

**“N-F” Flux and N-3 All-Purpose Flux Liquid Fast Action****Safety Data Sheet**

according to Regulation (EC) No. 453/2010

Date of issue: 19/12/2014

Version: 1.0

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
 Product name. : “N-F” Flux and N-3 All-Purpose Flux Liquid Fast Action

**1.2. Relevant identified uses of the substance or mixture and uses advised against****1.2.1. Relevant identified uses**

Main use category : Industrial use, Professional use  
 Use of the substance/mixture : Soldering flux

**1.2.2. Uses advised against**

No additional information available

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

LA-CO Industries Europe S.A.S.  
 Parc Industriel de la Plaine de  
 l'Ain - Allée des Combes.  
 01150.BLYES.France.  
 Phone: +33 (0)4 74 46 23 23  
 Fax: +33 (0)4 74 46 23 29  
 E-mail: info@eu.laco.com  
 Web: http://www.markal.com

**1.4. Emergency telephone number**

Emergency number : 24-hour emergency: CHEMTREC- U.S. : 1-800-424-9300 International: +1-703-527-3887

EU Member State	Officieel adviesorgaan	Adres	Noodnummer
AUSTRIA	Vergiftungsinformationszentrale (Poisons Information Centre)	Allgemeines Krankenhaus Waehringer Geurtel 18-20 1090 Wien	+43 1 406 43 43
BELARUS	The Belarus Republican Poisons Centre	Kizhevatova str. 58 220115 Minsk	+375 (0)17 201 9158
BELGIUM	Centre Anti-Poisons/Antigifcentrum c/o Hôpital Central de la Base - Reine Astrid	Rue Bruyn 1 B -1120 Bruxelles/Brussel	+32 70 245 245
BULGARIA	Национален токсикологичен информационен център National Clinical Toxicology Centre, Emergency Medical Institute "Pirogov"	21 Totleben Boulevard 1606 SOFIA	+359 2 9154 409
CROATIA	Poisons Control Centre Institute of Medical Research & Occupational Health	Ksaverska Cesta 2 P.O. Box 291 HR-10000 Zagreb	+385 1 234 8342
CZECH REPUBLIC	Toxikologické informační středisko Clinic For Occupational Medicine, 1st Medical Faculty, Charles University	Na Bojišti 1 120 00 Praha 2	+42 2 2491 9293 +42 2 2491 5402
DENMARK	Gifflinjen Bispebjerg Hospital	Bispebjerg Bakke 23, 60, 1 DK-2400 København NV	+45 82 12 12 12 +45 35 31 55 55
ESTONIA	Mürgistusteabekeskus	Gonsiori 29 15027 Tallinn	+372 626 93 90
FINLAND	Myrkytystietokeskus	P.O.B 340 (Haartmaninkatu 4) HUS SF - 00029 Helsinki	+358 9 471 977
FRANCE	ORFILA		+33 1 45 42 59 59
GERMANY	Berliner Betrieb für Zentrale Gesundheitliche Aufgaben	Oranienburger Strasse 285 13437 Berlin	+49 30 19240
GERMANY	Informations und Beratungszentrum für Vergiftungsfälle	Kirrberger Straße, Gebäude 9 D-66421 Homburg/Saar	+49 6841 19240
GERMANY	Beratungstelle bei Vergiftungen, Klinische Toxikologie und Beratungstelle bei Vergiftungen	Langenbeckstrasse 1 55131 Mainz	+49 6131 19240
GREECE	Poisons Information Centre	11527 Athens	+30 10 779 3777
HUNGARY	Országos Kémiai Biztonsági Intézet (National Institute of Chemical Safety) Egészségügyi Toxikológiai Tájékoztató Szolgálat (Health Toxicological Information Service)	1437 Budapest PO Box 839 1097 Budapest, Nagyvárad tér 2	+36 80 20 11 99
ICELAND	Eitrunarmiðstöðin	Eitrunarmiðstöðin 108 Reykjavik	+354 543 22 22
IRELAND	National Poisons Information Centre	Beaumont Hospital PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2166

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LATVIA	Valsts Toksikoloģijas centra Saindēšanās un zāļu informācijas centrs	2 Hipocrate Street LV 1038 Riga	+371 67 04 24 73
LITHUANIA	Apsinuodijimų kontrolės ir informacijos biuras	Siltnamiu 29 2043 Vilnius	+370 5 236 20 52/+370 687 53 378
MALTA	Medicines & Poisons Info Office	Mater Dei Hospital, Msida MSD 2090 Malta	25450000
NETHERLANDS	Nationaal Vergiftigingen Informatie Centrum National Institute for Public Health and the Environment, NB this service is only available to health professionals	Huispostnummer B.00.118, PO Box 85500 3508 GA Utrecht	+31 30 274 88 88
PORTUGAL	Centro de Informação Antivenenos Instituto Nacional de Emergência Médica (INEM)	Rua Almirante Barroso, 36 1000-013 Lisboa	808 250 143 (for use only in Portugal), +351 21 330 3284
ROMANIA	Biroul pentru Regulamentul Sanitar International si Informare Toxicologica	Str. Dr. Leonte Anastasievici Nr.1-3, Sector 5 50463 Bucuresti	+40 21 318 36 06
SLOVAKIA	Národné toxikologické informačné centrum University Hospital Bratislava	Limbová 5 833 05 Bratislava	+421 2 54 77 4 166
SPAIN	Servicio de Información Toxicológica Instituto Nacional de Toxicología, Departamento de Madrid	Calle Luis Cabrera 9 E-28002 Madrid	+34 91 562 04 20
SWEDEN	Giftinformationscentralen Swedish Poisons Information Centre, Karolinska Hospital	Box 60 500 SE-171 76 Stockholm	+46 8 33 12 31 (International) 112 (National)
SWITZERLAND	Centre Suisse d'Information Toxicologique	Freiestrasse 16 Postfach CH-8028 Zurich	+41 44 251 51 51 (International) 145 (National)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Corr. 1B H314

STOT SE 3 H335

Aquatic Acute 1 H400

Aquatic Chronic 1 H410

Full text of H-phrases: see section 16

#### Classification according to Directive 67/548/EEC or 1999/45/EC

Xn; R22

C; R34

N; R50/53

Full text of R-phrases: see section 16

### Adverse physicochemical, human health and environmental effects

No additional information available

### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

: Danger.

Hazardous ingredients N-3

: Hydrochloric acid, zinc chloride

Hazardous ingredients "N-F"

: Zinc chloride

Hazard statements (CLP)

: H314 - Causes severe skin burns and eye damage  
H335 - May cause respiratory irritation  
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP)

: P260 - Do not breathe mist/vapours/spray  
P264 - Wash hands thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P273 - Avoid release to the environment  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P301+P330+P331 - If swallowed: Rinse mouth. Do NOT induce vomiting  
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

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P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a POISON CENTER/doctor  
P312 - Call a POISON CENTER/doctor if you feel unwell  
P321 - Specific treatment (see Section 4 on this label)  
P391 - Collect spillage  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P405 - Store locked up  
P501 - Dispose of contents/container in accordance with local and national regulations

### 2.3. Other hazards

PBT: not yet assessed

vPvB: not yet assessed

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixture

Components with health hazards above the applicable thresholds and/or Exposure Limit values are shown. Exact concentrations withheld as trade secret. Ranges due to batch/product differences.

