Safety Data Sheet dated 5/10/2022, version 1

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

1.1. Product identifier
Mixture identification:
Trade name: ON ROAD CHAIN SPRAY

1.2. Relevant identified uses of the substance or mixture and uses advised against
Recommended use:
PC-TEC-11 (EuPCS)
1.3. Details of the supplier of the safety data sheet
Company:
NILS S.p.A.
Via Stazione, 30
39014 Postal (BZ)

e-mail: nils@nils.it
www.nils.eu
Tel. +39 0473 29 24 00
Fax +39 0473 29 12 44
Competent person responsible for the safety data sheet:
schedasicurezza@nils.it
1.4. Emergency telephone number
CAV "Ospedale Pediatrico Bambino Gesù" - Roma - Tel. +39 06 6859 37 26

CAV "Azienda Ospedaliera Università di Foggia" - Foggia - Tel. 800 183 459

CAV "Azienda Ospedaliera A. Cardarelli" - Napoli - Tel. +39 081 545 33 33

CAV Policlinico "Umberto I" - Roma - Tel. +39 06 4997 80 00

CAV Policlinico "A. Gemelli" - Roma - Tel. +39 06 305 43 43

CAV Aziedna Ospedaliera "Careggi" U.O. Tossicologia Medica - Firenze - Tel. +39 055 794 78 19

CAV Centro Nazionale di Informazione Tossicologica - Pavia - Tel. +39 0382 24 444

CAV Ospedale Niguarda - Milano - +39 02 66 10 10 29

CAV Azienda Ospedaliera Papa Giovanni XXIII - Bergamo - Tel. 800 88 33 00

CAV Centro Antiveleni Veneto - Verona - Tel. 800 011 858
Tel. +39 0473 29 24 00
Fax +39 0473 29 12 44

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
EC regulation criteria 1272/2008 (CLP)
Danger, Aerosols 1, Extremely flammable aerosol. Pressurized container: may burst if heated.
Warning, Skin Irrit. 2, Causes skin irritation.

Danger, Eye Dam. 1, Causes serious eye damage.
Warning, STOT SE 3, May cause drowsiness or dizziness.
Aquatic Chronic 3, Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H222, H229 Extremely flammable aerosol. Pressurized container: may burst if heated.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

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.
P280 Wear protective gloves/clothing and eye/face protection.
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/...
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.

Special Provisions:

None

Contains

Hydrocarbons, C6, isoalkanes, <5% n-hexane
Calcium dihydroxide

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%

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
>= 40% - < 50%	butane	Index number: 601-004-00-0 CAS: 106-97-8 EC: 203-448-7	2.2/1 Flam. Gas 1 H220 2.5/L Press Gas (Liq.) H280
>= 20% - < 25%	Hydrocarbons, C6, isoalkanes, <5% n-hexane	CAS: 64742-49-0 EC: 931-254-9	2.6/2 Flam. Liq. 2 H225 3.10/1 Asp. Tox. 1 H304

			3.2/2 Skin Irrit. 2 H315 3.8/3 STOT SE 3 H336 4.1/C2 Aquatic Chronic 2 H411
>= 15% - < 20%	propane	Index number: 601-003-00-5 CAS: 74-98-6 EC: 200-827-9	2.2/1 Flam. Gas 1 H220 2.5/L Press Gas (Liq.) H280
>= 3% - < 5%	Calcium dihydroxide	CAS: 1305-62-0 EC: 215-137-3	3.3/1 Eye Dam. 1 H318 3.2/2 Skin Irrit. 2 H315 3.8/3 STOT SE 3 H335

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.
OBTAIN IMMEDIATE MEDICAL ATTENTION.
Wash thoroughly the body (shower or bath).
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 under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.
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
None
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:
None

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media:
CO2 or Dry chemical fire extinguisher.
Extinguishing media which must not be used for safety reasons:
Water.
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
For non emergency personnel:
Wear personal protection equipment.
Remove all sources of ignition.
Remove persons to safety.
See protective measures under Sect. 7 and 8.
For emergency responders:
Wear personal protection equipment.
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 cleanup: absorbing material, organic material, sand
6.3. Methods and material for containment and cleaning up
Wash with plenty of water.
6.4. Reference to other sections
Hazardous combustion products: see Sect. 5
Precautions for safe handling: see Sect. 7
Individual protection measures: see Sect. 8
Incompatible materials: see Sect. 10
Enviornmental precautions: see Sect. 12
Disposal considerations: see Sect. 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.
See also section 8 for recommended protective equipment.
Advice on general occupational hygiene:
Contamined clothing should be changed before entering eating areas.
Do not eat or drink while working.
7.2. Conditions for safe storage, including any incompatibilities
Store at below 20 °C. Keep away from unguarded flame and heat sources. Avoid direct exposure to sunlight.
Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.
Keep away from food, drink and feed.
Incompatible materials:
None in particular.
Instructions as regards storage premises:
Cool and adequately ventilated.

