

According to (EC) No. 1907/2006, as amended

4.5

L100

Version

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

#### 1.1 Product identifier

Trade name	: Conducting silver
Article-No.	: L100

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

Use of the	: Preparation containing firing metal and ceramics for the
Substance/Mixture	manufacture of conductive structures or components for the
e abotanoo, mixtaro	electronic industry.

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

Company Telephone	<ul> <li>Kemo-Electronic GmbH</li> <li>Leher Landstraße 20</li> <li>27607 Geestland</li> <li>+49474393380</li> </ul>
Telefax	: +494743933822
E-mail address	: kemo-electronic@t-online.de
Responsible/issuing person	: Umwelt / Sicherheit

#### 1.4 Emergency telephone number

CHEMTREC Global Number : +(1)-703-527-3887(Call Collect)

#### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

#### Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 2	H225: Highly flammable liquid and vapour.
Specific target organ toxicity - single exposure, Category 3, Central nervous system	H336: May cause drowsiness or dizziness.
Acute aquatic toxicity, Category 1	H400: Very toxic to aquatic life.
Chronic aquatic toxicity, Category 1	H410: Very toxic to aquatic life with long lasting effects.

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2.2 Label elements	5			
Labelling (RE) Hazard pictogr		C) No 1272/2008)	!	
Signal word		: Danger		
Hazard statem	ents	: H225 H336 H410	May cause dr	able liquid and vapour. owsiness or dizziness. aquatic life with long
Precautionary	statements	: Prevention:		
		P210 P233 P261	sparks, open ignition source Keep containe Avoid breathir	om heat, hot surfaces, flames and other es. No smoking. er tightly closed. ng dust/ fume/ gas/
		P273 <b>Response:</b>	mist/ vapours/ Avoid release	spray. to the environment.
		P303 + P361 P353		
		P370 + P378	In case of fire	: Use dry sand, dry cohol-resistant foam

Hazardous components which must be listed on the label: 1-ethoxypropan-2-ol

acetone

ethyl acetate

#### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

#### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.2 Mixtures

Chemical nature

: precious metal glycol ether/-acetate

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natural polymer, modified organic solvent aldehyde/ketone carbonic acid/ester/anhydride

#### Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
silver	7440-22-4 231-131-3 01-2119555669-21- 0032	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 25 - < 50
1-ethoxypropan-2-ol	52125-53-8	Flam. Liq. 3; H226 STOT SE 3; H336	>= 20 - < 25
acetone	67-64-1 200-662-2 01-2119471330-49- xxxx	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	>= 3 - < 10
collodion wool, dissolved	9004-70-0	Expl. 1.1; H201 Flam. Liq. 2; H225	< 10
ethyl acetate	141-78-6 205-500-4	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	>= 1 - < 3
Substances with a work	place exposure limit :		
ethanol	64-17-5 200-578-6	Flam. Liq. 2; H225	>= 10 - < 20

For explanation of abbreviations see section 16.

#### **SECTION 4: FIRST AID MEASURES**

#### 4.1 Description of first aid measures

General advice	<ul> <li>Move out of dangerous area.</li> <li>Consult a physician.</li> <li>Show this safety data sheet to the doctor in attendance.</li> <li>Do not leave the victim unattended.</li> </ul>
If inhaled	: Consult a physician after significant exposure. If unconscious place in recovery position and seek medical advice.
In case of skin contact	: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water.