Name	Product identifier	%	Classification according to Directive 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
zinc chloride	(CAS No) 7646-85-7 (EC no) 231-592-0 (EC index no) 030-003-00-2	30 – 50	C; R34 Xn; R22 N; R50/53	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Hydrochloric acid	(CAS No) 7647-01-0 (EC no) 231-595-7 (EC index no) 017-002-01-X	0 – 10	C; R34 Xi; R37	Skin Corr. 1B, H314 STOT SE 3, H335
ammonium chloride	(CAS No) 12125-02-9 (EC no) 235-186-4 (EC index no) 017-014-00-8	5 – 20	Xn; R22 Xi; R36	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319
ethanol	(CAS No) 64-17-5 (EC no) 200-578-6 (EC index no) 603-002-00-5	0 – 5	F; R11	Flam. Liq. 2, H225
Isopropanol	(CAS No) 67-63-0 (EC no) 200-661-7 (EC index no) 603-117-00-0	0 – 1	F; R11 Xi; R36 R67	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
propyl acetate	(CAS No) 109-60-4 (EC no) 203-686-1 (EC index no) 607-024-00-6	0 – 1	F; R11 Xi; R36 R66 R67	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Polyethylene Glycol	(CAS No) 25322-68-3 (EC no) 500-038-2	0 – 0.1	Not classified	Not classified

Name	Product identifier	Specific concentration limits
zinc chloride	(CAS No) 7646-85-7 (EC no) 231-592-0 (EC index no) 030-003-00-2	(5 =< C < 10) Xi; R36/37/38 (C >= 10) C; R34 (C >= 5) STOT SE 3, H335
Hydrochloric acid	(CAS No) 7647-01-0 (EC no) 231-595-7 (EC index no) 017-002-01-X	(10 =< C < 25) Xi; R36/37/38 (C >= 25) C; R34-37 (10 =< C < 25) Skin Irrit. 2, H315 (10 =< C < 25) Eye Irrit. 2, H319 (C >= 10) STOT SE 3, H335 (C >= 25) Skin Corr. 1B, H314

Full text of R-, H- and EUH-phrases: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

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

- Symptoms/injuries after inhalation : May cause respiratory irritation.

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Symptoms/injuries after skin contact : Causes severe skin burns and eye damage.  
Symptoms/injuries after eye contact : Causes serious eye damage.

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

All treatments should be based on observed signs and symptoms of distress in the patient.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.  
Unsuitable extinguishing media : None known.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Not flammable  
Hazardous decomposition products in case of fire : Burning produces irritating, toxic and noxious fumes. ammonia.

### 5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Do not allow run-off from fire fighting to enter drains or water courses.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear fire/flame resistant/retardant clothing. Wear a self contained breathing apparatus. EN469.

## SECTION 6: Accidental release measures

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

General measures : Avoid all eyes and skin contact and do not breathe vapour and mist.

#### 6.1.1. For non-emergency personnel

Protective equipment : Chemical goggles or safety glasses. Wear suitable gloves. Face shield.  
Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Wear suitable gloves. Chemical goggles or safety glasses. Face shield.  
Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Avoid release to the environment. Do not discharge into drains or the environment. Notify authorities if liquid enters sewers or public waters.

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

For containment : Stop the flow of material, if this is without risk. Contain and/or absorb spill with inert material, then place in suitable container.  
Methods for cleaning up : Take up in non-combustible absorbent material and shove into container for disposal.

### 6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Do not breathe mist, spray, vapours. Use only outdoors or in a well-ventilated area.  
Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

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

Storage conditions : Keep only in original container. Keep container tightly closed and in a well-ventilated place.  
Incompatible products : Strong bases. Metals.  
Incompatible materials : Nitrites.

### 7.3. Specific end use(s)

Flux.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Hydrochloric acid (7647-01-0)		
EU	Local name	Hydrogen chloride
EU	IOELV TWA (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
EU	IOELV TWA (ppm)	5 ppm
EU	IOELV STEL (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
EU	IOELV STEL (ppm)	10 ppm

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Hydrochloric acid (7647-01-0)		
EU	Notation	(Hydrogen chloride)
Austria	MAK (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Austria	MAK (ppm)	5 ppm
Austria	MAK Short time value (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Austria	MAK Short time value (ppm)	10 ppm
Belgium	Local name	Hydrogène (chlorure d')
Belgium	Limit value (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Belgium	Limit value (ppm)	5 ppm
Belgium	Short time value (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Belgium	Short time value (ppm)	10 ppm
Belgium	Remark*	(chlorure d')
Bulgaria	Local name	Хлороводород*
Bulgaria	OEL TWA (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Bulgaria	OEL STEL (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
France	Local name	Chlorure d'hydrogène
France	VLE (mg/m <sup>3</sup> )	7.6 mg/m <sup>3</sup>
France	VLE (ppm)	5 ppm
France	Note (FR)	(chlorure d'hydrogène)
Germany	Local name	Hydrogenchlorid
Germany	TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Germany	TRGS 900 Occupational exposure limit value (ppm)	2 ppm
Germany	TRGS 900 Limitation of exposure peaks (mg/m <sup>3</sup> )	6 mg/m <sup>3</sup>
Germany	TRGS 900 Limitation of exposure peaks (ppm)	4 ppm
Germany	Remark (TRGS 900)	DFG,EU,Y
Greece	OEL TWA (mg/m <sup>3</sup> )	7 mg/m <sup>3</sup>
Greece	OEL TWA (ppm)	5 ppm
Greece	OEL STEL (mg/m <sup>3</sup> )	7 mg/m <sup>3</sup>
Greece	OEL STEL (ppm)	5 ppm
Italy - Portugal - USA ACGIH	Local name	Hydrogen chloride
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	2 ppm As gas. Notation A4.
Italy - Portugal - USA ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Italy - Portugal - USA ACGIH	ACGIH Ceiling (ppm)	2 ppm
Italy - Portugal - USA ACGIH	Remark (ACGIH)	URT irr
Italy	Local name	Acido cloridrico
Italy	OEL TWA (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Italy	OEL TWA (ppm)	5 ppm
Italy	OEL STEL (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Italy	OEL STEL (ppm)	10 ppm
Spain	VLA-ED (mg/m <sup>3</sup> )	7.6 mg/m <sup>3</sup>
Spain	VLA-ED (ppm)	5 ppm
Spain	VLA-EC (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Spain	VLA-EC (ppm)	10 ppm
Spain	Notes	VLI
Switzerland	Local name	Acide chlorhydrique
Switzerland	VLE (mg/m <sup>3</sup> )	6 mg/m <sup>3</sup>
Switzerland	VLE (ppm)	4 ppm
Switzerland	VME (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Switzerland	VME (ppm)	2 ppm
Switzerland	Remark (CH)	4x15
The Netherlands	Local name	Zoutzuur
The Netherlands	MAC TGG 8H (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
The Netherlands	MAC TGG 15MIN (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
United Kingdom	Local name	Hydrogen chloride (gas and aerosol mists)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
United Kingdom	WEL TWA (ppm)	1 ppm
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
United Kingdom	WEL STEL (ppm)	5 ppm
United Kingdom	Remark (WEL)	(gas and aerosol mists)

