

1 Identification

- **Product identifier**
- **Trade name:** 4CR 4200 / 4205 / 4210 / 4215 / 2K-HS-Füller 4:1
- **Application of the substance / the mixture** *Paint*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 4CR Vertriebsgesellschaft mbH
 Oberer Sommerfeldweg 2
 D-94469 Deggendorf
 Tel.: +49 (0) 40 69 60 99 315
 Fax: +49 (0) 40 69 60 99 316
 E-Mail: Info@4CR.com
www.4CR.com
- **Emergency telephone number:** +49(0)700 24112112 (CRM)

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.



GHS08 Health hazard

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

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

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02



GHS07



GHS08

- **Signal word** *Warning*

- **Hazard-determining components of labeling:**

butyl acetate

xylene

Hydrocarbons, C9, aromatics

2,3-epoxypropyl neodecanoate

- **Hazard statements**

H226 Flammable liquid and vapor.

H317 May cause an allergic skin reaction.

H336 May cause drowsiness or dizziness.

H373 May cause damage to organs through prolonged or repeated exposure.

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Trade name: 4CR 4200 / 4205 / 4210 / 4215 / 2K-HS-Füller 4:1

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· Precautionary statements

- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 P260 Do not breathe dust/fume/gas/mist/vapors/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P405 Store locked up.

· Classification system:
· NFPA ratings (scale 0 - 4)

· HMIS-ratings (scale 0 - 4)

HEALTH	*0	Health = *0
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

· Other hazards
· Results of PBT and vPvB assessment

- PBT: Not applicable.
- vPvB: Not applicable.

3 Composition/information on ingredients
· Chemical characterization: Mixtures
· Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:

123-86-4	butyl acetate	≥10- ≤20%
108-65-6	2-methoxy-1-methylethyl acetate	2.5-<10%
64742-95-6	Hydrocarbons, C9, aromatics	≥0.1-<2.5%
1330-20-7	xylene	≥0.1-<2.5%
26761-45-5	2,3-epoxypropyl neodecanoate	≥0.1-<1%

4 First-aid measures
· Description of first aid measures

- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: If symptoms persist consult doctor.

· Information for doctor:

- Indication of any immediate medical attention and special treatment needed
 No further relevant information available.

5 Fire-fighting measures
· Extinguishing media
· Suitable extinguishing agents:

 CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Do not flush with water or aqueous cleansing agents
- **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.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

123-86-4	butyl acetate	5 ppm
7727-43-7	barium sulphate, natural	15 mg/m ³
13463-67-7	titanium dioxide	30 mg/m ³
7779-90-0	Trizinc bis(orthophosphate)	12 mg/m ³
108-65-6	2-methoxy-1-methylethyl acetate	50 ppm
1330-20-7	xylene	130 ppm
7784-30-7	Aluminium orthophosphate	14 mg/m ³
20344-49-4	iron hydroxide oxide	24 mg/m ³
100-41-4	ethylbenzene	33 ppm
1344-28-1	aluminium oxide	15 mg/m ³
1317-61-9	triiron tetraoxide	21 mg/m ³
1333-86-4	Carbon black	9 mg/m ³
112-07-2	2-butoxyethyl acetate	15 ppm
1314-13-2	zinc oxide	10 mg/m ³
7631-86-9	silicon dioxide, chemically prepared	18 mg/m ³
1314-23-4	zirconium dioxide	14 mg/m ³
1308-38-9	dichromium trioxide	2.2 mg/m ³
14808-60-7	Quartz (SiO ₂)	0.075 mg/m ³
107-98-2	1-methoxy-2-propanol	100 ppm
112945-52-5	Silicon dioxide	18 mg/m ³
78-83-1	isobutanol	150 ppm
868-77-9	2-hydroxyethyl methacrylate	1.9 mg/m ³
34590-94-8	(2-methoxymethylethoxy)propanol	150 ppm
77-58-7	dibutyltin dilaurate	1.1 mg/m ³

