide adequate ventilation which can be achieved by using good local exhaust-ventilation and a good general exhaust system.

Concentration	100%	
Uses	Coating	
Breathing Protection		
PPE: Characteristics: CEN Standards:	Filter mask for protection against gases and particles. CE Marking, Category III. Sealed and watertight. EN136, EN140, EN405 Should not be stored at high temperatures or in damp environments before use. Special attention should be paid to the state of the	
Maintenance: Filter Type:	inhalation and exhalation valves.  Read the manufacturer's instructions carefully. Attach the necessary filters according to nature of risk. Particles and aerosols: P1-P2-P3, Gases and vapours: A-B-E-K-AX A2	
Hand Protection		
PPE: Characteristics: CEN Standards: Maintenance:  Observations:  Material: Breakthrough time: Material thickness:	Protective gloves for chemicals. CE Marking, Category III EN374-1, EN374-2, EN374-3, EN420 Keep in a dry place, away from any heat sources. Avoid sunlight as much as possible. Do not make changes to gloves that may alter their resistance. Do not apply paints, solvents or adhesives to the gloves. Gloves should fit the user well, not being too loose or too tight. Always use with clean and dry hands. PVC >480 minutes 0.35mm	
Eye Protection		
PPE: Characteristics: CEN Standards: Maintenance: Observations:	Protective goggle with a built-in frame. CE Marking, Category II. Eye protector with built-in frame for protection against dust, smoke, fog and vapour. EN165, EN 166, EN167, EN168 Visibility through lenses should be ideal. Clean daily. Protectors should be disinfected periodically, following manufacturer's instructions. Signs of wear and tear include: yellowing lenses, superficial scratches of lenses, scraping etc.	
Skin Protection		
PPE: Characteristics: CEN Standards: Maintenance:	Anti-static protective clothing. Antistatic safety footwear. CE Marking, Category II. Clothing should not be too tight or too loose in order to not obstruct user's movements. EN340, EN1149-1, EN1149-2, EN1149-3, EN1149-5, EN ISO 13287, EN ISO 20344, EN ISO 20346 Footwear should be checked regularly. Clothing should be washed and maintained according to manufacturer instructions.	A
	and maintained according to manufacturer instructions.	

## **Section 9: Physical and chemical properties**

# 9.1 Information on basic physical and chemical properties General Information (appearance):

Form: Liquid with characteristic odour and colour

**Colour:** Various according to pigmentation

Odour: Solvent
Odour threshold: N/A
pH-value: N/A

Melting point: Not determined

**Boiling point:** 238 °C **Flash point:** 45 °C

**Evaporation rate:** Not determined Flammable (solid, gas): Flammable

**Explosion limits** 

**Lower:** Not determined

**Upper:** N/A

Vapour pressureNot determinedVapour densityNot determined

Relative density 1,3

Solvent content

**Liposolubility:**Not determined **Hydrosolubility:**Not determined **Partition coefficient (n-octanol/water):** Not determined

**Auto-ignition temperature:** N/A **Decomposition temperature:** N/A

**Viscosity** 5000-10000 cps 25°C

**Explosive properties**Oxidising properties:
Non-explosive
Non-oxidant

9.2 Other information

Dropping Point:Not determinedBlink:Not determinedKinematic viscosity:Not determined

## Section 10: Stability and reactivity

**10.1** Reactivity If the storage conditions are satisfied, does not produce

dangerous reactions.

**10.2 Chemical stability** Stable under the recommended handling and storage conditions.

**10.3 Possibility of hazardous reactions** Flammable liquid and vapour.

**10.4 Conditions to avoid** High temperature, static discharge, contact with incompatible

materials, heat, direct sunlight. Do not heat closed containers.

**10.5 Incompatible materials** Avoid explosive, oxidizing and toxic materials.

10.6 Hazardous

**decomposition products** In case of fire, dangerous decomposition products can be

generated, such as carbon monoxide and dioxide and nitrogen

fumes and oxides.