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		5		, ,
In case of e	ye contact	Flush eyes with wate Remove contact lens Protect unharmed ey Keep eye wide open If eye irritation persis	ses. /e. while rinsing.	
If swallowed	I	Clean mouth with wa Keep respiratory trac Do NOT induce vom Do not give milk or a Never give anything If symptoms persist,	t clear. iting. Icoholic beveraç by mouth to an	unconscious person.
1.2 Most import	ant symptoms an	effects, both acute ar	nd delayed	
Symptoms Risks		None known. May cause drowsine		
		-		
1.3 Indication of	f any immediate n	dical attention and sr	oecial treatmen	t needed
Treatment	REFIGHTING M	The first aid procedu with the doctor respo	re should be est	ablished in consultation trial medicine.
Treatment SECTION 5: FI 5.1 Extinguishir	REFIGHTING M	The first aid procedu with the doctor respo	re should be est onsible for indus	
Treatment SECTION 5: FI 5.1 Extinguishir Suitable ext	REFIGHTING M	The first aid procedu with the doctor response     ASURES     Alcohol-resistant foat Carbon dioxide (CO2	re should be est onsible for indust	
Treatment SECTION 5: FI 5.1 Extinguishir Suitable ext Unsuitable e media	REFIGHTING Milling media	<ul> <li>The first aid procedu with the doctor response</li> <li>ASURES</li> <li>Alcohol-resistant foat Carbon dioxide (CO2 Dry chemical</li> </ul>	re should be est onsible for indust m 2)	
Treatment SECTION 5: FI 5.1 Extinguishir Suitable ext Unsuitable e media	REFIGHTING Milling media inguishing media extinguishing	<ul> <li>The first aid procedu with the doctor response</li> <li>ASURES</li> <li>Alcohol-resistant foat Carbon dioxide (CO2 Dry chemical</li> <li>High volume water je</li> <li>e substance or mixtu</li> </ul>	re should be est onsible for indust m 2) et	
Treatment SECTION 5: FI 5.1 Extinguishir Suitable ext Unsuitable e media 5.2 Special haza Specific haz	REFIGHTING Milling media inguishing media extinguishing ards arising from frank	<ul> <li>The first aid procedu with the doctor responsion of the doctor responsint of the doctor responsion of the doctor responsion of the do</li></ul>	re should be est onsible for indust m 2) et <b>re</b> from fire fighting	to enter drains or water
Treatment SECTION 5: FI 5.1 Extinguishir Suitable ext Unsuitable ext Unsuitable ext 5.2 Special haza Specific haz firefighting Hazardous o	REFIGHTING Milling media inguishing media extinguishing ards arising from f ards during combustion	<ul> <li>The first aid procedu with the doctor response</li> <li>ASURES</li> <li>Alcohol-resistant foat Carbon dioxide (CO2 Dry chemical</li> <li>High volume water je</li> <li>e substance or mixtu</li> <li>Do not allow run-off f courses.</li> </ul>	re should be est onsible for indust m 2) et <b>re</b> from fire fighting	to enter drains or water
Treatment SECTION 5: FI 5.1 Extinguishir Suitable ext Unsuitable ext Unsuitable ext Unsuitable ext Specific haz firefighting Hazardous of products 5.3 Advice for fi	REFIGHTING Milling media inguishing media extinguishing ards arising from franks ards during combustion refighters ective equipment	<ul> <li>The first aid procedu with the doctor responsion of the doctor response of the doctor re</li></ul>	re should be est onsible for indust m 2) et from fire fighting ustion products a	to enter drains or water

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	be dis For sa	esidues and contaminated fire posed of in accordance with l afety reasons in case of fire, c ately in closed containments.	ocal regulations.
SECTION 6: ACCIDEN	TAL RELEASE N	IEASURES	
6.1 Personal precautions	s, protective equip	ment and emergency proce	edures
Personal precautions	Remo Evacu Bewa	e adequate ventilation. ve all sources of ignition. late personnel to safe areas. re of vapours accumulating to ntrations. Vapours can accun	
6.2 Environmental preca	utions		
Environmental preca	Preve If the	nt product from entering drair nt further leakage or spillage product contaminates rivers a ctive authorities.	if safe to do so.
6.3 Methods and materia	al for containment	and cleaning up	
Methods for cleaning	absori vermi local /	in spillage, and then collect w bent material, (e.g. sand, eart culite) and place in container national regulations (see sec in suitable, closed containers	h, diatomaceous earth, for disposal according to tion 13).
	ections		
6.4 Reference to other se			

Advice on safe handling	: Avoid formation of aerosol.
-	Do not breathe vapours/dust.
	Avoid exposure - obtain special instructions before use.
	For personal protection see section 8.
	Smoking, eating and drinking should be prohibited in the application area.
	Take precautionary measures against static discharges.
	Provide sufficient air exchange and/or exhaust in work rooms. Container may be opened only under exhaust ventilation
	hood.
	Dispose of rinse water in accordance with local and national

