Safety Data Sheet dated 24/2/2016, version 1

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

1.1. Product identifier

Mixture identification:

Trade name: A/C FLUSH SOLVENT NOT FLAMMABLE 5L
11.036

1.2. Relevant identified uses of the substance or mixture and uses advised against
Recommended use:
product for air conditioning systems
product for cleaning and washing
Uses advised against:
do not use on humans and animals

1.3. Details of the supplier of the safety data sheet

Company:
ELKE S.r.l. Via XXV Aprile 202 10042 Nichelino (To) Italia.
Tel. n. +39 011 9622412

Competent person responsible for the safety data sheet:
Domenico Amosso info@elke-ac.com

1.4. Emergency telephone number
Centro Antiveleni Ospedale Niguarda Milano +39 02.66101029

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
EC regulation criteria 1272/2008 (CLP):


Warning, Eye Irrit. 2, Causes serious eye irritation.


Warning, Skin Sens. 1, May cause an allergic skin reaction.


Danger, Asp. Tox. 1, May be fatal if swallowed and enters airways.

Adverse physicochemical, human health and environmental effects:
No other hazards

2.2. Label elements
Hazard pictograms:

Danger
Hazard statements:
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H304 May be fatal if swallowed and enters airways.
Precautionary statements:
P264 Wash with water Thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
P331 Do NOT induce vomiting.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:
None

Contents:
Idrocarburi, C12-C15, n-alcani, isoalcani, ciclici, < 2% aromatici
dipentene; limonene;
N-DECANO

Special provisions according to Annex XVII of REACH and subsequent amendments:
None

2.3. Other hazards
vPvB Substances: None - PBT Substances: None

Other Hazards:
No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances
N.A.

3.2. Mixtures
Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
67 %	Idrocarburi, C12-C15, n-alcani, isoalcani, ciclici, < 2% aromatici	EC: 920-107-4 REACH No.: 01-2119453414-43	3.10/1 Asp. Tox. 1 H304
18 %	N-DECANO	CAS: 124-18-5 EC: 204-686-4 REACH No.: 01-2119474199-26	2.6/3 Flam. Liq. 3 H226 3.10/1 Asp. Tox. 1 H304
10.9 %	propan-2-ol; isopropyl alcohol; isopropanol	Index number: 603-117-00-0 CAS: 67-63-0 EC: 200-661-7 REACH No.: 01-2119457558-25	2.6/2 Flam. Liq. 2 H225 3.3/2 Eye Irrit. 2 H319 3.8/3 STOT SE 3 H336
2.5 %	dipentene; limonene;	Index number: 601-029-00-7 CAS: 5989-27-5 EC: 227-813-5 REACH No.: 01-2119529223-47	2.6/3 Flam. Liq. 3 H226 3.2/2 Skin Irrit. 2 H315 3.4.2/1-1A-1B Skin Sens. 1,1A,1B H317 4.1/A1 Aquatic Acute 1 H400 4.1/C1 Aquatic Chronic 1 H410
1.63 %	ethanol; ethyl alcohol	Index number: 603-002-00-5 CAS: 64-17-5 EC: 200-578-6	2.6/2 Flam. Liq. 2 H225

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.
Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.
Wash thoroughly the body (shower or bath).
Remove contaminated clothing immediately and dispose off safely.
After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

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

In case of Ingestion:

Do NOT induce vomiting.

In case of Inhalation:

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

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

Cap11

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

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Water.
Carbon dioxide (CO2).
Extinguishing media which must not be used for safety reasons:
None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.
Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.
Remove all sources of ignition.
Remove persons to safety.
See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
Retain contaminated washing water and dispose it.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

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

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.
Don't use empty container before they have been cleaned.
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
Contamined clothing should be changed before entering eating areas.
Do not eat or drink while working.
See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

store in a cool, well ventilated place, away from heat, flames, sparks or other sources of ignition
keep only in the original container away from sunlight neighborhoods
avoid contact with skin and eyes, inhalation of vapours/mists/dusts.
do not use empty containers before they are cleaned.
contaminated clothing must be replaced before entering the dining areas.
at work do not eat or drink.
do not smoke
Keep away from food, drink and feed.
Incompatible materials:
None in particular.
Instructions as regards storage premises:
Adequately ventilated premises.