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Hydrochloric acid (7647-01-0)		
Czech Republic	Local name	Chlorovodík
Czech Republic	Expoziční limity (PEL) (mg/m3)	8 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (PEL) (ppm)	5.43 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m3)	15 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (NPK-P) (ppm)	10.19 ppm
Czech Republic	Remark (CZ)	(chlorovodík, I)
Denmark	Local name	Hydrogenchlorid
Denmark	Grænseværdie (langvarig) (mg/m3)	7 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (ppm)	5 ppm
Denmark	Anmærkninger (DK)	EL
Finland	Local name	Kloorivety, vedetön
Finland	HTP-arvo (15 min)	7.6 mg/m <sup>3</sup>
Finland	HTP-arvo (15 min) (ppm)	5 ppm
Hungary	Local name	SÓSAV
Hungary	AK-érték	8 mg/m <sup>3</sup>
Hungary	CK-érték	16 mg/m <sup>3</sup>
Hungary	Megjegyzések (HU)	i, m; EU1
Ireland	Local name	Hydrogen chloride
Ireland	OEL (8 hours ref) (mg/m3)	8 mg/m <sup>3</sup>
Ireland	OEL (8 hours ref) (ppm)	5 ppm
Ireland	OEL (15 min ref) (mg/m3)	15 mg/m <sup>3</sup>
Ireland	OEL (15 min ref) (ppm)	10 ppm
Ireland	Notes (IE)	IOELV
Lithuania	Local name	Vandenilio chloridas
Lithuania	IPRV (mg/m3)	8 mg/m <sup>3</sup>
Lithuania	IPRV (ppm)	5 ppm
Lithuania	TPRV (mg/m3)	15 mg/m <sup>3</sup>
Lithuania	TPRV (ppm)	10 ppm
Malta	Local name	Hydrogenchloride
Malta	OEL TWA (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Malta	OEL TWA (ppm)	5 ppm
Malta	OEL STEL (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Malta	OEL STEL (ppm)	10 ppm
Norway	Local name	Hydrogenklorid
Norway	Gjennomsnittsverdier (AN) (mg/m3)	7 mg/m <sup>3</sup>
Norway	Gjennomsnittsverdier (AN) (ppm)	5 ppm
Norway	Gjennomsnittsverdier (Takverdi) (mg/m3)	7 mg/m <sup>3</sup>
Norway	Gjennomsnittsverdier (Takverdi) (ppm)	5 ppm
Norway	Merknader (NO)	T
Poland	Local name	Chlorowodór
Poland	NDS (mg/m3)	5 mg/m <sup>3</sup>
Poland	NDSch (mg/m3)	10 mg/m <sup>3</sup>
Romania	Local name	Acid clorhidric
Romania	OEL TWA (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Romania	OEL TWA (ppm)	5 ppm
Romania	OEL STEL (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Romania	OEL STEL (ppm)	10 ppm
Slovakia	NPHV (priemerná) (mg/m3)	8 mg/m <sup>3</sup>
Slovakia	NPHV (priemerná) (ppm)	5 ppm

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<b>Hydrochloric acid (7647-01-0)</b>		
Sweden	Local name	Hydrogen chloride
Sweden	takgränsvärde (TGV) (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Sweden	takgränsvärde (TGV) (ppm)	5 ppm
Portugal	Local name	(1) Ácido clorídrico
Portugal	OEL - Ceilings (ppm)	2 ppm
Croatia	Local name	Vodikov klorid
Croatia	GVI (granična vrijednost izloženosti) (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Croatia	GVI (granična vrijednost izloženosti) (ppm)	5 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	10 ppm
Croatia	Naznake (HR)	EU*, T, C
<b>ethanol (64-17-5)</b>		
Austria	Local name	Ethyl alcohol
Austria	MAK (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
Austria	MAK (ppm)	1000 ppm
Austria	MAK Short time value (mg/m <sup>3</sup> )	3800 mg/m <sup>3</sup>
Austria	MAK Short time value (ppm)	2000 ppm
Belgium	Local name	Alcool éthylique
Belgium	Limit value (mg/m <sup>3</sup> )	1907 mg/m <sup>3</sup>
Belgium	Limit value (ppm)	1000 ppm
Bulgaria	Local name	Етилов алкохол
Bulgaria	OEL TWA (mg/m <sup>3</sup> )	1000 mg/m <sup>3</sup>
France	Local name	Alcool éthylique
France	VLE (mg/m <sup>3</sup> )	9500 mg/m <sup>3</sup>
France	VLE (ppm)	5000 ppm
France	VME (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
France	VME (ppm)	1000 ppm
Germany	Local name	Ethanol
Germany	TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> )	960 mg/m <sup>3</sup>
Germany	TRGS 900 Occupational exposure limit value (ppm)	500 ppm
Germany	Remark (TRGS 900)	DFG, Y
Greece	OEL TWA (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
Greece	OEL TWA (ppm)	1000 ppm
Italy - Portugal - USA ACGIH	Local name	Ethanol
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	1884 mg/m <sup>3</sup>
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	1000 ppm
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	1000 ppm
Italy - Portugal - USA ACGIH	Remark (ACGIH)	URT irr
Latvia	Local name	Etilspirts (etanols)
Latvia	OEL TWA (mg/m <sup>3</sup> )	1000 mg/m <sup>3</sup>
Spain	Local name	Alcohol etílico
Spain	VLA-ED (mg/m <sup>3</sup> )	1910 mg/m <sup>3</sup>
Spain	VLA-ED (ppm)	1000 ppm
Spain	VLA-EC (mg/m <sup>3</sup> )	1910 mg/m <sup>3</sup>
Spain	VLA-EC (ppm)	1000 ppm
Spain	Notes	s,
Switzerland	Local name	Ethanol
Switzerland	VLE (mg/m <sup>3</sup> )	1920 mg/m <sup>3</sup>
Switzerland	VLE (ppm)	1000 ppm
Switzerland	VME (mg/m <sup>3</sup> )	960 mg/m <sup>3</sup>
Switzerland	VME (ppm)	500 ppm
Switzerland	Remark (CH)	4x15
The Netherlands	Local name	Ethanol
The Netherlands	MAC TGG 8H (mg/m <sup>3</sup> )	260 mg/m <sup>3</sup>
The Netherlands	MAC TGG 15MIN (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
The Netherlands	Remark (MAC)	H