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			regulations. Avoid release	to the environment.		
Advice on p fire and exp	rotection against losion	:		on of aerosol. Keep away moking. Take measures c charge.		
Hygiene me	easures	:		ordance with good indus h hands before breaks a		
7.2 Conditions	for safe storage, i	inc	luding any inc	ompatibilities		
Requiremer areas and c	nts for storage containers	:	place. Contain resealed and precautions.	Store in cool place. Keep ners which are opened m kept upright to prevent le Electrical installations / wo ne technological safety st	iust be o akage. orking n	carefully Observe label naterials must
Other data		:	No decompos	sition if stored and applied	d as dire	ected.
7.3 Specific end Specific use	( )	:	Consult the te substance/mi	echnical guidelines for the xture.	euse of	this

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### **Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Expressed as	Basis
silver	7440-22-4	TWA	0.1 mg/m3		2000/39/EC
Further information	Indicative				
		VLE-MP	0.1 mg/m3		PT OEL
Further information	Included by specific national legislation or by not transposed communitary legilation, agyria				
		TWA	0.01 mg/m3 (Silver)	Silver	PT DL 305/2007
ethanol	64-17-5	VLE-MP	1,000 ppm		PT OEL
Further	Substances that are not classified as carcinogenic for humans, irritation of the				
information	upper respirat	upper respiratory tract, Eye irritation, damage of central nervous system			
acetone	67-64-1	TWA	500 ppm 1,210 mg/m3		2000/39/EC

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Further information	Indicative				
		VLE-MP	500 ppm		PT OEL
Further information	Included by specific national legislation or by not transposed communitary legilation, Substances that are not classified as carcinogenic for humans, ldentification of substances for which biological exposure values are available. There are two types: IBE A refers to acetylcholinesterase inhibitors pesticides and IBE M to metahaemoglibine inductors., hematologic effects, irritation of the upper respiratory tract, impairment of central nervous system, Eye irritation				
		VLE_CD	750 ppm		PT OEL
Further information	legilation, Sub Identification of There are two and IBE M to b	becific national legis stances that are no of substances for wh types: IBE A refers metahaemoglibine i ory tract, impairmer TWA	nt classified as carc nich biological expo to acetylcholineste nductors., hematol	inogenic for hu osure values a erase inhibitors logic effects, ir	umans, re available. s pesticides ritation of the
ethyl acetate	141-78-6	VLE-MP	400 ppm		PT OEL
Further information	irritation of the upper respiratory tract, Eye irritation				

#### 8.2 Exposure controls

#### **Engineering measures**

No data available

### Personal protective equipment

Eye protection	:	Eye wash bottle with pure water Tightly fitting safety goggles
Hand protection	:	Solvent-resistant gloves The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Before removing gloves clean them with soap and water. The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Skin and body protection	:	impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Respiratory protection	:	In the case of vapour formation use a respirator with an approved filter.
Protective measures	:	Wear suitable protective equipment. Avoid contact with skin. When using do not eat, drink or smoke.

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### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	: liquid
Colour	: silver
Odour	: characteristic
Odour Threshold	: No data available
рН	: No data available
Melting point/range	: No data available
Boiling point/boiling range	: No data available
Flash point	: 12 °C Method: DIN 51755 Part 1
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Burning rate	: No data available
Auto-ignition temperature	: No data available
Upper explosion limit	: 19 %(V)
Lower explosion limit	: 2 %(V)
Vapour pressure	: > 1,100 - 1,750 hPa (50 °C)
Relative vapour density	: No data available
Relative density	: No data available
Density	: 1.44 g/cm3 (20 °C)
Bulk density	: No data available
Solubility(ies) Water solubility	: soluble
Solubility in other solvents	: No data available

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Partition coef	ficient: n- :	No data available		
octanol/water Decompositio		No data available		
Viscosity Viscosity, o	dynamic :	No data available		
Explosive pro		No data available Not applicable		
9.2 Other informa Refractive inc	ation	No data available		

### SECTION 10: STABILITY AND REACTIVITY

#### **10.1 Reactivity**

Stable under recommended storage conditions.

#### 10.2 Chemical stability

No decomposition if stored and applied as directed.