7.3. Specific end use(s)

produced for air conditioning and for cleaning and washing

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

N-DECANO - CAS: 124-18-5

TLV TWA - 1200 mg/m3

propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

ACGIH - LTE(8h): 200 ppm - STE: 400 ppm - Notes: A4, BEI - Eye and URT irr, CNS impair

ethanol; ethyl alcohol - CAS: 64-17-5

ACGIH - STE: 1000 ppm - Notes: A3 - URT irr

DNEL Exposure Limit Values

dipentene; limonene; - CAS: 5989-27-5

Worker Professional: 33.3 mg/kg - Consumer: 8.33 mg/kg - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Consumer: 4.76 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

N-DECANO - CAS: 124-18-5

Target: Fresh Water - Value: 1.2 mg/l
Target: Marine water - Value: 1.2 mg/l
Target: Fresh Water - Value: 0.33 mg/kg
Target: Marine water sediments - Value: 0.33 mg/kg
Target: Soil (agricultural) - Value: 0.13 mg/kg

dipentene; limonene; - CAS: 5989-27-5
Target: Soil (agricultural) - Value: 0.262 mg/kg
Target: Fresh Water - Value: 0.0054 mg/l
Target: Marine water - Value: 0.00054 mg/l
Target: Freshwater sediments - Value: 1.32 mg/kg
Target: Marine water sediments - Value: 0.13 mg/kg

8.2. Exposure controls

Eye protection:
Basket eye glasses.

Protection for skin:
Safety shoes.
Chemical protection clothing.

Protection for hands:
PVC (polyvinyl chloride).

Respiratory protection:
Mask with filter "A" , brown colour

Thermal Hazards:
Do not expose to temperatures exceeding 50° c.

Environmental exposure controls:
emissions from production processes, including those from ventilation equipment should be inspected for the purposes of enforcement of environmental protection

Appropriate engineering controls:
None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Appearance and colour:	Liquid	--	--
Odour:	characteristic	--	--
Odour threshold:	N.A.	--	--
pH:	N.A.	--	--
Melting point / freezing point:	N.A.	--	--
Initial boiling point and boiling range:	>220°C	--	--
Flash point:	> 55 ° C	--	--
Evaporation rate:	N.A.	--	--
Solid/gas flammability:	N.A.	--	--
Upper/lower flammability or explosive limits:	N.A.	--	--
Vapour pressure:	N.A.	--	--
Vapour density:	>2	--	--
Relative density:	0.8 Kg/l	--	--
Solubility in water:	insoluble	--	--
Solubility in oil:	soluble	--	--
Partition coefficient (n-octanol/water):	N.A.	--	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	N.A.	--	--
Viscosity:	N.A.	--	--

Explosive properties:	N.A.	--	--
Oxidizing properties:	N.A.	--	--

9.2. Other information

Properties	Value	Method:	Notes:
kinematic viscosity:	kv <= 1,4 mm2/s (a 40°C)	--	--
Miscibility:	N.A.	--	--
Fat Solubility:	N.A.	--	--
Conductivity:	N.A.	--	--
Substance Groups relevant properties	N.A.	--	--

SECTION 10: Stability and reactivity

10.1. Reactivity
Stable under normal conditions
10.2. Chemical stability
Stable under normal conditions
10.3. Possibility of hazardous reactions
None
10.4. Conditions to avoid
keep away from heat, sources of ignition
10.5. Incompatible materials
oxidizing agents
10.6. Hazardous decomposition products
the product is flammable, following combustion can lead to the formation of dangerous decomposition products
by thermal decomposition can rid COx

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Toxicological information of the mixture:
N.A.
Toxicological information of the main substances found in the mixture:
Idrocarburi, C12-C15, n-alcani, isoalcani, ciclici, < 2% aromatici
a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit > 5000 mg/kg
Test: LC50 - Route: Inhalation - Species: Rat > 4951 mg/m3 - Duration: 4h
N-DECANO - CAS: 124-18-5
a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg
Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg
propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0
a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 5840 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg
dipentene; limonene; - CAS: 5989-27-5
a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat = 4400 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit > 5000 mg/kg

LAVAGGIO IMPIANTI NON INFIAMM. -
The product may have harmful effects on human health. Repeated exposure may cause skin dryness or cracking. May be fatal if swallowed and enters Airways.
ethanol; ethyl alcohol - CAS: 64-17-5
LD50 (RABBIT) ORAL: 6300 MG/KG
LD50 (RAT) ORAL SINGLE DOSE: 7060 MG/KG

If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.:
a) acute toxicity;
b) skin corrosion/irritation;
c) serious eye damage/irritation;
d) respiratory or skin sensitisation;
e) germ cell mutagenicity;
f) carcinogenicity;
g) reproductive toxicity;
h) STOT-single exposure;
i) STOT-repeated exposure;
j) aspiration hazard.