## **Section 11: Toxicological information**

#### 11.1 Information on toxicological effect

Repeated or prolonged contact with the product can cause elimination of oil from the skin, giving rise to non-allergic contact dermatitis and absorption of the product through the skin.

Exposure to concentrations of solvent fumes above the workplace exposure limit can have negative effects (irritation of the mucous membranes and respiratory system, adverse effects on the kidneys, liver and central nervous system). Among the symptoms are: headaches, vertigo, fatigue, muscular weakness, drowsiness, unconsciousness.

Based on the properties of isocyanates and taking into account existing technical data on similar products, it appears that this product may cause irritation and/or acute awareness of the respiratory system leading to an asthmatic condition, a wheezing and chest pressure. Sensitized individuals may show asthmatic symptoms when exposed to atmospheres containing concentrations below the level of exposure. Repeated exposure can lead to chronic respiratory diseases.

## Toxicological information about the substances present in the composition.

Name	Acute Toxicity:			
	Туре	Test	Kind	Value
xylene (mixture of isomers)	Oral	LD50	Rat	4300 mg/kg bw [1]
CAS No 1330-20-7 EC No. 215-535-7	Dermal	LD50	Rat	>1700 mg/kg bw [2]
	Inhalation	LC50/4h	Rat	21.7 mg/l [2]

[1] AMA Archives of Industrial Health, Vol. 14, Pg. 387, 1956 [2] Raw Material Data Handbook, Vol. 1: Organic Solvents, 1974. Vol 1, Pg. 123, 1974

Primary irritant effect:

Acute Toxicity

Not conclusive data for classification

Acute Toxicity Estimate (ATE)

Mixtures: ATE (Dermal): 12.436 mg/kg

Skin corrosion/irritationBased on available data, the classification criteria are not met.Serious eye damage/irritationBased on available data, the classification criteria are not met.

**Respiratory or skin sensitization** Resp. Sens. 1, Skin Sens. 1

**Germ cell mutagenicity** Not conclusive data for classification.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity**Not conclusive data for classification

**STOT-single exposure** May cause respiratory irritation.

STOT-repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

## **Section 12: Ecological information**

#### 12.1 Toxicity

Name	Acute Toxicity:			
	Туре	Test	Kind	Value
xylene (mixture of isomers)	Fish	LC50/96h	Fish	15.7 mg/l [1]
CAS No 1330-20-7 EC No. 215-535-7	Aquatic invertebrates	LC50/48h	Crustacean	8.5 mg/l [2]
	Aquatic plants	-	-	-

[1] Bailey, H.C., D.H.W. Liu and H. A. Javitz 1985. Time/Toxicity Relationships in Short-Term Static, Dynamic and Plug-Flow Bioassys. In: R.C.Bahner and D.J.Hansen (Eds.), Aquatic Toxicology and Hazard Assessment, 8th Symposium, ASTM STP 891, Philadelphia, PA: 193-212

[2] Tatem, H.E., B.A. Cox and J.W. Anderson 1978. The Toxicity of Oils and Petroleum Hydrocarbons to Estuarine Crustaceans. Estuar.Coast Mar.Sci.6(4):365-373. Tatem, H.E. 1975. The Toxicity and Physiological Effects of Oil and Petroleum Hydrocarbons on Esturaine Grass Shrimp Palaemonetes pugio (Holthuis). Ph.D.Thesis, Texas A&M University, College Station, TX: 133p

**12.2** Persistence and degradability No information is available regarding the biodegradability of the

substances present. No information is available on the degradability

of the substances present. No information is available about

persistence and degradability of the product.

**12.3** Bioaccumulative potential No information is available regarding the bioaccumulation of the

substances present.

**12.4 Mobility in soil** No information is available about the mobility in soil.

The product must not be allowed to go into sewers or waterways.

Prevent penetration into the ground.

#### 12.5 Results of PBT and vPvB assessment

No information is available about the results of PBT and vPvB assessment of the product.