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Hydrochloric acid (7647-01-0)		
United Kingdom	Local name	Ethanol
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	1920 mg/m <sup>3</sup>
United Kingdom	WEL TWA (ppm)	1000 ppm
Czech Republic	Local name	Ethanol
Czech Republic	Expoziční limity (PEL) (mg/m <sup>3</sup> )	1000 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (PEL) (ppm)	530 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m <sup>3</sup> )	3000 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (NPK-P) (ppm)	1600 ppm
Denmark	Local name	Ethanol
Denmark	Grænseværdie (langvarig) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (ppm)	1000 ppm
Denmark	Grænseværdie (kortvarig) (mg/m <sup>3</sup> )	3800 mg/m <sup>3</sup>
Denmark	Grænseværdie (kortvarig) (ppm)	2000 ppm
Finland	Local name	Etanoli
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
Finland	HTP-arvo (8h) (ppm)	1000 ppm
Finland	HTP-arvo (15 min)	2500 mg/m <sup>3</sup>
Finland	HTP-arvo (15 min) (ppm)	1300 ppm
Hungary	Local name	ETIL-ALKOHOL
Hungary	AK-érték	1900 mg/m <sup>3</sup>
Hungary	CK-érték	7600 mg/m <sup>3</sup>
Hungary	Megjegyzések (HU)	IV.
Ireland	Local name	Ethanol
Ireland	OEL (15 min ref) (ppm)	1000 ppm
Lithuania	Local name	Etanolis (etilo alkoholis)
Lithuania	IPRV (mg/m <sup>3</sup> )	1000 mg/m <sup>3</sup>
Lithuania	IPRV (ppm)	500 ppm
Lithuania	TPRV (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
Lithuania	TPRV (ppm)	1000 ppm
Norway	Local name	Etanol
Norway	Gjennomsnittsverdier (AN) (mg/m <sup>3</sup> )	950 mg/m <sup>3</sup>
Norway	Gjennomsnittsverdier (AN) (ppm)	500 ppm
Poland	Local name	Etanol (alkohol etylowy)
Poland	NDS (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
Romania	Local name	Alcool etilic
Romania	OEL TWA (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
Romania	OEL TWA (ppm)	1000 ppm
Romania	OEL STEL (mg/m <sup>3</sup> )	9500 mg/m <sup>3</sup>
Romania	OEL STEL (ppm)	5000 ppm
Slovakia	NPHV (priemerná) (mg/m <sup>3</sup> )	960 mg/m <sup>3</sup>
Slovakia	NPHV (priemerná) (ppm)	500 ppm
Sweden	Local name	Ethanol
Sweden	nivågränsvärde (NVG) (mg/m <sup>3</sup> )	1000 mg/m <sup>3</sup>
Sweden	nivågränsvärde (NVG) (ppm)	500 ppm
Sweden	kortidsvärde (KTV) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
Sweden	kortidsvärde (KTV) (ppm)	1000 ppm
Portugal	Local name	Etanol (Álcool etílico)
Portugal	OEL TWA (ppm)	1000 ppm
Croatia	Local name	Etanol; (Etil-alkohol)
Croatia	GVI (granična vrijednost izloženosti) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>



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<b>Hydrochloric acid (7647-01-0)</b>		
Croatia	GVI (granična vrijednost izloženosti) (ppm)	1000 ppm
Croatia	Naznake (HR)	F
<b>Isopropanol (67-63-0)</b>		
Austria	Local name	Isopropyl alcohol
Austria	MAK (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Austria	MAK (ppm)	200 ppm
Austria	MAK Short time value (mg/m <sup>3</sup> )	2000 mg/m <sup>3</sup>
Austria	MAK Short time value (ppm)	800 ppm
Belgium	Local name	Alcool isopropylique
Belgium	Limit value (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Belgium	Limit value (ppm)	200 ppm
Belgium	Short time value (mg/m <sup>3</sup> )	1000 mg/m <sup>3</sup>
Belgium	Short time value (ppm)	400 ppm
Bulgaria	Local name	Изопропилов алкохол
Bulgaria	OEL TWA (mg/m <sup>3</sup> )	980 mg/m <sup>3</sup>
Bulgaria	OEL STEL (mg/m <sup>3</sup> )	1225 mg/m <sup>3</sup>
France	Local name	Alcool isopropylique
France	VLE (mg/m <sup>3</sup> )	980 mg/m <sup>3</sup>
France	VLE (ppm)	400 ppm
Germany	Local name	Propan-2-ol
Germany	TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Germany	TRGS 900 Occupational exposure limit value (ppm)	200 ppm
Germany	Remark (TRGS 900)	DFG,Y
Germany	TRGS 903 (BGW)	50 mg/l Aceton (Blut; Expositionsende bzw. Schichtende)
Greece	OEL TWA (mg/m <sup>3</sup> )	980 mg/m <sup>3</sup>
Greece	OEL TWA (ppm)	400 ppm
Greece	OEL STEL (mg/m <sup>3</sup> )	1225 mg/m <sup>3</sup>
Greece	OEL STEL (ppm)	500 ppm
Italy - Portugal - USA ACGIH	Local name	2-Propanol
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	490 mg/m <sup>3</sup>
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	200 ppm
Italy - Portugal - USA ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	960 mg/m <sup>3</sup>
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	400 ppm
Italy - Portugal - USA ACGIH	Remark (ACGIH)	Eye & URT irr; CNS impair
Spain	VLA-ED (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup> VLB, s
Spain	VLA-ED (ppm)	200 ppm VLB, s 40 ppm F, I "(Acetona en orina; Final de la semana, laboral 1)"
Spain	VLA-EC (mg/m <sup>3</sup> )	1000 mg/m <sup>3</sup> VLB, s
Spain	VLA-EC (ppm)	400 ppm VLB, s
Switzerland	Local name	2-Propanol
Switzerland	VLE (mg/m <sup>3</sup> )	1000 mg/m <sup>3</sup>
Switzerland	VLE (ppm)	400 ppm
Switzerland	VME (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Switzerland	VME (ppm)	200 ppm
Switzerland	Remark (CH)	4x15
The Netherlands	MAC TGG 8H (mg/m <sup>3</sup> )	650 mg/m <sup>3</sup>
The Netherlands	MAC TGG 8H (ppm)	250 ppm
United Kingdom	Local name	Propan-2-ol
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	999 mg/m <sup>3</sup>
United Kingdom	WEL TWA (ppm)	400 ppm
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	1250 mg/m <sup>3</sup>
United Kingdom	WEL STEL (ppm)	500 ppm
Czech Republic	Local name	iso-Propanol
Czech Republic	Expoziční limity (PEL) (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (PEL) (ppm)	204 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m <sup>3</sup> )	1000 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (NPK-P) (ppm)	410 ppm

