

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

1.1. Product identifier

Mixture identification:

Trade name: MAPEPOXY BI-IMP /A Trade code: 9015910

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

Recommended use: N.A.

Uses advised against: N.A.

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

Company: MAPEI AS - Vallsetvegen, 6 - 2120 Sagstua - Norway Responsable: sicurezza@mapei.it

#### 1.4. Emergency telephone number

Giftinformasjonen – phone number: +47 22591300 MAPEI AS - phone: +47-62972000 fax: +47-62972099 www.mapei.no (office hours)

### **SECTION 2: Hazards identification**



### 2.1. Classification of the substance or mixture

# Regulation (EC) n. 1272/2008 (CLP)

Skin Irrit. 2Causes skin irritation.Eye Irrit. 2Causes serious eye irritation.Skin Sens. 1May cause an allergic skin reaction.Aquatic Chronic 2Toxic to aquatic life with long lasting effects.Adverse physicochemical, human health and environmental effects:

No other hazards

#### 2.2. Label elements

#### Regulation (EC) n. 1272/2008 (CLP)

#### Pictograms and Signal Words



#### Hazard statements:

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.

#### **Precautionary statements:**

P261	Avoid breathing mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P391	Collect spillage.

#### **Special Provisions:**

EUH208	Contains 1,6-Hexanediol Diglycidyl Ether. May produce an allergic reaction.
EUH208	Contains reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700). May produce an allergic reaction.

#### EUH205

#### **Contains:**

bisphenol F - epoxy resin

#### Special provisions according to Annex XVII of REACH and subsequent amendments:

None

#### 2.3. Other hazards

No PBT/vPvB Ingredients are present

Other Hazards: No other hazards

This preparation contains low molecular weight epoxy resins. Cross sensitisation to other epoxies is possible. Avoid also exposure to spray mist and vapour.

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

3.1. Substances

N.A.

#### 3.2. Mixtures

Mixture identification: MAPEPOXY BI-IMP /A

#### Hazardous components within the meaning of the CLP regulation and related classification:

Quantity	Name	Ident. Numb.	Classification	Registration Number
≥25 - <50 %	bisphenol F - epoxy resin	CAS:9003-36-5 EC:500-006-8	Skin Irrit. 2, H315; Skin Sens. 1, H317; Aquatic Chronic 2, H411	01-2119454392-40-xxxx
≥25 - <50 %	1,6-Hexanediol Diglycidyl Ether	CAS:933999-84-9 EC:618-939-5	Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; Aquati Chronic 3, H412	01-2119463471-41-0005 c
≥20 - <25 %	reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weigh <= 700)	CAS:25068-38-6 EC:500-033-5 nt Index:603-074-00-	Eye Irrit. 2, H319; Skin Irrit. 2, H315; Skin Sens. 1,1A,1B, H317; 8 Aquatic Chronic 2, H411	01-2119456619-26-xxxx

# SECTION 4: First aid measures

### 4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose of safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and the hazard label.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

Eye irritation

Eye damages

Skin Irritation

Erythema

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Treatment:

(see paragraph 4.1)

#### **SECTION 5: Firefighting measures**

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO2).

Extinguishing media which must not be used for safety reasons:

None in particular.

# 5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

5.3. Advice for firefighters

Use suitable breathing apparatus.

### **SECTION 6: Accidental release measures**

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

Wear personal protection equipment.

#### Remove persons to safety. 6.2. Environmental precautions

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Limit leakages with earth or sand.