Storage class according to TRGS 510 2B (Aerosolpackungen und Feuerzeuge)

7.3. Specific end use(s)

PC-TEC-11 (EuPCS)

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

butane - CAS: 106-97-8

- OEL Type: TRGS 900 - TWA: 1800 mg/m3, 1000 ppm - Notes: 4(II)

Calcium dihydroxide - CAS: 1305-62-0

- OEL Type: EU - TWA: 1 mg/m3

DNEL Exposure Limit Values

Calcium dihydroxide - CAS: 1305-62-0

Worker Professional: 1 mg/m3 - Consumer: 1 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Professional: 4 mg/m3 - Consumer: 4 mg/m3 - Exposure: Human Inhalation - Frequency: Short Term, local effects

PNEC Exposure Limit Values

Calcium dihydroxide - CAS: 1305-62-0

Target: Freshwater - Value: 0.49 mg/l

Target: Reference values for water, intermittent release - Value: 0.49 mg/l

Target: Marine water - Value: 0.32 mg/l

Target: Microorganisms in sewage treatments - Value: 3 mg/l

Target: Soil - Value: 1080 mg/kg

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Wear anti-static footwear and clothing.

Protection for hands:

Only CE-marked protective gloves tested according to EN 374 may be worn when working with chemicals. Protective gloves must be selected for each workplace depending on the concentration and type of harmful substances after consultation with the supplier. Establish a healing period for skin regeneration. Preventive protection of the skin is recommended (protective creams/pomades). Wash hands thoroughly after use.

Suitable material:

Butyl caoutchouc (butyl rubber).

Thickness of glove material:

0.5 mm

Breakthrough time:

240 min

Respiratory protection:

Use respiratory protection where ventilation is insufficient or exposure is prolonged.

Combination filter conforming to EN 14387, type A-P2

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes
Physical state:	Liquid	--	--
Colour:	Light yellow	--	--
Odour:	of: Mineral oil	--	--
Melting point/freezing point:	N.A.	--	--
Pour point	N.A.	--	--
Drop point	N.A.	--	--
Boiling point or initial boiling point and boiling range:	< -20 ° C	--	--
Flammability:	> 200 °C	--	--
Lower and upper explosion limit:	N.A.	--	--
Flash point:	< -20 ° C	--	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	N.A.	--	--
pH:	N.A.	--	--
Kinematic viscosity:	N.A.	--	--
Solubility in water:	almost insoluble	--	--
Solubility in oil:	N.A.	--	--
Partition coefficient n-octanol/water (log value):	N.A.	--	--
Vapour pressure:	N.A.	--	--
Density and/or relative density:	0.628 kg/dm3	--	20 °C
Relative vapour density:	N.A.	--	--
Particle characteristics:			
Particle size:	N.A.	--	--

9.2. Other information

Properties	Value	Method:	Notes
Explosive properties:	1 vol% LEL - 15 vol% UEL	--	--

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
Stable under normal conditions.
10.5. Incompatible materials
Avoid contact with combustible materials. The product could catch fire.
10.6. Hazardous decomposition products
None.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Toxicological information of the product:
ON ROAD CHAIN SPRAY
a) acute toxicity
Not classified
Based on available data, the classification criteria are not met
b) skin corrosion/irritation
The product is classified: Skin Irrit. 2 H315
c) serious eye damage/irritation
The product is classified: Eye Dam. 1 H318

d) respiratory or skin sensitisation
Not classified
Based on available data, the classification criteria are not met
e) germ cell mutagenicity
Not classified
Based on available data, the classification criteria are not met
f) carcinogenicity
Not classified
Based on available data, the classification criteria are not met
g) reproductive toxicity
Not classified
Based on available data, the classification criteria are not met
h) STOT-single exposure
The product is classified: STOT SE 3 H336
i) STOT-repeated exposure
Not classified
Based on available data, the classification criteria are not met
j) aspiration hazard
Not classified
Based on available data, the classification criteria are not met

Toxicological information of the main substances found in the product:
butane - CAS: 106-97-8
a) acute toxicity:
Test: LC50 - Route: Inhalation - Species: Rat 659 g/m3
Test: LC50 - Route: Inhalation - Species: Mouse 680 g/m3
Calcium dihydroxide - CAS: 1305-62-0
a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg - Notes: OECD Guideline 425
Test: LD50 - Route: Skin - Species: Rabbit > 2500 mg/kg - Notes: EU Method B. 3
Test: LC50 - Route: Inhalation Vapour - Species: Rat > 6.04 mg/l - Duration: 4h - Notes: OECD Guideline 436

11.2. Information on other hazards
Endocrine disrupting properties:
No endocrine disruptor substances present in concentration >= 0.1%

SECTION 12: Ecological information

12.1. Toxicity
Adopt good working practices, so that the product is not released into the environment.
ON ROAD CHAIN SPRAY
The product is classified: Aquatic Chronic 3 - H412
butane - CAS: 106-97-8
a) Aquatic acute toxicity:
Endpoint: LC50 - Species: Fish = 49.9 mg/l - Duration h: 96 h - Notes: US Environmental Protection
Endpoint: ErC50 - Species: Algae = 19.37 mg/l - Duration h: 96 h - Notes: USEPA OPPT Risk Assessment
Endpoint: EC50 - Species: Daphnia = 69.43 mg/l - Duration h: 48 h - Notes: USEPA OPPT Risk Assessment
propane - CAS: 74-98-6
a) Aquatic acute toxicity:
Endpoint: LC50 - Species: Fish = 49.9 mg/l - Duration h: 96 h - Notes: US Environmental Protection

