Safety data sheet

SECTION 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Code:	**A466**
Product name	**Starter quick starting**
Chemical name and synonym	**Protective**

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

Intended use **Professional starter for cars' engines.**

Identified Uses	Industrial	Professional	Consumer
Industrial Use	✔	-	-
Professional Use	-	✔	-

1.3. Details of the supplier of the safety data sheet

Name	**AMBRO-SOL S.R.L.**
Full address	**Via per Pavone del Mella n.21**
District and Country	**25020 Cigole (BS)** **Italia**
	Tel. +39 030 9959674
	Fax +39 030 959265
e-mail address of the competent person	
responsible for the Safety Data Sheet	**quality@ambro-sol.com**

1.4. Emergency telephone number

For urgent inquiries refer to

Centro Antiveleni di Pavia: 0382 24444 (IRCCS Fondazione Maugeri - Pavia)
Centro Antiveleni di Bergamo: 800 883300 (Ospedali Riuniti - Bergamo)
Centro Antiveleni di Firenze: 055 7947819 (Ospedale Careggi - Firenze)
Centro Antiveleni di Roma: 06 3054343 (Policlinico Gemelli - Roma)
Centro Antiveleni di Napoli: 081 7472870 (Ospedale Cardarelli - Napoli)
Centro Antiveleni in Spagna: 91 5620420 (Inst. Nacional de Toxicología y Ciencias Forenses)
Centro Antiveleni in Francia: 01 40054848 (Centre Antipoison et de Toxicovigilance de Paris)

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Aerosol, category 1	H222	Extremely flammable aerosol.
	H229	Pressurised container: may burst if heated.
Acute toxicity, category 4	H302	Harmful if swallowed.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

Signal words: Danger

Hazard statements:

H222	Extremely flammable aerosol.
H229	Pressurised container: may burst if heated.
H302	Harmful if swallowed.
H336	May cause drowsiness or dizziness.
EUH066	Repeated exposure may cause skin dryness or cracking.

Precautionary statements:

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P261	Avoid breathing dust / fume / gas / mist / vapours / spray.
P312	Call a POISON CENTRE / doctor / . . . if you feel unwell.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50°C / 122°F.

Contains: DIETHYL ETHER

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

SECTION 3. Composition/information on ingredients

3.1. Substances

Information not relevant

3.2. Mixtures

Contains:

The full wording of hazard (H) phrases is given in section 16 of the sheet.

Identification		**Classification 1272/2008 (CLP)**
DIETHYL ETHER		
CAS 60-29-7	47 ≤ x < 51	Flam. Liq. 1 H224, Acute Tox. 4 H302, STOT SE 3 H336, EUH019, EUH066
EC 200-467-2		
INDEX 603-022-00-4		

Reg. no. 01-2119535785-29-XXXX

PROPANE

CAS 74-98-6	35 ≤ x < 39	Flam. Gas 1 H220, Press. Gas (Liq.) H280, Note U
EC 200-827-9		
INDEX 601-003-00-5		
Reg. no. 01-2119486944-21-XXXX		

BUTANE

CAS 106-97-8	11 ≤ x < 15	Flam. Gas 1 H220, Press. Gas (Liq.) H280, Note C U
EC 203-448-7		
INDEX 601-004-00-0		
Reg. no. 01-2119474691-32-XXXX		

The product is an aerosol containing propellants. For the purposes of calculation of the health hazards, propellants are not considered (unless they have health hazards). The percentages indicated are inclusive of the propellants.

Percentage of propellants: 49,90 %

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.
SKIN: Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.
INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.
INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.
UNSUITABLE EXTINGUISHING EQUIPMENT
None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
If overheated, aerosol cans can deform, explode and be propelled considerable distances. Put a protective helmet on before approaching the fire. Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site. Send away individuals who are not suitably equipped. Wear protective gloves / protective clothing / eye protection / face protection.

6.2. Environmental precautions

Do not disperse in the environment.

6.3. Methods and material for containment and cleaning up

Use inert absorbent material to soak up leaked product. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Avoid bunching of electrostatic charges. Do not spray on flames or incandescent bodies. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Do not eat, drink or smoke during use. Do not breathe spray.

7.2. Conditions for safe storage, including any incompatibilities

Store in a place where adequate ventilation is ensured, away from direct sunlight at a temperature below 50°C / 122°F, away from any combustion sources.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