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Hydrochloric acid (7647-01-0)		
Czech Republic	Remark (CZ)	D
Denmark	Local name	Isopropylalkohol (2005)
Denmark	Grænseværdie (langvarig) (mg/m3)	490 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (ppm)	200 ppm
Denmark	Grænseværdie (kortvarig) (mg/m3)	980 mg/m <sup>3</sup>
Denmark	Grænseværdie (kortvarig) (ppm)	400 ppm
Finland	Local name	2-Propanoli
Finland	HTP-arvo (8h) (mg/m3)	500 mg/m <sup>3</sup>
Finland	HTP-arvo (8h) (ppm)	200 ppm
Finland	HTP-arvo (15 min)	620 mg/m <sup>3</sup>
Finland	HTP-arvo (15 min) (ppm)	250 ppm
Hungary	Local name	IZOPROPIL-ALKOHOL
Hungary	AK-érték	500 mg/m <sup>3</sup>
Hungary	CK-érték	2000 mg/m <sup>3</sup>
Hungary	Megjegyzések (HU)	b, i; II.1.
Ireland	Local name	Isopropyl alcohol
Ireland	OEL (8 hours ref) (ppm)	200 ppm
Ireland	OEL (15 min ref) (ppm)	400 ppm
Ireland	Notes (IE)	Sk
Lithuania	Local name	2-propanolis (izopropanolis, izopropilo alkoholis)
Lithuania	IPRV (mg/m3)	350 mg/m <sup>3</sup>
Lithuania	IPRV (ppm)	150 ppm
Lithuania	TPRV (mg/m3)	600 mg/m <sup>3</sup>
Lithuania	TPRV (ppm)	250 ppm
Norway	Local name	2-Propanol
Norway	Gjennomsnittsverdier (AN) (mg/m3)	245 mg/m <sup>3</sup>
Norway	Gjennomsnittsverdier (AN) (ppm)	100 ppm
Poland	Local name	Propan-2-ol (izopropylowy alkohol)
Poland	NDS (mg/m3)	900 mg/m <sup>3</sup>
Poland	NDSch (mg/m3)	1200 mg/m <sup>3</sup>
Romania	Local name	Alcool izopropilic
Romania	OEL TWA (mg/m <sup>3</sup> )	200 mg/m <sup>3</sup>
Romania	OEL TWA (ppm)	81 ppm
Romania	OEL STEL (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Romania	OEL STEL (ppm)	203 ppm
Slovakia	NPHV (priemerná) (mg/m3)	500 mg/m <sup>3</sup>
Slovakia	NPHV (priemerná) (ppm)	200 ppm
Sweden	Local name	Isopropanol
Sweden	nivågränsvärde (NVG) (mg/m3)	350 mg/m <sup>3</sup>
Sweden	nivågränsvärde (NVG) (ppm)	150 ppm
Sweden	kortidsvärde (KTV) (mg/m3)	600 mg/m <sup>3</sup>
Sweden	kortidsvärde (KTV) (ppm)	250 ppm
Portugal	Local name	2-Propanol (isopropanol ou álcool isopropílico)
Portugal	OEL TWA (ppm)	200 ppm
Portugal	OEL STEL (ppm)	400 ppm
Croatia	Local name	Propan-2-ol; (izopropil-alkohol; izopropanol)
Croatia	GVI (granična vrijednost izloženosti) (mg/m <sup>3</sup> )	999 mg/m <sup>3</sup>
Croatia	GVI (granična vrijednost izloženosti) (ppm)	400 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m <sup>3</sup> )	1250 mg/m <sup>3</sup>

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Hydrochloric acid (7647-01-0)		
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	500 ppm
Croatia	Naznake (HR)	F, Xi
propyl acetate (109-60-4)		
Austria	Local name	n-Propyl acetate
Austria	MAK (mg/m <sup>3</sup> )	420 mg/m <sup>3</sup>
Austria	MAK (ppm)	100 ppm
Austria	MAK Short time value (mg/m <sup>3</sup> )	420 mg/m <sup>3</sup>
Austria	MAK Short time value (ppm)	100 ppm
Austria	Remark (AT)	(gemessen als Momentanwert)
Belgium	Local name	Acétate de n-propyle
Belgium	Limit value (mg/m <sup>3</sup> )	847 mg/m <sup>3</sup>
Belgium	Limit value (ppm)	200 ppm
Belgium	Short time value (mg/m <sup>3</sup> )	1055 mg/m <sup>3</sup>
Belgium	Short time value (ppm)	250 ppm
France	Local name	Acétate de n-propyle
France	VME (mg/m <sup>3</sup> )	840 mg/m <sup>3</sup>
France	VME (ppm)	200 ppm
Greece	OEL TWA (mg/m <sup>3</sup> )	840 mg/m <sup>3</sup>
Greece	OEL TWA (ppm)	200 ppm
Greece	OEL STEL (mg/m <sup>3</sup> )	1050 mg/m <sup>3</sup>
Greece	OEL STEL (ppm)	250 ppm
Italy - Portugal - USA ACGIH	Local name	n-Propyl acetate
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	835 mg/m <sup>3</sup>
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	200 ppm
Italy - Portugal - USA ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	1040 mg/m <sup>3</sup>
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	250 ppm
Italy - Portugal - USA ACGIH	Remark (ACGIH)	Eye & URT irr
Latvia	Local name	Propilacetāts (etiķskābespropilesteris)
Latvia	OEL TWA (mg/m <sup>3</sup> )	200 mg/m <sup>3</sup>
Spain	VLA-ED (mg/m <sup>3</sup> )	849 mg/m <sup>3</sup>
Spain	VLA-ED (ppm)	200 ppm
Spain	VLA-EC (mg/m <sup>3</sup> )	1060 mg/m <sup>3</sup>
Spain	VLA-EC (ppm)	250 ppm
Switzerland	Local name	Acétate de n-propyle
Switzerland	VLE (mg/m <sup>3</sup> )	840 mg/m <sup>3</sup>
Switzerland	VLE (ppm)	200 ppm
Switzerland	VME (mg/m <sup>3</sup> )	420 mg/m <sup>3</sup>
Switzerland	VME (ppm)	100 ppm
Switzerland	Remark (CH)	4x15
United Kingdom	Local name	n-Propyl acetate
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	849 mg/m <sup>3</sup>
United Kingdom	WEL TWA (ppm)	200 ppm
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	1060 mg/m <sup>3</sup>
United Kingdom	WEL STEL (ppm)	250 ppm
Czech Republic	Local name	n-Propylacetát
Czech Republic	Expoziční limity (PEL) (mg/m <sup>3</sup> )	800 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (PEL) (ppm)	192 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m <sup>3</sup> )	1000 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (NPK-P) (ppm)	240 ppm
Czech Republic	Remark (CZ)	I
Denmark	Local name	n-Propylacetat (1994)
Denmark	Grænseværdie (langvarig) (mg/m <sup>3</sup> )	625 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (ppm)	150 ppm
Denmark	Grænseværdie (kortvarig) (mg/m <sup>3</sup> )	1250 mg/m <sup>3</sup>
Denmark	Grænseværdie (kortvarig) (ppm)	300 ppm