Endpoint: ErC50 - Species: Algae = 19.37 mg/l - Duration h: 96 h - Notes: USEPA OPPT Risk Assessment
Endpoint: EC50 - Species: Daphnia = 69.43 mg/l - Duration h: 48 h - Notes: USEPA OPPT Risk Assessment

Calcium dihydroxide - CAS: 1305-62-0

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 50.6 mg/l - Duration h: 96 h - Notes: OECD Guideline 203
Endpoint: ErC50 - Species: Fish = 184.57 mg/l - Duration h: 72 h - Notes: OECD Guideline 201
Endpoint: EC50 - Species: Daphnia = 49.1 mg/l - Duration h: 48 h - Notes: OECD Guideline 202

12.2. Persistence and degradability

N.A.

12.3. Bioaccumulative potential

butane - CAS: 106-97-8

Test: Log Pow 1.09

propane - CAS: 74-98-6

Test: Log Pow 1.09

Calcium dihydroxide - CAS: 1305-62-0

Test: BCF - Bioconcentrantion factor 21.09

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 0.1%

12.7. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste Code: 160504

Dispose of according to Directive (EC) n. 2008/98 on waste and hazardous waste. Recycle in compliance with official regulations.

SECTION 14: Transport information

14.1. UN number or ID number

ADR-UN number:	UN 1950
RID-UN Number:	UN 1950
ADN-UN Number:	UN 1950
IATA-Un number:	UN 1950
IMDG-Un number:	UN 1905

14.2. UN proper shipping name

ADR-Shipping Name:	AEROSOLS
IATA-Technical name:	AEROSOLS, FLAMMABLE
IMDG-Technical name:	AEROSOLS

14.3. Transport hazard class(es)

ADR-Class:	2
RID-Class:	2
ADN-Class:	2
IATA-Class:	2

IMDG-Class: 2.1

14.4. Packing group

RID-Packing Group: -
ADN-Packing Group: -
ADR-Packing Group: -
IATA-Packing group: -
IMDG-Packing group: -
ADR-Special provisions: 190 327 344 625
ADN-Special provisions: 190 327 344 625
IATA-Special provisions: A145 A167 A802
IMDG-Special provisions: 63, 190, 277, 327, 344, 381, 959
Limited quantity: 1 L
Accepted quantity: EO
Classification code: 5F
IATA Limited quantity Passenger: 30 kg G
IATA Passenger LQ: Y203

14.5. Environmental hazards

Marine pollutant: Marine pollutant
IMDG-EMS: F-D, S-U

14.6. Special precautions for user

ADR-Transport category (Tunnel restriction code): D
Rail (RID): 190 327 344 625
IATA-Passenger Aircraft: 203, 75 kg
IATA-Cargo Aircraft: 203, 150 kg
IMDG-Technical name: AEROSOLS

14.7. Maritime transport in bulk according to IMO instruments

N.A.

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) n. 2020/878
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)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)
Regulation (EU) n. 2018/669 (ATP 11 CLP)
Regulation (EU) n. 2018/1480 (ATP 13 CLP)
Regulation (EU) n. 2019/521 (ATP 12 CLP)
Regulation (EU) n. 2020/217 (ATP 14 CLP)
Regulation (EU) n. 2020/1182 (ATP 15 CLP)
Regulation (EU) n. 2021/643 (ATP 16 CLP)

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

Restrictions related to the product:

Restriction 3
Restriction 40
Restrictions related to the substances contained:
No restriction.
Where applicable, refer to the following regulatory provisions :
Directive 2012/18/EU (Seveso III)
Regulation (EC) nr 648/2004 (detergents).
Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):
Seveso III category according to Annex 1, part 1
Product belongs to category: P3a

National legislation
Limitations for workers: Respect the employment limits according to Directive 94/33/EC on the protection of young people at work.

German Water Hazard Class: 2 - Water pollutant.

15.2. Chemical safety assessment
No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

COV(%): 82.98
COV(g/l): 521.114
Full text of phrases referred to in Section 3:
H220 Extremely flammable gas.
H280 Contains gas under pressure; may explode if heated.
H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

Hazard class and hazard category	**Code**	**Description**
Flam. Gas 1	2.2/1	Flammable gas, Category 1
Aerosols 1	2.3/1	Aerosol, Category 1
Press Gas (Liq.)	2.5/L	Gases under pressure (Liquefied gas)
Flam. Liq. 2	2.6/2	Flammable liquid, Category 2
Asp. Tox. 1	3.10/1	Aspiration hazard, Category 1
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3
Aquatic Chronic 2	4.1/C2	Chronic (long term) aquatic hazard, category 2
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Aerosols 1, H222, H229	On basis of test data
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method
STOT SE 3, H336	Calculation method
Aquatic Chronic 3, H412	Calculation method

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.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
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.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.