#### 6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Retain contaminated washing water and dispose it.

## 6.4. Reference to other sections

See also section 8 and 13

#### **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

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

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

## 7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

# SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### List of components with OEL value

Component	OEL Type	Country	Ceiling	Long Term mg/m3	Term	Short Term mg/m3	Term	Behaviour Note
reaction product: bisphenol- A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)	National	BULGARIA		1,0				

### Predicted No Effect Concentration (PNEC) values

Component	CAS-No.	PNEC Limit	Exposure Route	Exposure Frequency	Remark
bisphenol F - epoxy resin	9003-36-5	0,003 mg/l	Fresh Water		
		0,0003 mg/l	Marine water		

			0,294 mg/kg	Freshwater sediments		
			•	Marine wate sediments	er	
			10 mg/l	Microorgani in sewage treatments	sms	
			0,237 mg/kg	Soil		
1,6-Hexanediol Digly Ether	cidyl 93399 9	9-84-	1 mg/l	Microorgani in sewage treatments	sms	
			0,0115 mg/l	Fresh Water		
			0,283 mg/kg	Freshwater sediments		
			0,00115 mg/l	Marine wate	er	
			•	Marine wate sediments	er	
			0,223 mg/kg	Soil		
reaction product: bisphenol-A- (epichlorhydrin); ep resin (number averag molecular weight <= 700)	ge	-38-6	0,006 mg/l	Fresh Wateı	-	
			0,0006 mg/l	Marine wate	er	
			0,0627	Freshwater sediments		
				Marine wate sediments	er	
Derived No Effect L	evel. (DNF	1)				
	-	-	ker Wor	ker Consu	Exposure	Exposure Frequency Remark
	CAS-No.	Indu	istr Prof		Route	
Component		Indu Y	iona			Short Term, local effects
<b>Component</b> bisphenol F - epoxy		Indu Y	<b>iona</b> opm		<b>Route</b> Human	Short Term, local
<b>Component</b> bisphenol F - epoxy		<b>Indu</b> <b>y</b> 8,3 p	iona opm 15 kg 9	62,5 mg/kg 8,7	<b>Route</b> Human Dermal Human	Short Term, local effects Long Term, systemic
<b>Component</b> bisphenol F - epoxy		<b>Indu</b> <b>y</b> 8,3 p 104,: mg/k 29,39	iona opm 15 kg 9	62,5 mg/kg 8,7	Route Human Dermal Human Dermal Human Inhalation	Short Term, local effects Long Term, systemic effects Long Term, systemic
<b>Component</b> bisphenol F - epoxy		<b>Indu</b> <b>y</b> 8,3 p 104, ; mg/k 29,39 mg/r	iona opm 15 kg 9 m3	62,5 mg/kg 8,7 mg/m3 6,25	Route Human Dermal Human Dermal Human Inhalation	Short Term, local effects Long Term, systemic effects Long Term, systemic effects Long Term, systemic
<b>Component</b> bisphenol F - epoxy resin 1,6-Hexanediol	9003-36-5 933999-84-	<b>Indu</b> <b>y</b> 8,3 p 104, ; mg/k 29,39 mg/r	iona opm 15 kg 9 n3	62,5 mg/kg 8,7 mg/m3 6,25	Route Human Dermal Human Inhalation Human Oral Human	Short Term, local effects Long Term, systemic effects Long Term, systemic effects Long Term, systemic effects Long Term, systemic
<b>Component</b> bisphenol F - epoxy resin 1,6-Hexanediol	9003-36-5 933999-84- 9 25068-38-6	<b>Indu</b> <b>y</b> 8,3 p 104, mg/k 29,39 mg/r 2,8 mg/k 4,9 mg/r	iona opm 15 kg 9 n3 kg m3	62,5 mg/kg 8,7 mg/m3 6,25	Route Human Dermal Human Inhalation Human Oral Human Dermal Human	Short Term, local effects Long Term, systemic effects Long Term, systemic effects Long Term, systemic effects Long Term, systemic effects Long Term, systemic

8,3 mg/kg		Human Dermal	Long Term, systemic effects
12,25 mg/m3		Human Inhalation	Long Term, systemic effects
	3,571 mg/kg	Human Dermal	Short Term, systemic effects
	0,75 mg/kg	Human Oral	Short Term, systemic effects
	3,571 mg/kg	Human Dermal	Long Term, systemic effects
	0,75 mg/kg	Human Oral	Long Term, systemic effects

### 8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Suitable materials for safety gloves; EN 374:

Polychloroprene - CR: thickness >=0,5mm; breakthrough time >=480min.