BGR	България	МИНИСТЕРСТВО НА ТРУДА И СОЦИАЛНАТА ПОЛИТИКА МИНИСТЕРСТВО НА ЗДРАВЕОПАЗВАНЕТО НАРЕДБА No 13 от 30 декември 2003 г
CZE	Česká Republika	Nařízení vlády č. 361/2007 Sb. kterým se stanoví podmínky ochrany zdraví při práci
DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
DNK	Danmark	Graensevaerdier per stoffer og materialer
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
EST	Eesti	Töökeskkonna keemiliste ohutegurite piirnormid 1. Vastu võetud 18.09.2001 nr 293 RT I 2001, 77, 460 - Redaktsiooni jõustumise kp: 01.01.2008
FIN	Suomi	HTP-arvot 2012. Haitallisiksi tunnetut pitoisuudet - Sosiaali- ja terveysministeriön julkaisuja 2012:5
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
GRC	Ελλάδα	ΕΦΗΜΕΡΙΣ ΤΗΣ ΚΥΒΕΡΝΗΣΕΩΣ -ΤΕΥΧΟΣ ΠΡΩΤΟ Αρ. Φύλλου 19 - 9 Φεβρουαρίου 2012
HRV	Hrvatska	NN13/09 - Ministarstvo gospodarstva, rada i poduzetništva
HUN	Magyarország	50/2011. (XII. 22.) NGM rendelet a munkahelyek kémiai biztonságáról
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
LTU	Lietuva	DĖL LIETUVOS HIGIENOS NORMOS HN 23:2007 CHEMINIŲ MEDŽIAGŲ 2007 m. spalio 15 d. Nr. V-827/A1-287
LVA	Latvija	Ķīmisko vielu aroda ekspozīcijas robežvērtības (AER) darba vides gaisā 2012

NLD	Nederland	Databank of the social and Economic Concil of Netherlands (SER) Values, AF 2011:18
NOR	Norge	Veiledning om Administrative normer for forurensning i arbeidsatmosfære
POL	Polska	ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 16 grudnia 2011r
PRT	Portugal	Ministério da Economia e do Emprego Consolida as prescrições mínimas em matéria de protecção dos trabalhadores contra os riscos para a segurança e a saúde devido à exposição a agentes químicos no trabalho - Diaro da Republica I 26; 2012-02-06
SVK	Slovensko	NARIADENIE VLÁDY Slovenskej republiky z 20. júna 2007
SVN	Slovenija	Uradni list Republike Slovenije 15. 6. 2007
SWE	Sverige	Occupational Exposure Limit Values, AF 2011:18
TUR	Türkiye	2000/39/EC sayılı Direktifin ekidir
EU	OEL EU	Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2016

DIETHYL ETHER

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	308		616		
TLV	CZE	300		600		
AGW	DEU	1200	400	1200	400	
MAK	DEU	1200	400	1200	400	
TLV	DNK	303	100			
VLA	ESP	308	100	616 (C)	200 (C)	
TLV	EST	308	100	616	200	
HTP	FIN	310	100	620	200	
VLEP	FRA	308	100	616	200	
WEL	GBR	310	100	620	200	
TLV	GRC	1200	400	1500	500	
GVI	HRV	308	100	616	200	
AK	HUN	308		616		SKIN
VLEP	ITA	308	100	616	200	
RD	LTU	900	300	1200	400	
RV	LVA	308	100	616	200	
OEL	NLD	308		616		
TLV	NOR	300	100			
NDS	POL	300		600		
VLE	PRT	308	100	616	200	
NPHV	SVK	308	100	616		
MAK	SWE	900	300	1200	400	
ESD	TUR	308	100	616	200	
OEL	EU	308	100	616	200	
TLV-ACGIH		1213	400	1516	500	

Predicted no-effect concentration - PNEC

Normal value in fresh water	2	mg/l
Normal value in marine water	200	µg/l
Normal value for fresh water sediment	9,14	mg/kg/d

Normal value for marine water sediment	914	µg/kg/d
Normal value for water, intermittent release	1,65	mg/l
Normal value of STP microorganisms	4,2	mg/l
Normal value for the terrestrial compartment	600	µg/kg/d

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers Acute local	Acute systemic	Chronic local	Chronic systemic	Effects on workers Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				15,6 mg/kg bw/d				
Inhalation				54,5 mg/m3		616 mg/m3		308 mg/m3
Skin				15,6 mg/kg bw/d				44 mg/kg bw/d

PROPANE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV	BGR	1800			
AGW	DEU	1800	1000	7200	4000
MAK	DEU	1800	1000	7200	4000
TLV	DNK	1800	1000		
TLV	EST	1800	1000		
HTP	FIN	1500	800	2000	1100
TLV	GRC	1800	1000		
TLV	NOR	900	500		
NDS	POL	1800			
MV	SVN	1800	1000		
TLV-ACGIH			1000		

BUTANE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV	BGR	1900			
AGW	DEU	2400	1000	9600	4000
MAK	DEU	2400	1000	9600	4000
TLV	DNK	1200	500		
VLA	ESP		800		
TLV	EST	1500	800		
HTP	FIN	1900	800	2400	1000
VLEP	FRA	1900	800		
WEL	GBR	1450	600	1810	750
TLV	GRC	2350	1000		
GVI	HRV	1450	600	1810	750
AK	HUN	2350		9400	
OEL	NLD	1430			
TLV	NOR	600	250		
NDS	POL	1900		3000	
TLV-ACGIH				2377	1000

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.

HAND PROTECTION
None required.