· **PAC-2:**

123-86-4	butyl acetate	200 ppm
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7727-43-7	<i>barium sulphate, natural</i>	170 mg/m ³
13463-67-7	<i>titanium dioxide</i>	330 mg/m ³
7779-90-0	<i>Trizinc bis(orthophosphate)</i>	36 mg/m ³
108-65-6	<i>2-methoxy-1-methylethyl acetate</i>	1,000 ppm
1330-20-7	<i>xylene</i>	920* ppm
7784-30-7	<i>Aluminium orthophosphate</i>	200 mg/m ³
20344-49-4	<i>iron hydroxide oxide</i>	260 mg/m ³
100-41-4	<i>ethylbenzene</i>	1100* ppm
1344-28-1	<i>aluminium oxide</i>	170 mg/m ³
1317-61-9	<i>triiron tetraoxide</i>	230 mg/m ³
1333-86-4	<i>Carbon black</i>	99 mg/m ³
112-07-2	<i>2-butoxyethyl acetate</i>	35 ppm
1314-13-2	<i>zinc oxide</i>	15 mg/m ³
7631-86-9	<i>silicon dioxide, chemically prepared</i>	740 mg/m ³
1314-23-4	<i>zirconium dioxide</i>	110 mg/m ³
1308-38-9	<i>dichromium trioxide</i>	24 mg/m ³
14808-60-7	<i>Quartz (SiO₂)</i>	33 mg/m ³
107-98-2	<i>1-methoxy-2-propanol</i>	160 ppm
112945-52-5	<i>Silicon dioxide</i>	100 mg/m ³
78-83-1	<i>isobutanol</i>	1,300 ppm
868-77-9	<i>2-hydroxyethyl methacrylate</i>	21 mg/m ³
34590-94-8	<i>(2-methoxymethylethoxy)propanol</i>	1700* ppm
77-58-7	<i>dibutyltin dilaurate</i>	8 mg/m ³

· PAC-3:

123-86-4	<i>butyl acetate</i>	3000* ppm
7727-43-7	<i>barium sulphate, natural</i>	990 mg/m ³
13463-67-7	<i>titanium dioxide</i>	2,000 mg/m ³
7779-90-0	<i>Trizinc bis(orthophosphate)</i>	220 mg/m ³
108-65-6	<i>2-methoxy-1-methylethyl acetate</i>	5000* ppm
1330-20-7	<i>xylene</i>	2500* ppm
7784-30-7	<i>Aluminium orthophosphate</i>	1,200 mg/m ³
20344-49-4	<i>iron hydroxide oxide</i>	1,600 mg/m ³
100-41-4	<i>ethylbenzene</i>	1800* ppm
1344-28-1	<i>aluminium oxide</i>	990 mg/m ³
1317-61-9	<i>triiron tetraoxide</i>	1,400 mg/m ³
1333-86-4	<i>Carbon black</i>	590 mg/m ³
112-07-2	<i>2-butoxyethyl acetate</i>	210 ppm
1314-13-2	<i>zinc oxide</i>	2,500 mg/m ³
7631-86-9	<i>silicon dioxide, chemically prepared</i>	4,500 mg/m ³
1314-23-4	<i>zirconium dioxide</i>	680 mg/m ³
1308-38-9	<i>dichromium trioxide</i>	140 mg/m ³
14808-60-7	<i>Quartz (SiO₂)</i>	200 mg/m ³
107-98-2	<i>1-methoxy-2-propanol</i>	660 ppm
112945-52-5	<i>Silicon dioxide</i>	630 mg/m ³

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		(Contd. of page 4)
78-83-1	isobutanol	8000* ppm
868-77-9	2-hydroxyethyl methacrylate	1,000 mg/m ³
34590-94-8	(2-methoxymethylethoxy)propanol	9900** ppm
77-58-7	dibutyltin dilaurate	48 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Use only in well ventilated areas.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Storage class:** 3
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

123-86-4 butyl acetate

PEL	Long-term value: 710 mg/m ³ , 150 ppm
REL	Long-term value: 950 mg/m ³ , 200 ppm
TLV	Short-term value: 712 mg/m ³ , 150 ppm Long-term value: 238 mg/m ³ , 50 ppm

108-65-6 2-methoxy-1-methylethyl acetate

WEEL	Long-term value: 50 ppm
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1330-20-7 xylene