Nitrile rubber - NBR: thickness >=0,35mm; breakthrough time >=480min.

Butyl rubber - IIR: thickness >=0,5mm; breakthrough time >=480min.

Fluorinated rubber - FKM: thickness >=0,4mm; breakthrough time >=480min.

Neoprene gloves are suggested (0,5 mm) not recommended gloves: not waterproof gloves

Respiratory protection:

Personal Protective Equipment should comply with relevant CE standards (as EN 374 for gloves and EN 166 for goggles), correctly maintained and stored. Consult the supplier to check the suitability of equipment against specific chemicals and for user information.

In case of insufficient ventilation use mask with ABEKP filters (EN 14387).

Hygienic and Technical measures

N.A.

Appropriate engineering controls:

N.A.

# SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical State Liquid
Appearance and colour: Liquid Orange
Odour: Odourless
Odour threshold: N.A.
pH: N.A.
Melting point / freezing point: N.A.
Initial boiling point and boiling range: 200 °C (392 °F)
Flash point: 150 °C (302 °F)
Evaporation rate: N.A.
Upper/lower flammability or explosive limits: N.A.
Vapour density: N.A.
Vapour pressure: N.A.
Relative density: N.A.
Apparent density: 1.1
Solubility in water: Insoluble
Partition coefficient (n-octanol/water): N.A This product is a mixture
Auto-ignition temperature: N.A No explosive or spontaneous ignition in contact with air at room temperature
Decomposition temperature: N.A.
Viscosity: N.A.
Explosive properties: N.A No components with explosive properties
Oxidizing properties: N.A No component with oxidizing properties
Solid/gas flammability: N.A.
9.2. Other information
No additional information

### **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

Stable under normal conditions

### 10.2. Chemical stability

Stable under normal conditions

# 10.3. Possibility of hazardous reactions

None.

#### 10.4. Conditions to avoid

Stable under normal conditions.

#### 10.5. Incompatible materials

None in particular.

### 10.6. Hazardous decomposition products

None.

#### **SECTION 11: Toxicological information**

#### 11.1. Information on toxicological effects

#### Toxicological information of the mixture:

There is no toxicological data available on the mixture. Consider the individual concentration of each component to assess toxicological effects resulting from exposure to the mixture.

#### Toxicological information on main components of the mixture:

bisphenol F - epoxy resin	a) acute toxicity	LD50 Oral Rat > 2000 mg/kg LD50 Skin Rat > 2000 mg/kg LD50 Oral Rat > 2 g/kg
1,6-Hexanediol Diglycidyl Ether	a) acute toxicity	LD50 Oral Rat = 2190 mg/kg
		LD50 Skin Rabbit > 4900 mg/kg
	i) STOT-repeated exposure	NOAEL Oral = 200 mg/kg
		NOAEL Inhalation = 16 mg/m3
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700)	a) acute toxicity	LD50 Oral Rat > 15000 mg/kg
		LD50 Skin Rabbit > 23000 mg/kg
		LD50 Oral Rat = 11400 mg/kg
	i) STOT-repeated exposure	NOAEL Oral Rat = 50 mg/kg
		NOAEL Skin Rat = 100 mg/kg

#### If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as

N.A.