SKIN PROTECTION
Wear category I professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION
Wear airtight protective goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, a mask with a type AX filter combined with a type P filter should be worn (see standard EN 14387).
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	aerosol
Colour	colourless
Odour	ether
Odour threshold	Not available
pH	Not available
Melting point / freezing point	-116,3 °C
Initial boiling point	34,65 °C
Boiling range	Not available
Flash point	< 0 °C
Evaporation Rate	Not available
Flammability of solids and gases	flammable gas
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	587 hPa (base)
Vapour density	Not available
Relative density	a 20°C 0,58 ÷ 0,62 g/ml

Solubility	64.9 g/L @ 20 °C and pH 7 (ECHA sources)
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	174,85 °C
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	not applicable
Oxidising properties	not applicable

9.2. Other information

Molecular weight	67,511
Total solids (250°C / 482°F)	0,05 %
VOC (Directive 2010/75/EC) :	99,95 % - 599,70 g/litre
VOC (volatile carbon) :	73,27 % - 439,64 g/litre

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

10.4. Conditions to avoid

Avoid overheating.

10.5. Incompatible materials

Strong reducing or oxidising agents, strong acids or alkalis, hot material.

10.6. Hazardous decomposition products

Information not available

SECTION 11. Toxicological information

11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information

Information not available
Information on likely routes of exposure

Information not available
Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available
Interactive effects

Information not available
ACUTE TOXICITY

LC50 (Inhalation - vapours) of the mixture:Not classified (no significant component)
LC50 (Inhalation - mists / powders) of the mixture:Not classified (no significant component)
LD50 (Oral) of the mixture:491 mg/kg
LD50 (Dermal) of the mixture:Not classified (no significant component)

DIETHYL ETHER
2380 mg/kg bw rat
LD50 (Oral)
20000 ppm NOEL (rat)
LC50 (Inhalation)

PROPANE
800000 ppm 15 min
LC50 (Inhalation)

SKIN CORROSION / IRRITATION

Repeated exposure may cause skin dryness or cracking.Does not meet the classification criteria for this hazard class
SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class
RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class
GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class
CARCINOGENICITY

Does not meet the classification criteria for this hazard class
REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class
STOT - SINGLE EXPOSURE

May cause drowsiness or dizziness
STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class
ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

SECTION 12. Ecological information

12.1. Toxicity

DIETHYL ETHER	
LC50 - for Fish	2,56 g/l/96h
EC50 - for Algae / Aquatic Plants	100 mg/l/72h
Chronic NOEC for Crustacea	100 mg/l 21 days
BUTANE	
LC50 - for Fish	85,82 mg/l/96h
EC50 - for Crustacea	41,82 mg/l/48h
PROPANE	
LC50 - for Fish	85,82 mg/l/96h
EC50 - for Crustacea	41,82 mg/l/48h

12.2. Persistence and degradability

DIETHYL ETHER	
Solubility in water	> 10000 mg/l

Biodegradability: Information not available

BUTANE	
Solubility in water	0,1 - 100 mg/l

Rapidly biodegradable

PROPANE	
Solubility in water	0,1 - 100 mg/l

Rapidly biodegradable

12.3. Bioaccumulative potential

DIETHYL ETHER	
Partition coefficient: n-	0,83

octanol/water	
BCF	2
BUTANE	
Partition coefficient: n-octanol/water	1,09
PROPANE	
Partition coefficient: n-octanol/water	1,09

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Waste transportation may be subject to ADR restrictions.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

14.1. UN number

ADR / RID, IMDG, IATA:	1950

14.2. UN proper shipping name

ADR / RID:	AEROSOLS
IMDG:	AEROSOLS
IATA:	AEROSOLS, FLAMMABLE

14.3. Transport hazard class(es)

ADR / RID:	Class: 2	Label: 2.1
IMDG:	Class: 2	Label: 2.1
IATA:	Class: 2	Label: 2.1

14.4. Packing group

ADR / RID, IMDG, IATA: -

14.5. Environmental hazards

ADR / RID:	NO
IMDG:	NO
IATA:	NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: --	Limited Quantities: 1 L	Tunnel restriction code: (D)
	Special Provision: -		
IMDG:	EMS: F-D, S-U	Limited Quantities: 1 L	
IATA:	Cargo:	Maximum quantity: 100 Kg	Packaging instructions: 130
	Pass.:	Maximum quantity: 25 Kg	Packaging instructions: 130
	Special Instructions:	A802	

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

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC: P3a

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product
Point 40

Substances in Candidate List (Art. 59 REACH)

Substances subject to authorisarion (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

No chemical safety assessment has been processed for the mixture and the substances it contains.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Gas 1	Flammable gas, category 1
Aerosol 1	Aerosol, category 1
Aerosol 3	Aerosol, category 3
Flam. Liq. 1	Flammable liquid, category 1
Press. Gas (Liq.)	Liquefied gas
Acute Tox. 4	Acute toxicity, category 4
STOT SE 3	Specific target organ toxicity - single exposure, category 3
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: may burst if heated.
H224	Extremely flammable liquid and vapour.
H280	Contains gas under pressure; may burst if heated.
H302	Harmful if swallowed.
H336	May cause drowsiness or dizziness.
EUH019	May form explosive peroxides.
EUH066	Repeated exposure may cause skin dryness or cracking.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)

- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EU) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 04 / 08 / 09 / 11 / 12 / 16.