PEL	Long-term value: 435 mg/m ³ , 100 ppm
REL	Short-term value: 655 mg/m ³ , 150 ppm Long-term value: 435 mg/m ³ , 100 ppm
TLV	Short-term value: 651 mg/m ³ , 150 ppm Long-term value: 434 mg/m ³ , 100 ppm
BEI	

- **Ingredients with biological limit values:**

1330-20-7 xylene

BEI	1.5 g/g creatinine Medium: urine Time: end of shift Parameter: Methylhippuric acids
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- **Additional information:** *The lists that were valid during the creation were used as basis.*
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** *Wash hands before breaks and at the end of work.*
- **Breathing equipment:**



In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Protection of hands:**
*Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Breakthrough time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties	
· General Information	
· Appearance:	
Form:	<i>Fluid</i>
Color:	<i>According to product specification</i>
· Odor:	<i>Characteristic</i>
· Odor threshold:	<i>Not determined.</i>
· pH-value:	<i>Not determined.</i>
· Change in condition	
Melting point/Melting range:	<i>Undetermined.</i>
Boiling point/Boiling range:	<i>124°C (255 °F)</i>
· Flash point:	<i>27°C (81 °F) (DIN 53213)</i>
· Flammability (solid, gaseous):	<i>Not applicable.</i>
· Ignition temperature:	<i>370°C (698 °F) (DIN 51794)</i>
· Decomposition temperature:	<i>Not determined.</i>
· Auto igniting:	<i>Product is not selfigniting.</i>
· Danger of explosion:	<i>Product is not explosive. However, formation of explosive air/vapor mixtures are possible.</i>

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· Explosion limits:	
Lower:	1.2 Vol %
Upper:	7.5 Vol %
· Vapor pressure at 20°C (68 °F): 10.7 hPa (8 mm Hg)	
· Density at 20°C (68 °F): 1.622 g/cm ³ (13.536 lbs/gal) (DIN 53217)	
· Relative density Not determined.	
· Vapor density Not determined.	
· Evaporation rate Not determined.	
· Solubility in / Miscibility with Water: Not miscible or difficult to mix.	
· Partition coefficient (n-octanol/water): Not determined.	
· Viscosity:	
Dynamic:	Not determined.
Kinematic at 20°C (68 °F):	75 s (ISO 6 mm)
· Solvent content:	
VOC content:	26.61 % 432 g/l / 3.6 lb/gl
· Solids content (weight-%): 73.4 %	
· Other information No further relevant information available.	

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Carbon monoxide

11 Toxicological information

- **Information on toxicological effects**
 - **Acute toxicity:**
- | | | |
|---|------|-----------------------|
| · LD/LC50 values that are relevant for classification: | | |
| 7779-90-0 Trizinc bis(orthophosphate) | | |
| Oral | LD50 | >5,000 mg/kg (rat) |
| 64742-95-6 Hydrocarbons, C9, aromatics | | |
| Oral | LD50 | >2,000 mg/kg (rat) |
| Dermal | LD50 | >2,000 mg/kg (rabbit) |
- **Primary irritant effect:**
 - **on the skin:** No irritant effect.
 - **on the eye:** No irritating effect.
 - **Sensitization:** No sensitizing effects known.

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Trade name: 4CR 4200 / 4205 / 4210 / 4215 / 2K-HS-Füller 4:1

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- **Additional toxicological information:**
- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

13463-67-7	titanium dioxide	2B
14807-96-6	Talc	3
1330-20-7	xylene	3
100-41-4	ethylbenzene	2B
1333-86-4	Carbon black	2B

· **NTP (National Toxicology Program)**

14808-60-7	Quartz (SiO ₂)	K
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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN1263

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Trade name: 4CR 4200 / 4205 / 4210 / 4215 / 2K-HS-Füller 4:1

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· **UN proper shipping name**
 · **DOT** *Paint*
 · **ADR** *UN1263 Paint, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS*
 · **IMDG** *PAINT (Trizinc bis(orthophosphate), Solvent naphtha), MARINE POLLUTANT*
 · **IATA** *PAINT*