- a) acute toxicity
- b) skin corrosion/irritation
- c) serious eye damage/irritation
- d) respiratory or skin sensitisation
- e) germ cell mutagenicity
- f) carcinogenicity
- g) reproductive toxicity
- h) STOT-single exposure

Toxicological kinetics, metabolism and distribution information

i) STOT-repeated exposure

# **SECTION 12: Ecological information**

### 12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment. Eco-Toxicological Information:

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### List of components with eco-toxicological properties

Component	Ident. Numb.	Ecotox Infos
bisphenol F - epoxy resin	CAS: 9003-36-5 - EINECS: 500-006-8	a) Aquatic acute toxicity : EC50 Fish > 100 mg/L 96
		a) Aquatic acute toxicity : LC50 Daphnia > 100 mg/L 96
		a) Aquatic acute toxicity : LC50 Fish = 2,54 mg/L 96
		a) Aquatic acute toxicity : EC50 Daphnia = 2,55 mg/L 48
		a) Aquatic acute toxicity: EC50 Algae > 1000 mg/L 72
1,6-Hexanediol Diglycidyl Ether	CAS: 933999-84-9 - EINECS: 618-939-5	a) Aquatic acute toxicity: EC50 Daphnia = 47 mg/L 48
		a) Aquatic acute toxicity : LC50 Fish = 30 mg/L 96
		a) Aquatic acute toxicity : EC50 Algae = 23,1 mg/L 48
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weigh <= 700)	CAS: 25068-38-6 - EINECS: 500-033-5 - It INDEX: 603-074-00-8	a) Aquatic acute toxicity: LC50 Fish > 2 mg/L 96
		a) Aquatic acute toxicity: EC50 Daphnia > 1,8 mg/L 48
		a) Aquatic acute toxicity: LC50 Algae > 11 mg/L 72
		a) Aquatic acute toxicity : LC50 Daphnia = 1,3 mg/L 96
		b) Aquatic chronic toxicity : NOEC Daphnia = 0,3 mg/L

#### 12.2. Persistence and degradability

N.A.

### 12.3. Bioaccumulative potential

N.A.

### 12.4. Mobility in soil

N.A.

#### 12.5. Results of PBT and vPvB assessment

No PBT/vPvB Ingredients are present

#### 12.6. Other adverse effects

N.A.

### **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force.

A waste code according to European waste catalogue (EWC) cannot be specified, due to dependence on the usage. Contact an authorized waste disposal service.

Product:

Do not dispose of waste into sewers.

Do not contaminate ponds, waterways or ditches with chemical or used container.

Send to an authorized waste disposal service.

Contaminated packaging:

Empty remaining content.

Dispose of as unused product.

Do not re-use empty containers.

## **SECTION 14: Transport information**

14.1. UN number

3082

#### 14.2. UN proper shipping name

ADR-Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. IATA-Technical name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. IMDG-Technical name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

#### 14.3. Transport hazard class(es)

ADR-Class: 9

IATA-Class: 9

IMDG-Class: 9

# 14.4. Packing group

ADR-Packing Group: III IATA-Packing group: III IMDG-Packing group: III

### 14.5. Environmental hazards

Marine pollutant: Yes Environmental Pollutant: Yes

14.6. Special precautions for user

# Road and Rail ( ADR-RID ) :

ADR-Label: 9

ADR-Hazard identification number: 90

ADR-Special Provisions: 274 335 375 601

ADR-Transport category (Tunnel restriction code): 3 (-)

#### Air (IATA):

IATA-Passenger Aircraft: 964 IATA-Cargo Aircraft: 964 IATA-Label: 9

IATA-Subsidiary hazards: -

IATA-Erg: 9L

IATA-Special Provisioning: A97 A158 A197

#### Sea ( IMDG ) :

IMDG-Stowage Code: Category A

IMDG-Stowage Note: -

IMDG-Subsidiary hazards: -

IMDG-Special Provisioning: 274 335 969 IMDG-EMS: F-A, S-F

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

#### N.A.

These substances, when carried in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for liquids, or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to provisions of ADR, IMDG and IATA DGR.