#### 10.3 Possibility of hazardous reactions

Hazardous reactions	<ul> <li>Stable under recommended storage conditions.</li> <li>No decomposition if used as directed.</li> <li>No hazards to be specially mentioned.</li> </ul>
	Vapours may form explosive mixture with air.
<b>10.4 Conditions to avoid</b> Conditions to avoid	: Heat, flames and sparks.
10.5 Incompatible materials	

### Materials to avoid

: No data available

#### **10.6 Hazardous decomposition products**

Stable under normal conditions.

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#### SECTION 11: TOXICOLOGICAL INFORMATION

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#### 11.1 Information on toxicological effects

#### Acute toxicity

Not classified based on available information.

#### Product:

<u>Components:</u> ethyl acetate:	
Acute dermal toxicity	: Remarks: No data available
Acute inhalation toxicity	: Remarks: No data available
Acute oral toxicity	: Remarks: No data available

Acute oral toxicity	: LD50 Oral (Rat): 6,100 mg/kg Assessment: The substance or mixture has no acute oral toxicity
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#### ethanol:

Acute dermal toxicity	:	LD50 (Rabbit): 15,800 mg/kg
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#### Skin corrosion/irritation

Not classified based on available information.

#### **Components:**

ethanol: Species: Rabbit Exposure time: 24 h Method: OECD Test Guideline 404 Result: No skin irritation

#### Serious eye damage/eye irritation

Not classified based on available information.

#### Components:

*acetone:* Assessment: Irritating to eyes. Result: Irritating to eyes.

*ethyl acetate:* Species: Rabbit Result: No eye irritation

ethanol: Species: Rabbit

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Method: OECD Test Guideline 405 Result: Moderate eye irritation

#### Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information. Respiratory sensitisation: Not classified based on available information.

#### Product:

Remarks: No data available

#### Germ cell mutagenicity

Not classified based on available information.

#### Carcinogenicity

Not classified based on available information.

#### **Reproductive toxicity**

Not classified based on available information.

#### STOT - single exposure

May cause drowsiness or dizziness.

#### **Components:**

**1-ethoxypropan-2-ol:** Exposure routes: inhalation (vapour) Target Organs: Central nervous system Assessment: May cause drowsiness or dizziness.

#### STOT - repeated exposure

Not classified based on available information.

#### Aspiration toxicity

Not classified based on available information.

#### **Further information**

#### Product:

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects. Solvents may degrease the skin.

#### SECTION 12: ECOLOGICAL INFORMATION

#### 12.1 Toxicity

Product: Ecotoxicology Assessment



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Acute aquatic toxicity	:	No data available	
Chronic aquatic toxicity	:	No data available	
Components:			
silver:			
Toxicity to fish	:	LC50 (Pimephales promelas (f Exposure time: 96 h Test Type: flow-through test	athead minnow)): 16 μg/l
M-Factor (Acute aquatic toxicity)	:	10	
M-Factor (Chronic aquatic toxicity)	:	10	
acetone:			
Toxicity to fish	:	LC50 (Oncorhynchus mykiss (i Exposure time: 96 h	ainbow trout)): 4.74 mg/l
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia (water flea)): 1 Exposure time: 48 h	0,294 mg/l
ethyl acetate:			
Toxicity to fish	:	LC50 (Pimephales promelas (f Exposure time: 96 h Test Type: flow-through test	athead minnow)): 220 mg/l
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia (water flea)): 5 Exposure time: 48 h	60 mg/l
Toxicity to algae	:	EC50 (algae): 3,300 mg/l Exposure time: 48 h	
ethanol:			
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia (water flea)): 9 Exposure time: 48 h	268 mg/l
12.2 Persistence and degradabil	ity		
Product:			
Biodegradability	:	Remarks: No data available	
<u>Components:</u>			
1-ethoxypropan-2-ol:			
Biodegradability	:	Remarks: No data available	