· **Transport hazard class(es)**

· **DOT**


 · **Class** *3 Flammable liquids*
 · **Label** *3*

· **ADR**



 · **Class** *3 (F1) Flammable liquids*
 · **Label** *3*

· **IMDG**



 · **Class** *3 Flammable liquids*
 · **Label** *3*

· **IATA**


 · **Class** *3 Flammable liquids*
 · **Label** *3*

· **Packing group**

· **DOT, ADR, IMDG, IATA** *III*

· **Environmental hazards:** *Product contains environmentally hazardous substances: Trizinc bis(orthophosphate)*

· **Marine pollutant:** *No*
Yes (DOT)
Symbol (fish and tree)

· **Special marking (ADR):** *Symbol (fish and tree)*

· **Special precautions for user** *Warning: Flammable liquids*

· **Danger code (Kemler):** *30*

· **EMS Number:** *F-E,S-E*

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Trade name: 4CR 4200 / 4205 / 4210 / 4215 / 2K-HS-Füller 4:1

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· Stowage Category	A
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Remarks:	Special marking with the symbol (fish and tree).
· ADR	
· Remarks:	≤ 5 l: 2.2.3.1.5 ADR
· IMDG	
· Limited quantities (LQ)	5L
· Remarks:	≤ 5 l: 2.2.3.1.5 IMDG
· UN "Model Regulation":	UN 1263 PAINT, 3, III, MARINE POLLUTANT/ ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

7727-43-7	barium sulphate, natural
7779-90-0	Trizinc bis(orthophosphate)
1330-20-7	xylene
100-41-4	ethylbenzene
1344-28-1	aluminium oxide
112-07-2	2-butoxyethyl acetate
1314-13-2	zinc oxide
1308-38-9	dichromium trioxide

· **Proposition 65**

· **Chemicals known to cause cancer:**

13463-67-7	titanium dioxide
100-41-4	ethylbenzene
1333-86-4	Carbon black
14808-60-7	Quartz (SiO ₂)

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

7727-43-7	barium sulphate, natural	D, CBD(inh), NL(oral)
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Trade name: 4CR 4200 / 4205 / 4210 / 4215 / 2K-HS-Füller 4:1

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7779-90-0	Trizinc bis(orthophosphate)	D, I, II
1330-20-7	xylene	I
100-41-4	ethylbenzene	D
1314-13-2	zinc oxide	D, I, II
1308-38-9	dichromium trioxide	D, CBD

· TLV (Threshold Limit Value established by ACGIH)

13463-67-7	titanium dioxide	A4	10-25%
14807-96-6	Talc	A4	2.5-<10%
1330-20-7	xylene	A4	e"0.1-<2.5%
100-41-4	ethylbenzene	A3	e"0.1-<1%
1344-28-1	aluminium oxide	A4	e"0.1-<1%
1333-86-4	Carbon black	A4	e"0.1-<1%
112-07-2	2-butoxyethyl acetate	A3	e"0.1-<1%
1314-23-4	zirconium dioxide	A4	~0-≤0.1%
1308-38-9	dichromium trioxide	A4	~0-≤0.1%
14808-60-7	Quartz (SiO ₂)	A2	0.1%
77-58-7	dibutyltin dilaurate	A4	0.1%

· NIOSH-Ca (National Institute for Occupational Safety and Health)

13463-67-7	titanium dioxide
1333-86-4	Carbon black
14808-60-7	Quartz (SiO ₂)

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms


GHS02 GHS07 GHS08

· Signal word Warning
· Hazard-determining components of labeling:

butyl acetate

xylene

Hydrocarbons, C9, aromatics

2,3-epoxypropyl neodecanoate

· Hazard statements

H226 Flammable liquid and vapor.

H317 May cause an allergic skin reaction.

H336 May cause drowsiness or dizziness.

H373 May cause damage to organs through prolonged or repeated exposure.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P405 Store locked up.

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Trade name: 4CR 4200 / 4205 / 4210 / 4215 / 2K-HS-Füller 4:1

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· **National regulations:**

Class	Share in %
NK	25-50

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

· **Date of preparation / last revision** 09/13/2018 / 46

· **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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 3: Flammable liquids – Category 3

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

· *** Data compared to the previous version altered.**