SECTION 12: Ecological information

12.1. Toxicity
Adopt good working practices, so that the product is not released into the environment.
Idrocarburi, C12-C15, n-alcani, isoalcani, ciclici, < 2% aromatici
a) Aquatic acute toxicity:
Endpoint: LC50 - Species: Fish > 1000 mg/l - Duration h: 24
Endpoint: EC50 - Species: Daphnia > 1000 mg/l - Duration h: 24
Endpoint: EC50 - Species: Algae > 1000 mg/l - Duration h: 72
N-DECANO - CAS: 124-18-5
a) Aquatic acute toxicity:
Endpoint: LC50 - Species: Fish > 10-100 mg/l - Duration h: 96
Endpoint: EC50 - Species: Algae > 100 mg/l - Duration h: 72
Endpoint: EC50 - Species: Daphnia > 100 mg/l - Duration h: 48
propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0
a) Aquatic acute toxicity:
Endpoint: EC50 - Species: Daphnia > 100 mg/l - Duration h: 48
Endpoint: EC50 - Species: Algae > 100 mg/l - Duration h: 72
Endpoint: EC50 - Species: Fish > 100 mg/l - Duration h: 48
dipentene; limonene; - CAS: 5989-27-5
a) Aquatic acute toxicity:
Endpoint: EC50 - Species: Algae = 150 mg/l - Duration h: 72
Endpoint: EC50 - Species: Daphnia = 0.85 mg/l - Duration h: 24
Endpoint: LC50 - Species: Fish = 0.72 mg/l - Duration h: 96

12.2. Persistence and degradability
None
N-DECANO - CAS: 124-18-5
Biodegradability: Persistent and Biodegradable - Test: 1 - Duration: 1 - %: 114.3 - Notes: N.A.
dipentene; limonene; - CAS: 5989-27-5
Biodegradability: Not persistent and Biodegradable - Test: N.A. - Duration: N.A. - %: N.A. - Notes: N.A.

12.3. Bioaccumulative potential
dipentene; limonene; - CAS: 5989-27-5

Bioaccumulation: Bioaccumulative - Test: N.A. N.A. - Duration: N.A. - Notes: N.A.

12.4. Mobility in soil

N-DECANO - CAS: 124-18-5

Mobility in soil: Mobile - Test: N.A. N.A. - Duration: N.A. - Notes: N.A.

dipentene; limonene; - CAS: 5989-27-5

Mobility in soil: Mobile - Test: N.A. N.A. - Duration: N.A. - Notes: N.A.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

14.1. UN number

Not classified as dangerous in the meaning of transport regulations.

14.2. UN proper shipping name

N.A.

14.3. Transport hazard class(es)

ADR-Class:	Not dangerous
IATA-Class:	Not dangeorus
IMDG-Class:	Not dangeorus

N.A.

14.4. Packing group

N.A.

14.5. Environmental hazards

Marine pollutant: No

N.A.

14.6. Special precautions for user

N.A.

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

No

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) 2015/830
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)

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

None

Where applicable, refer to the following regulatory provisions :

Directive 82/501/EEC ('Activities linked to risks of serious accidents') and subsequent amendments.
Regulation (EC) nr 648/2004 (detergents).
1999/13/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):
N.A.

15.2. Chemical safety assessment
No

SECTION 16: Other information

Text of phrases referred to under heading 3:
H304 May be fatal if swallowed and enters airways.
H226 Flammable liquid and vapour.
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

This document was prepared by a competent person who has received appropriate training.
Main bibliographic sources:
ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.
It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.
This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.

LTE:	Long-term exposure.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STE:	Short-term exposure.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWATLV:	Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
WGK:	German Water Hazard Class.