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acetone:			
Biodegradability	: Remarks:	No data available	
collodion wool, dissolve			
Biodegradability	: Remarks:	No data available	
ethyl acetate:		<b>NI 17 111</b>	
Biodegradability	: Remarks:	No data available	
ethanol:		Ne dete eveileble	
Biodegradability	Remarks	No data available	
2.3 Bioaccumulative potent	ial		
Product:			
Bioaccumulation	: Remarks:	No data available	
Components:			
1-ethoxypropan-2-ol:	Demenden		
Bioaccumulation	: Remarks:	No data available	
Partition coefficient: n- octanol/water	: log Pow: 0	.3	
acetone:			
Bioaccumulation	: Remarks:	No data available	
Partition coefficient: n-	: log Pow: -(	0.24	
octanol/water	Ū		
collodion wool, dissolve			
Bioaccumulation	: Remarks:	No data available	
<i>ethyl acetate:</i> Bioaccumulation	: Remarks:	No data available	
Partition coefficient: n-			
octanol/water	: log Pow: 0	.13 (20 0)	
ethanol:			
Bioaccumulation	: Remarks:	No data available	
Partition coefficient: n-	· log Pow: -(	0.349 (24 °C)	

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Product:

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Distribution a environment	among al compartments	:	Remarks: No data available	
Component	<u>s:</u>			
<b>1-ethoxypro</b> Distribution a environment		:	Remarks: No data available	
<i>acetone:</i> Distribution a environment	among al compartments	:	Remarks: No data available	
Distribution a	<b>ool, dissolved:</b> among al compartments	:	Remarks: No data available	
ethyl acetat Distribution a environment		:	Remarks: No data available	
<i>ethanol:</i> Distribution a environment	among al compartments	:	Remarks: No data available	
12.5 Results of F	PBT and vPvB as	se	ssment	
Product:				
Assessment		:	This substance/mixture contains no conto be either persistent, bioaccumulative very persistent and very bioaccumulative 0.1% or higher	and toxic (PBT), or
12.6 Other adver	se effects			
Product: Additional ec information	cological	:	Remarks: An environmental hazard car event of unprofessional handling or disp Very toxic to aquatic organisms, may ca effects in the aquatic environment. Very toxic to aquatic life with long lastin	oosal. ause long-term adverse

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

Product

: The product should not be allowed to enter drains, water courses or the soil.

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	ch Ofi dis	o not contaminate ponds, waterway emical or used container. fer surplus and non-recyclable sol posal company. nd to a licensed waste manageme	utions to a licensed
Contaminat	Dis Dis	npty remaining contents. spose of as unused product. not re-use empty containers. not burn, or use a cutting torch or	n, the empty drum.

#### **SECTION 14: TRANSPORT INFORMATION**

14.1 UN number	
ADN	: UN 1993
ADR	: UN 1993
RID	: UN 1993
IMDG	: UN 1993
ΙΑΤΑ	: UN 1993
14.2 UN proper shipping name	
ADN	: FLAMMABLE LIQUID, N.O.S. (ethanol, acetone)
ADR	: FLAMMABLE LIQUID, N.O.S. (ethanol, acetone)
RID	: FLAMMABLE LIQUID, N.O.S. (ethanol, acetone)
IMDG	: FLAMMABLE LIQUID, N.O.S. (ethanol, acetone)
ΙΑΤΑ	: Flammable liquid, n.o.s. (ethanol, acetone)
14.3 Transport hazard class(es)	
ADN	: 3
ADR	: 3
RID	: 3
IMDG	: 3
ΙΑΤΑ	: 3