# **SECTION 15: Regulatory information**

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

VOC (2004/42/EC) : N.A. q/l Dir. 98/24/EC (Risks related to chemical agents at work) Dir. 2000/39/EC (Occupational exposure limit values) Regulation (EC) n. 1907/2006 (REACH) Regulation (EU) 2015/830 Regulation (EC) n. 1272/2008 (CLP) Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013 Regulation (EU) n. 286/2011 (ATP 2 CLP) Regulation (EU) n. 618/2012 (ATP 3 CLP) Regulation (EU) n. 487/2013 (ATP 4 CLP) Regulation (EU) n. 944/2013 (ATP 5 CLP) Regulation (EU) n. 605/2014 (ATP 6 CLP) Regulation (EU) n. 2015/1221 (ATP 7 CLP) Regulation (EU) n. 2016/918 (ATP 8 CLP) Regulation (EU) n. 2016/1179 (ATP 9 CLP) Regulation (EU) n. 2017/776 (ATP 10 CLP) Provisions related to directive EU 2012/18 (Seveso III):

Products belongs to category E2 200

German Water Hazard Class.

N.A.

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 3

Restrictions related to the substances contained: None

# **SVHC Substances:**

No data available

Produktregisteret Norge: 17188 Produktregister Danmark: 4049195 MAL-kode: 5-5 (A+B: 5-5) (1993)

# 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

# **SECTION 16: Other information**

Code	Description	
H315	Causes skin irritation.	
H317	May cause an allergic skin reaction.	
H319	Causes serious eye irritation.	
H411	Toxic to aquatic life with long lasting effe	cts.
H412	Harmful to aquatic life with long lasting e	ffects.
Code	Hazard class and hazard category	Description
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/2	Eye Irrit. 2	Ever invitation Cotocom 2
/		Eye irritation, Category 2
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
	,	
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
3.2/2	Calculation method
3.3/2	Calculation method
3.4.2/1	Calculation method
4.1/C2	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX'S DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This SDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center CE: European Community CLP: Classification, Labeling, Packaging. CMR: Carcinogenic, Mutagenic and Reprotoxic COD: Chemical Oxygen Demand COV: Volatile Organic Compound CSA: Chemical Safety Assessment CSR: Chemical Safety Report DMEL: Derived Minimal Effect Level DNEL: Derived No Effect Level. **DPD:** Dangerous Preparations Directive DSD: Dangerous Substances Directive EC50: Half Maximal Effective Concentration ECHA: European Chemicals Agency EINECS: European Inventory of Existing Commercial Chemical Substances. ES: Exposure Scenario GefStoffVO: Ordinance on Hazardous Substances, Germany. GHS: Globally Harmonized System of Classification and Labeling of Chemicals. IARC: International Agency for Research on Cancer IATA: International Air Transport Association. IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA). IC50: half maximal inhibitory concentration ICAO: International Civil Aviation Organization. ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO). IMDG: International Maritime Code for Dangerous Goods. INCI: International Nomenclature of Cosmetic Ingredients. IRCCS: Scientific Institute for Research, Hospitalization and Health Care KSt: Explosion coefficient. LC50: Lethal concentration, for 50 percent of test population. LD50: Lethal dose, for 50 percent of test population. LDLo: Leathal Dose Low N.A.: Not Applicable N/A: Not Applicable N/D: Not defined/ Not available NA: Not available NIOSH: National Institute for Occupational Safety and Health NOAEL: No Observed Adverse Effect Level OSHA: Occupational Safety and Health Administration. PBT: Persistent, Bioaccumulative and Toxic PGK: Packaging Instruction PNEC: Predicted No Effect Concentration. **PSG:** Passengers RID: Regulation Concerning the International Transport of Dangerous Goods by Rail. STEL: Short Term Exposure limit. STOT: Specific Target Organ Toxicity. TLV: Threshold Limiting Value. TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard). vPvB: Very Persistent, Very Bioaccumulative. WGK: German Water Hazard Class. Paragraphs modified from the previous revision: - 2. HAZARDS IDENTIFICATION - 5. FIRE-FIGHTING MEASURES

- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 13. DISPOSAL CONSIDERATIONS
- 15. REGULATORY INFORMATION