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<b>Hydrochloric acid (7647-01-0)</b>		
Finland	Local name	1-Propyyliasetaatti
Finland	HTP-arvo (8h) (mg/m3)	420 mg/m <sup>3</sup>
Finland	HTP-arvo (8h) (ppm)	100 ppm
Finland	HTP-arvo (15 min)	850 mg/m <sup>3</sup>
Finland	HTP-arvo (15 min) (ppm)	200 ppm
Hungary	Local name	PROPIL-ACETÁT
Hungary	AK-érték	840 mg/m <sup>3</sup>
Hungary	CK-érték	840 mg/m <sup>3</sup>
Hungary	Megjegyzések (HU)	b, i; l.
Ireland	Local name	n-Propyl acetate
Ireland	OEL (8 hours ref) (mg/m3)	840 mg/m <sup>3</sup>
Ireland	OEL (8 hours ref) (ppm)	200 ppm
Ireland	OEL (15 min ref) (mg/m3)	1050 mg/m <sup>3</sup>
Ireland	OEL (15 min ref) (ppm)	250 ppm
Lithuania	Local name	Propilacetatas
Lithuania	IPRV (mg/m3)	420 mg/m <sup>3</sup>
Lithuania	IPRV (ppm)	100 ppm
Lithuania	TPRV (mg/m3)	800 mg/m <sup>3</sup>
Lithuania	TPRV (ppm)	200 ppm
Norway	Local name	n-Propylacetat
Norway	Gjennomsnittsverdier (AN) (mg/m3)	420 mg/m <sup>3</sup>
Norway	Gjennomsnittsverdier (AN) (ppm)	100 ppm
Poland	Local name	Octan propylu
Poland	NDS (mg/m3)	200 mg/m <sup>3</sup>
Poland	NDSch (mg/m3)	400 mg/m <sup>3</sup>
Romania	Local name	Acetat de propil și izopropil
Romania	OEL TWA (mg/m <sup>3</sup> )	400 mg/m <sup>3</sup>
Romania	OEL TWA (ppm)	96 ppm
Romania	OEL STEL (mg/m <sup>3</sup> )	600 mg/m <sup>3</sup>
Romania	OEL STEL (ppm)	144 ppm
Slovakia	NPHV (priemerná) (mg/m3)	400 mg/m <sup>3</sup>
Slovakia	NPHV (priemerná) (ppm)	100 ppm
Sweden	Local name	Propyl acetate
Sweden	nivågränsvärde (NVG) (mg/m3)	400 mg/m <sup>3</sup>
Sweden	nivågränsvärde (NVG) (ppm)	100 ppm
Sweden	kortidsvärde (KTV) (mg/m3)	800 mg/m <sup>3</sup>
Sweden	kortidsvärde (KTV) (ppm)	200 ppm
Portugal	Local name	Acetato de n-propilo
Portugal	OEL TWA (ppm)	200 ppm
Portugal	OEL STEL (ppm)	250 ppm
Croatia	Local name	Propil-acetat
Croatia	GVI (granična vrijednost izloženosti) (mg/m <sup>3</sup> )	849 mg/m <sup>3</sup>
Croatia	GVI (granična vrijednost izloženosti) (ppm)	200 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m <sup>3</sup> )	1060 mg/m <sup>3</sup>
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	250 ppm
Croatia	Naznake (HR)	F, Xi
<b>ammonium chloride (12125-02-9)</b>		
Austria	Local name	Ammonium chloride (fume)
Belgium	Local name	Ammonium (chlorure d') (fumées)

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Hydrochloric acid (7647-01-0)		
Belgium	Limit value (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Belgium	Short time value (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
Belgium	Remark*	(chloure d', fumeés)
Bulgaria	Local name	Амониев хлорид
Bulgaria	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
France	Local name	Ammonium (chlorure d'),fumées
France	VME (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Greece	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Greece	OEL STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
Italy - Portugal - USA ACGIH	Local name	Ammonium chloride fume
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Italy - Portugal - USA ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
Italy - Portugal - USA ACGIH	Remark (ACGIH)	Eye & URT irr
Latvia	Local name	Amonijahlorīds
Latvia	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Spain	VLA-ED (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Spain	VLA-EC (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
Switzerland	Local name	Chlorure d'ammonium
Switzerland	VME (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Switzerland	Remark (CH)	(alveolengängiger Staub)
United Kingdom	Local name	Ammonium chloride, fume
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
United Kingdom	Remark (WEL)	(fume)
Czech Republic	Local name	Chlorid amonný (dýmy)
Czech Republic	Expoziční limity (PEL) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (NPK-P) (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Czech Republic	Remark (CZ)	I
Denmark	Local name	Ammoniumchloridrøg
Denmark	Grænseværdie (langvarig) (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Ireland	Local name	Ammonium chloride, fume
Ireland	OEL (8 hours ref) (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Ireland	OEL (15 min ref) (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
Lithuania	Local name	Amonio chloridas
Lithuania	IPRV (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Norway	Local name	Ammoniumklorid
Norway	Gjennomsnittsverdier (AN) (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Norway	Merknader (NO)	1)
Poland	Local name	Chlorek amonu (amonowy chlorek) pary i dymy
Poland	NDS (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Poland	NDSch (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
Poland	Remark (PL)	pary i dymy
Romania	Local name	Clorura de amoniu
Romania	OEL TWA (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Romania	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Portugal	Local name	Cloreto de amónio, fumos
Portugal	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Portugal	OEL STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
Croatia	Local name	Amonijev klorid
Croatia	GVI (granična vrijednost izloženosti) (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
Croatia	Naznake (HR)	Xn

# “N-F” Flux and N-3 All-Purpose Flux Liquid Fast Action

## Safety Data Sheet

according to Regulation (EC) No. 453/2010

<b>Polyethylene Glycol (25322-68-3)</b>		
Austria	MAK (mg/m <sup>3</sup> )	1000 mg/m <sup>3</sup> (einatembare Fraktion)
Austria	MAK Short time value (mg/m <sup>3</sup> )	4000 mg/m <sup>3</sup> max. 4x15 min./Schicht (einatembare Fraktion)
Germany	TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> )	1000 mg/m <sup>3</sup>
Germany	TRGS 900 Limitation of exposure peaks (mg/m <sup>3</sup> )	8000 mg/m <sup>3</sup>
Germany	Remark (TRGS 900)	(einatembare Fraktion)
Switzerland	VME (ppm)	1000 ppm
Switzerland	Remark (CH)	(mittlere Molmasse 200–600)
Denmark	Grænseværdie (langvarig) (mg/m <sup>3</sup> )	1000 mg/m <sup>3</sup>
Denmark	Grænseværdie (kortvarig) (mg/m <sup>3</sup> )	2000 mg/m <sup>3</sup>
Denmark	Anmærkninger (DK)	(Polyethylenglycol (PEG) med middelmolvægt på 200-600)
Slovakia	NPHV (priemerná) (mg/m <sup>3</sup> )	1000 mg/m <sup>3</sup>
Slovakia	Upozornenie (SK)	krátkodobý: kategória II.
<b>zinc chloride (7646-85-7)</b>		
Austria	Local name	Zinc chloride (fume)
Belgium	Local name	Zinc (chlorure de) (fumées)
Belgium	Limit value (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Belgium	Short time value (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Belgium	Remark*	(chlorure de, fumées)
France	Local name	Zinc (chlorure de, fumées)
France	VME (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Greece	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Greece	OEL STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Italy - Portugal - USA ACGIH	Local name	Zinc chloride fume
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Italy - Portugal - USA ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Italy - Portugal - USA ACGIH	Remark (ACGIH)	LRT & URT irr
Spain	VLA-ED (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Spain	VLA-EC (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Switzerland	Local name	Chlorure de zinc (fumée)
Switzerland	VME (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Switzerland	Remark (CH)	(alveolengängiger Staub)
United Kingdom	Local name	Zinc chloride, fume
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
United Kingdom	Remark (WEL)	(fume)
Czech Republic	Local name	Chlorid zine natý
Czech Republic	Expoziční limity (PEL) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (NPK-P) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Czech Republic	Remark (CZ)	I
Denmark	Local name	Zinkchlorid og zinkchloridrøg, beregnet som Zn
Denmark	Grænseværdie (langvarig) (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Finland	Local name	Sinkkikloridi, huurut
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Ireland	Local name	Zinc chloride, fume
Ireland	OEL (8 hours ref) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Ireland	OEL (15 min ref) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Lithuania	Local name	Cinko chloridas, alveolinė frakcija
Lithuania	IPRV (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Lithuania	Remark (LT)	Piūrėk IX skyriaus 3 pastabà.
Norway	Local name	Sinkklorid
Norway	Gjennomsnittsverdier (AN) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Poland	Local name	Dichlorek cynku (chlorek cynku) dymy