14.4 Packing group



ADN       II         Packing group       II         Classification Code       F1         Hazard Identification Number       33         Labels       I         Special Provisions       Special Provision 640C         ADR       II         Packing group       II         Classification Code       F1         Hazard Identification Number       33         Labels       I         Tunnel restriction code       (D/E)         Special Provisions       Special Provision 640C         RID       II         Packing group       II         Classification Code       F1         Hazard Identification Number       33         Labels       I         Classification Code       F1         Hazard Identification Number       33         Labels       3         Special Provisions       Special Provision 640C         IMDG       II         Packing instruction Number       13         EmS Code       F-E, S-E         IATA       II         Packing instruction (cargo       364         aircraft)       II         Packing instruction (LQ)       Y341	<b>01/07/2021</b> Page 16 of 19
Packing group:IClassification Code:F1Hazard Identification Number:33Labels:3Special Provisions:Special Provision 640C <b>ADR</b> :IIPacking group:IIClassification Code:F1Hazard Identification Number:33Labels:3Tunnel restriction code:(D/E)Special Provisions:Special Provision 640C <b>RID</b> :IIPacking group:IIClassification Code:F1Hazard Identification Number:33Labels:3Special Provisions:Special Provision 640C <b>RID</b> ::1Packing group:IIClassification Code:F1Hazard Identification Number:33Labels:3Special Provisions:Special Provision 640C <b>IMDG</b> ::Packing group:IILabels:3EmS Code:F-E, S-E <b>IATA</b> ::Packing instruction (cargo::aircraft)::Packing instruction (LQ)::Packing group:IILabels::Packing group:IILabels::Packing group: <td< td=""><td></td></td<>	
Classification Code : F1 Hazard Identification Number : 33 Labels : 3 Special Provisions : Special Provision 640C ADR Packing group : II Classification Code : F1 Hazard Identification Number : 33 Labels : 3 Tunnel restriction code : (D/E) Special Provisions : Special Provision 640C RID Packing group : II Classification Code : F1 Hazard Identification Number : 33 Labels : 3 Special Provisions : Special Provision 640C MDG Packing group : II Labels : 3 Special Provisions : Special Provision 640C IMDG Packing group : II Labels : 3 EmS Code : F-E, <u>S-E</u> IATA Packing instruction (cargo : 364 aircraft) Packing instruction (LQ) : Y341 Packing instruction (LQ) : Y341 Packing instruction (LQ) : Y341 Packing instruction (LQ) : Y341 Packing group : II Labels : 3 <b>4.5 Environmental hazards</b> ADN Environmentally hazardous : yes	
Hazard Identification Number:33Labels::3Special Provisions::Special Provision 640CADRIPacking group:IIClassification Code:F1Hazard Identification Number::Hazard Identification Code::Ummel restriction code::Special Provisions::Special Provisions::Packing group:IIClassification Code:F1Hazard Identification Number::Packing group:IIClassification Code:F1Hazard Identification Number::Packing group:IIClassification Code:F1Hazard Identification Number::Packing group:IILabels::Packing group:IILabels::Packing group:IILabels::Packing instruction (cargo::aircraft)::Packing instruction (LQ)::Packing group:IILabels::Packing group::Hathells::Packing group::Hathells::Packing instruction (LQ) <td:< td="">:Packing group<td:< td="">:<!--</td--><td></td></td:<></td:<>	
Labels:3Special Provisions:Special Provision 640CADR	
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ADR       II         Packing group       II         Classification Code       F1         Hazard Identification Number       33         Labels       I         Tunnel restriction code       (D/E)         Special Provisions       Special Provision 640C <b>RID</b> II         Packing group       II         Classification Code       F1         Hazard Identification Number       33         Labels       I         Classification Code       F1         Hazard Identification Number       33         Labels       I         Classification Code       F1         Hazard Identification Number       33         Labels       I         Packing group       II         Labels       3         Special Provisions       Special Provision 640C         IMDG       II         Packing group       II         Labels       3         EmS Code       F-E, <u>S-E</u> IATA       Packing instruction (cargo       364         aircraft)       II         Packing instruction (LQ)       Y341         Packing group       II	
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IMDG       II         Packing group       :       II         Labels       :       3         EmS Code       :       F-E, S-E         IATA       Packing instruction (cargo aircraft)       :         Packing instruction       :       353         (passenger aircraft)       :       Y341         Packing group       :       II         Labels       :       3         Packing instruction (LQ)       :       Y341         Packing group       :       II         Labels       :       3         t.5 Environmental hazards       :       3         ADN       :       yes         ADR       :       yes	
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(passenger aircraft) Packing instruction (LQ): Y341 Packing groupPacking group: II LabelsLabels: 34.5 Environmental hazardsADN Environmentally hazardous: yesADR Environmentally hazardous: yes	
Packing instruction (LQ)       :       Y341         Packing group       :       II         Labels       :       3         4.5 Environmental hazards       :       Yes         ADN       :       yes         ADR       :       yes         Environmentally hazardous       :       yes	
Packing group       :       II         Labels       :       3         I.5 Environmental hazards	
Labels       : 3         I.5 Environmental hazards	
ADN         Environmentally hazardous       : yes         ADR         Environmentally hazardous       : yes	
ADNEnvironmentally hazardous: yesADREnvironmentally hazardous: yes	
Environmentally hazardous : yes ADR Environmentally hazardous : yes	
Environmentally hazardous : yes ADR Environmentally hazardous : yes	
ADR Environmentally hazardous : yes	
Environmentally hazardous : yes	
RID	
Environmentally hazardous : yes	
IMDG Marine pollutant	
Marine pollutant : yes	