#### 12.6 Other adverse effects

No further relevant information available.

## **Section 13: Disposal considerations**

#### 13.1 Waste treatment methods

Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local/national legislation.

Follow the provisions of Directive 2008.98.EC regarding waste management.

## **Section 14: Transport information**

14.1	UN-Number	UN1866

14.2 UN proper shipping name

 ADR
 1866 RESIN SOLUTION, 3, PG III, (E)

 IMDG
 1866 RESIN SOLUTION, 3, PG III (45°C)

 IAGO, IATA
 1866 RESIN SOLUTION, 3, PG III

14.3 Transport hazard class(es)

Class 3 Flammable liquids

**14.4 Packing group** Class 3

14.5 Environmental hazards:

Marine pollutant No

**14.6** Special precautions for user F-E, S-E

Labels3Hazard No.N/AADR Limited quantities (LQ)5LIMDG Limited quantities (LQ)5LICAO Limited quantities (LQ)10L

Provisions concerning carriage

in bulk (ADR) Not authorized carriage in bulk

**Transport by ship** Fem – Emergency sheets (F – Fire, S – Spills). Proceed in

accordance with point 6

## 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Transport / Additional information:

Product is not transported in bulk.

### **Section 15: Regulatory information**

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

The product is not affected by the Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer.

Volatile organic compound (VOC)

Product subcategory (Directive 2004/42/EC): I – one pack

performance coatings, solvent-borne Phase I\* (from 01/01/2007): 600 g/l Phase II\* (from 01/01/2010): 500 g/l

(\*) g/l ready to use

VOC Content (p/p): 15% VOC Content: 184 g/l

The provisions of the Directive 2004/42/EC on VOC apply to this product. Refer to the product label and/or technical data sheet for

further information.

Product classification according to Annex I of Directive 2012/18/EU (

Seveso III): P5b

The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of

biocidal products.

The product is not affected by the procedure established

Regulation (EU) No 649/2012, concerning the export and import of

dangerous chemicals.

#### 15.2 Chemical safety assessment

No Chemical safety assessment has been carried out for this

substance/mixture by the supplier.

#### **Section 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

H225	Highly flammable liquid and vapour
H226	Flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H351	May cause respiratory irritation
H373	May cause damage to organs through prolonged or repeated exposure

## **Training hints**

Instruction must take place including hazards and precautions before the start of employment and at least annually thereafter.

#### Classification codes:

Acute Tox. 4 : Acute toxicity (Dermal), Category 4 Acute Tox. 4 : Acute toxicity (Inhalation), Category 4

Asp. Tox. 1 : Aspiration toxicity, Category 1 Care. 2 : Carcinogen, Category 2

Eye Irrit. 2 : Eye irritation, Category 2 Flam. Liq. 2 : Flammable liquid, Category 2 Flam. Liq. 3 : Flammable liquid, Category 3 Resp. Sens. 1 : Respiratory sensitiser, Category 1

Skin Irrit. 2 : Skin irritant, Category 2 Skin Sens. 1 : Skin sensitiser, Category 1

Skin Sens. 1B: Skin sensitiser, Category 1B
STOT RE 2: Specific target organ toxicity following a repeated exposure, Category 2
STOT SE 3: Specific target organ toxicity following a single exposure, Category 3

It is advisable to carry out basic training with regard to health and safety at work in order to handle this product correctly.

#### Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer

(Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EC50: Half maximal effective concentration.

CEN: European Committee for Standardization

DMEL Derived Minimal Effect Level exposure level corresponding to a low risk,

that risk should be considered a tolerable minimum

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PNEC: Predicted No Effect Concentration, concentration of the substance

below which adverse effects are not expected in the environmental compartment.

RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.

## Key literature references and sources for data:

http://eur-lex.europa.eu/homepage. html

http://echa.europa.eu/

Regulation (EU) 2015/830.

Regulation (EC) No 1907/2006.

Regulation (EU) No 1272/2008.

Data compared to the previous version altered.

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