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Hydrochloric acid (7647-01-0)		
Poland	NDS (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Poland	NDSch (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Poland	Remark (PL)	dymy
Sweden	Local name	Zink chloride respirable dust
Sweden	nivågränsvärde (NVG) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Sweden	Anmärkning (SE)	respirable dust 1
Portugal	Local name	Cloreto de zinco, fumos
Portugal	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Portugal	OEL STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Croatia	Local name	Cinkov klorid, dim
Croatia	GVI (granična vrijednost izloženosti) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Croatia	Naznake (HR)	C, N

### 8.2. Exposure controls

Appropriate engineering controls	: Avoid creating mist or spray. Avoid splashing. Either local exhaust or general room ventilation is usually required. Emergency safety showers should be available in the immediate vicinity of any potential exposure. Eyewash stations.
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear suitable gloves resistant to chemical penetration. Use rubber gloves. EN 374.
Eye protection	: Chemical goggles or safety glasses. Face shield. EN 166.
Skin and body protection	: Wear suitable protective clothing. Impervious clothing. EN702.
Respiratory protection	: In case of inadequate ventilation wear respiratory protection. Use an approved respirator equipped with oil/mist cartridges. EN 12083.
Other information	: Do not eat, drink or smoke when using this product.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear liquid.
Colour	: Yellow, colourless.
Odour	: No data available
Odour threshold	: No data available
pH	: < 1 N-3; 2-3.9 "N-F"
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 100 - 150 °C
Flash point	: Not flammable
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Soluble in water.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

VOC content	: 0% "N-F" ; 6% N-3
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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

#### 10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

#### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

#### 10.4. Conditions to avoid

Heat.

#### 10.5. Incompatible materials

Strong bases. Potassium. Nitrates, Nitrites. carbon steel. plastics. nylon.

#### 10.6. Hazardous decomposition products

May release flammable gases. Thermal decomposition generates : Corrosive vapours. Zinc oxide. ammonia. Hydrogen. Burning produces irritating, toxic and noxious fumes.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

**Acute toxicity** : Not classified. (Based on available data, the classification criteria are not met)

<b>Hydrochloric acid (7647-01-0)</b>	
LC50 inhalation rat (mg/l)	8.3 mg/l 30 minutes
LC50 inhalation rat (ppm)	4701 ppm 30 minutes
ATE (vapours)	8.300 mg/l/4h
ATE (dust,mist)	8.300 mg/l/4h
<b>ethanol (64-17-5)</b>	
LD50 oral rat	10470 mg/kg
LD50 dermal rabbit	> 20000 mg/kg
LC50 inhalation rat (mg/l)	133.8 mg/l/4h
ATE (oral)	10470.000 mg/kg bodyweight
ATE (vapours)	133.800 mg/l/4h
ATE (dust,mist)	133.800 mg/l/4h
<b>Isopropanol (67-63-0)</b>	
LD50 oral rat	5840 mg/kg
LD50 dermal rabbit	16.4 ml/kg
LC50 inhalation rat (ppm)	> 10000 ppm/4h
ATE (oral)	5840.000 mg/kg bodyweight
<b>propyl acetate (109-60-4)</b>	
LD50 oral rat	8700 mg/kg
LD50 dermal rabbit	> 17800 mg/kg
LC50 inhalation rat (mg/l)	32 mg/l/4h
ATE (oral)	8700.000 mg/kg bodyweight
ATE (vapours)	32.000 mg/l/4h
ATE (dust,mist)	32.000 mg/l/4h
<b>ammonium chloride (12125-02-9)</b>	
LD50 oral rat	1410 mg/kg
LD50 dermal rat	> 2000 mg/kg
ATE (oral)	1410.000 mg/kg bodyweight
<b>Polyethylene Glycol (25322-68-3)</b>	
LD50 oral rat	47000 mg/kg
LD50 dermal rat	> 20000 mg/kg
ATE (oral)	47000.000 mg/kg bodyweight
<b>zinc chloride (7646-85-7)</b>	
LD50 oral rat	1100 mg/kg
LD50 oral	1260 mg/kg mouse
LD50 dermal rabbit	> 2000 mg/kg no effects were seen
LC50 inhalation rat (mg/l)	2000 mg/m <sup>3</sup> calculated
ATE (oral)	1100.000 mg/kg bodyweight



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<b>Skin corrosion/irritation</b>	: Causes severe skin burns and eye damage. N-3: Three minute occluded contact produced minimal skin reactions in all rabbits, no necrosis (not corrosive at three minute contact period) N-3: One hour occluded contact produced necrosis in 1/3 rabbits.
<b>Serious eye damage/irritation</b>	: Eye damage, category 1, implicit
<b>Respiratory or skin sensitisation</b>	: Not classified (Based on available data, the classification criteria are not met)
<b>Germ cell mutagenicity</b>	: Not classified (Based on available data, the classification criteria are not met)
<b>Carcinogenicity</b>	: Not classified (Based on available data, the classification criteria are not met)
<b>Reproductive toxicity</b>	: Not classified (Based on available data, the classification criteria are not met)
<b>Specific target organ toxicity (single exposure)</b>	: May cause respiratory irritation.
<b>Specific target organ toxicity (repeated exposure)</b>	: Not classified (Based on available data, the classification criteria are not met)

### ammonium chloride (12125-02-9)

NOAEL (subchronic,oral, animal/male,90 days) >= 580 mg/kg bodyweight 56 days

**Aspiration hazard** : Not classified (Based on available data, the classification criteria are not met)

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water : Very toxic to aquatic life with long lasting effects.