According to (EC) No. 1907/2006, as amended



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

Ship type	:	N/A
Pollution category	:	N/A

### **SECTION 15: REGULATORY INFORMATION**

15.1	Safety, health and environmental regulations/legislat International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors		specific for the substance or mixture Neither banned nor restricted
	REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	:	Neither banned nor restricted
	Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals	:	Neither banned nor restricted
	REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	This product does not contain substances of very high concern (Regulation (EC) No
	REACH - List of substances subject to authorisation (Annex XIV)	:	1907/2006 (REACH), Article 57). Neither banned nor restricted
	Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Neither banned nor restricted
	Regulation (EC) No 850/2004 on persistent organic pollutants	:	Neither banned nor restricted

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

P5c	FLAMMABLE LIQUIDS	Quantity 1 5,000 t	Quantity 2 50,000 t
E1	ENVIRONMENTAL HAZARDS	100 t	200 t
34	Petroleum products: (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams),(d) heavy fuel oils (e) alternative fuels serving the same purposes and with	2,500 t	25,000 t



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	regards environn	roperties as flammability and nental hazards as ucts referred to in ) to (d)	
Volatile organic compounds	: Remarks	: Not applicable	
	emissior Volatile o g/l	2010/75/EU of 24 Noveml s (integrated pollution prev organic compounds (VOC) s: VOC content excluding w	vention and control) content: 26.18 %, 376.94
	emissior Volatile o g/l Remarks	2010/75/EU of 24 Noveml s (integrated pollution prev organic compounds (VOC) s: VOC content valid only fo surfaces	vention and control) content: 26.18 %, 376.94
The components of this pr EINECS (European Union)	-	orted in the following inverse ompliance with the inventor	
SWISS (Switzerland)	: Not in co	mpliance with the inventor	у
TSCA (United States)	: On TSC	A Inventory	
DSL/NDSL (Canada)	: All comp	onents of this product are o	on the Canadian DSL.
AICS (Australia)	: On the ir	iventory, or in compliance v	with the inventory
NZioC (New Zealand)	: On the ir	iventory, or in compliance	with the inventory
ENCS (Japan)	: On the ir	iventory, or in compliance	with the inventory
ISHL (Japan)	: Not in co	mpliance with the inventor	У
KECI (Korea)	: On the ir	iventory, or in compliance v	with the inventory
PICCS (Philippines)	: Not in co	mpliance with the inventor	У

#### According to (EC) No. 1907/2006, as amended



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IECSC (China)	: 01	n the inventory, or in compliance with the i	inventory		
TCSI (Taiwan)	: 01	n the inventory, or in compliance with the i	inventory		
CICR (Turkey)	: No	ot in compliance with the inventory			
INSQ (Mexico)	: No	ot in compliance with the inventory			

#### **15.2 Chemical Safety Assessment**

Not applicable

### **SECTION 16: OTHER INFORMATION**

#### Full text of H-Statements

H201 H225 H226 H319 H336 H400 H410 <b>Full text of other abbreviation</b>	: : : : : : : : : : : : : : : : : : : :	Explosive; mass explosion hazard. Highly flammable liquid and vapour. Flammable liquid and vapour. Causes serious eye irritation. May cause drowsiness or dizziness. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
Aquatic Acute		Acute aquatic toxicity
Aquatic Chronic		Chronic aquatic toxicity
Expl. Eye Irrit.		Explosives Eye irritation
Flam. Liq.		Flammable liquids
STOT SE		Specific target organ toxicity - single exposure
eSDS Information	:	This material contains substances for which exposure scenarios have been completed. Please contact ExtendedSDS@Ferro.com to receive a copy of the exposure assessments.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.