#### Hydrochloric acid (7647-01-0)

LC50 fishes 1 3.25 - 3.5 pH

#### ethanol (64-17-5)

LC50 fishes 1 14200 mg/l

EC50 Daphnia 1 5012 mg/l

#### Isopropanol (67-63-0)

LC50 fishes 1 10000 mg/l

#### propyl acetate (109-60-4)

LC50 fishes 1 60 mg/l 96 h

EC50 Daphnia 1 91.5 mg/l 48 h

#### ammonium chloride (12125-02-9)

LC50 fishes 1 209 mg/l 96 h

EC50 Daphnia 1 101 mg/l 48 h

#### Polyethylene Glycol (25322-68-3)

LC50 fishes 1 > 100 mg/l

LC50 other aquatic organisms 1 1000 mg/l

#### zinc chloride (7646-85-7)

LC50 fishes 1 0.727 (0.727 - 1.65) mg/l Oncorhynchus kisutch

EC50 Daphnia 1 0.33 (0.33 - 0.66) mg/l

### 12.2. Persistence and degradability

#### “N-F” Flux and N-3 All-Purpose Flux Liquid Fast Action

Persistence and degradability May cause long-term adverse effects in the environment.

#### Hydrochloric acid (7647-01-0)

Persistence and degradability Not expected to persist.

#### ethanol (64-17-5)

Biodegradation > 96 % 28 d

#### Isopropanol (67-63-0)

Persistence and degradability Readily biodegradable.

#### propyl acetate (109-60-4)

Persistence and degradability Readily biodegradable.

Biodegradation 62 % 5 d

### 12.3. Bioaccumulative potential

#### ethanol (64-17-5)

Bioaccumulative potential Not expected to bioaccumulate.

#### Isopropanol (67-63-0)

Bioaccumulative potential Not expected to bioaccumulate.

#### propyl acetate (109-60-4)

Log Pow 1.23

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### zinc chloride (7646-85-7)

Bioaccumulative potential : Not expected to bioaccumulate.

#### 12.4. Mobility in soil

No additional information available

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

##### “N-F” Flux and N-3 All-Purpose Flux Liquid Fast Action

PBT: not yet assessed

vPvB: not yet assessed

#### 12.6. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.  
Ecology - waste materials : Avoid release to the environment.  
EURLW code : For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.  
H code : H14 - 'Ecotoxic': waste which presents or may present immediate or delayed risks for one or more sectors of the environment.  
H8 - 'Corrosive': substances and preparations which may destroy living tissue on contact.

### SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

#### 14.1. UN number

UN-No. (ADR) : 3264  
UN-No.(IATA) : 3264  
UN-No. (IMDG) : 3264  
UN-No.(ADN) : 3264

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (zinc chloride)  
Proper Shipping Name (IATA) : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (zinc chloride)  
Proper Shipping Name (IMDG) : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (zinc chloride)  
Proper Shipping Name (ADN) : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (zinc chloride)  
Transport document description (ADR) : UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (zinc chloride), 8, II, (E), ENVIRONMENTALLY HAZARDOUS

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

Class (ADR) : 8  
Classification code (ADR) : C1  
Class (IATA) : 8  
Class (IMDG) : 8  
Class (ADN) : 8  
Classification code (ADN) : C1

#### 14.4. Packing group

Packing group (ADR) : II  
Packing group (IATA) : II  
Packing group (IMDG) : II  
Packing group (ADN) : II

#### 14.5. Environmental hazards

Dangerous for the environment :



Other information : No supplementary information available.

#### 14.6. Special precautions for user

##### 14.6.1. Overland transport

Hazard identification number (Kemler No.) : 80  
Classification code (ADR) : C1

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Orange plates

:



Tunnel restriction code (ADR)

: E

EAC code

: 2X

APP code

: B

### 14.6.2. Transport by sea

EmS-No. (Fire)

: F-A

EmS-No. (Spillage)

: S-B

Stowage category (IMDG)

: B

### 14.6.3. Inland waterway transport

Carriage prohibited (ADN)

: No

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

Contains no substances with Annex XVII restrictions

"N-F" Flux and N-3 All-Purpose Flux Liquid Fast Action is not on the REACH Candidate List

Contains no REACH candidate substance

Contains no REACH Annex XIV substances.

VOC content : 0% "N-F" ; 6% N-3

#### 15.1.2. National regulations

All components are listed on the EEC inventory European Inventory of Existing Commercial Chemical Substances (EINECS).

All ingredients are listed in the Toxic Substances Control Act (TSCA).

All ingredients are listed on the Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL).

#### Germany

Water hazard class (WGK) : 3 - strongly hazardous to water

WGK remark : Classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS)

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Indication of changes:

Original document

Data sources

: ACGIH 2000.

Canadian Centre for Occupational Health and Safety. Accessed at:  
[http://www.ccohs.ca/oshanswers/legisl/whmis\\_classifi.html](http://www.ccohs.ca/oshanswers/legisl/whmis_classifi.html).

ESIS (European chemical Substances Information System; accessed at:  
<http://esis.jrc.ec.europa.eu/index.php?PGM=cla>.

European Chemicals Agency (ECHA) Registered Substances list. Accessed at  
<http://echa.europa.eu/>. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.

National Fire Protection Association; Fire Protection Guide to Hazardous Materials; 10th edition.

OSHA 29CFR 1910.1200 Hazard Communication Standard.

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

TSCA Chemical Substance Inventory. Accessed at  
<http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html>.

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Abbreviations and acronyms : ACGIH (American Conference of Government Industrial Hygienists).  
ATE: Acute Toxicity Estimate.  
CAS (Chemical Abstracts Service) number.  
CLP: Classification, Labelling, Packaging.  
EC50: Environmental Concentration associated with a response by 50% of the test population.  
GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).  
LD50: Lethal Dose for 50% of the test population.  
OSHA: Occupational Safety & Health Administration.  
PBT: Persistent, Bioaccumulative, Toxic.  
PNEC: Predicted No Effect Level.  
STEL: Short Term Exposure Limits.  
TWA: Time Weight Average.

Other information : None.

Full text of R-, H- and EUH-phrases::

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 2	Flammable liquids Category 2
Skin Corr. 1B	skin corrosion/irritation Category 1B
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapour
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
R11	Highly flammable.
R22	Harmful if swallowed.
R34	Causes burns.
R36	Irritating to eyes.
R37	Irritating to respiratory system.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.
C	Corrosive
F	Highly flammable
N	Dangerous for the environment
Xi	Irritant
Xn	Harmful.

### N-3 All-Purpose Flux Liquid Fast Action classification:

Aquatic Acute 1	<input type="checkbox"/> On basis of test data	<input checked="" type="checkbox"/> Calculation method
Aquatic Chronic 1	<input type="checkbox"/> On basis of test data	<input checked="" type="checkbox"/> Calculation method
Skin Corr. 1B	<input checked="" type="checkbox"/> On basis of test data	<input type="checkbox"/> Calculation method
STOT SE 3	<input type="checkbox"/> On basis of test data	<input checked="" type="checkbox"/> Calculation method

### "N-F" Flux classification:

Aquatic Acute 1	<input type="checkbox"/> On basis of test data	<input checked="" type="checkbox"/> Calculation method
Aquatic Chronic 1	<input type="checkbox"/> On basis of test data	<input checked="" type="checkbox"/> Calculation method
Skin Corr. 1B	<input type="checkbox"/> On basis of test data	<input checked="" type="checkbox"/> Calculation method
STOT SE 3	<input type="checkbox"/> On basis of test data	<input checked="" type="checkbox"/> Calculation method

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LA-CO EU CLP SDS

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*