

Revision nr.2 Dated 6/7/2019 Printed on 6/7/2019 Page n. 1/11 Replaced revision:1 (Dated 2/25/2019)

Safety Data Sheet

According to U.S.A. Federal Hazcom 2012

1. Identification

1.1. Product identifier

Product name CONCRETE PRO SHIELD

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

Intended use Solvent-based anti-stain treatment for cement. Industrial and professional use

1.3. Details of the supplier of the safety data sheet

Name Tenax Spa
Full address Via I Maggio, 226
District and Country 37020 Volargne

Italy

Tel. +39 045 6887593 Fax +39 045 6862456

e-mail address of the competent person

responsible for the Safety Data Sheet msds@tenax.it

Product distribution by: Tenax Usa

7606 Whitehall Executive Center Drive Suite 400, 28273 Charlotte NC, US

Tel. 001 7045831173 - Fax 001 7045833166

info@tenaxusa.com

1.4. Emergency telephone number

For urgent inquiries refer to 800.883300 (24h) Centro Antiveleni (Bergamo)

0 800 314 7900 (Turkey) only, or +90 0312 433 70 01 Toxicology Department and

(VR)

Poisons Centre

+98 21 6419306 / +98 21 6405569 Poisons Information Centre (Tehran)

+91 484 4008056 Poison Control Centre (South India)

(011) 642 2417 / (011) 488 3108 Anti-Poison Centre (Johannesburg)

2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200). The product thus requires a safety datasheet.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Classification and Hazard Statement

Flammable liquid, category 3
Aspiration hazard, category 1

Specific target organ toxicity - single exposure,

category 3

Flammable liquid and vapour.

May be fatal if swallowed and enters airways.

May cause drowsiness or dizziness.

Hazard pictograms:







Signal words: Danger

Hazard statements:

H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H336 May cause drowsiness or dizziness.



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2. Hazards identification .../>

Precautionary statements:

Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P261 Avoid breathing dust / fume / gas / mist / vapours / spray.

P242 Use only non-sparking tools.

P280 Wear protective gloves / eye protection / face protection.

P271 Use only outdoors or in a well-ventilated area.
P240 Ground / bond container and receiving equipment.
P243 Take precautionary measures against static discharge.

P241 Use explosion-proof electrical / ventilating / lighting / . . . / equipment.

Response:

P331 Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water / shower.

P301+P310 IF SWALLOWED: immediately call a POISON CENTER / doctor / . . .

P312 Call a POISON CENTER / doctor / . . . / if you feel unwell.

P304+P340 IF INHALED: remove person to fresh air and keep comfortable for breathing.

P370+P378 In case of fire: use CO2, sand, powder to extinguish.

Storage:

P403+P235 Store in a well-ventilated place. Keep cool.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

Disposal:

P501 Dispose of contents / container according to applicable law.

2.2. Other hazards

Information not available

3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification Conc. % Classification:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

CAS 64742-48-9 83.25 Flammable liquid, category 3 H226, Aspiration hazard, category 1 H304,

Specific target organ toxicity - single exposure, category 3 H336

EC 919-857-5

INDEX

N-BUTYL ACETATE

CAS 123-86-4 11.875 Flammable liquid, category 3 H226, Specific target organ toxicity - single exposure,

category 3 H336

EC 204-658-1 INDEX 607-025-00-1

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

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. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately. INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly 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



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5. Fire-fighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. 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. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

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).

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

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.

7. Handling and storage

7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available



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8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

USA NIOSH-REL NIOSH publication No. 2005-149, 3th printing, 2007.

USA OSHA-PEL Occupational Exposure Limits - Limits for Air Contaminants TABLE Z-1-1910.1000.

USA CAL/OSHA-PEL California Division of Occupational Safety and Health (Cal-OSHA) Permissible Exposure Limits

(PELs).

TLV-ACGIH ACGIH 2019

	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics										
Threshold Limit Value											
Type	Country	TWA/8h		STEL/15	STEL/15min						
		mg/m3	ppm	mg/m3	ppm						
TLV-ACGIH	-	1200	197								

N-BUTYL ACETATE										
Threshold Limit \	Value									
Type	Country	TWA/8h		STEL/15r	in					
		mg/m3	ppm	mg/m3	ppm					
TLV-ACGIH	-		50		150					
OSHA	USA	710	150							
CAL/OSHA	USA	710	150	950	200					
NIOSH	USA	710	150	950	200					

Legend:

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

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. Personal protective equipment must comply with current regulations.

HAND PROTECTION

Protect hands with category III work gloves (OSHA 29 CFR 1910.138).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear. Wash body with soap and water after removing protective clothing. EYE PROTECTION

Wear airtight protective goggles (OSHA 29 CFR 1910.133).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a NIOSH certified filter, whose class must be chosen according to the limit of use concentration (NIOSH 42 CFR 84, OSHA 29 CFR 1910.134). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

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.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus or external air-intake breathing apparatus. For a correct choice of respiratory protection device, see standard NIOSH 42 CFR 84, OSHA 29 CFR 1910.134.

ENVIRONMENTAL EXPOSURE CONTROLS

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

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties Value Information

Appearance liquid
Colour colourless

Odour characteristic of solvent

Odour threshold Not available



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9. Physical and chemical properties .../>>

pH Not available
Melting point / freezing point Not available
Initial boiling point Not available
Boiling range Not available

Flash point $23 \le T \le 60$ °C $(73,4 \le T \le 140 \text{ °F})$

Evaporation Rate Not available Flammability of solids and gases Not available Lower inflammability limit Not available Upper inflammability limit Not available Lower explosive limit Not available Upper explosive limit Not available Vapour pressure Not available Vapour density Not available Relative density 0.78 g/ml

Solubility soluble in organic solvents

Partition coefficient: n-octanol/water
Auto-ignition temperature
Decomposition temperature
Viscosity
Not available
Explosive properties
Not available
Oxidising properties
Not available
Not available

9.2. Other information

Information not available

10. Stability and reactivity

10.1. Reactivity

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

N-BUTYL ACETATE

Decomposes on contact with: water.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

N-BUTYL ACETATE

Risk of explosion on contact with: strong oxidising agents. May react dangerously with: alkaline hydroxides, potassium tert-butoxide. Forms explosive mixtures with: air.

10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

N-BUTYL ACETATE

Avoid exposure to: moisture, sources of heat, naked flames.

10.5. Incompatible materials

N-BUTYL ACETATE

Incompatible with: water,nitrates,strong oxidants,acids,alkalis,zinc.

10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information



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1. Toxicological 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

 $\label{lem:hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2\% aromatics $LD50 (Oral)$ > 5000 mg/kg rat $LD50 (Dermal)$ > 5000 mg/kg rabbit $LC50 (Inhalation)$ > 4951 mg/l/4h rat $LD50 (Dermal)$ > 4951 mg/l/4h rat $LD5$

N-BUTYL ACETATE

 LD50 (Oral)
 > 6400 mg/kg Rat

 LD50 (Dermal)
 > 5000 mg/kg Rabbit

 LC50 (Inhalation)
 21.1 mg/l/4h Rat

SKIN CORROSION / IRRITATION

Repeated exposure may cause skin dryness or cracking.

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

Toxic for aspiration



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12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1. Toxicity

Information not available

12.2. Persistence and degradability

N-BUTYL ACETATE

Solubility in water 1000 - 10000 mg/l

12.3. Bioaccumulative potential

N-BUTYL ACETATE

Partition coefficient: n-octanol/water 2.3

BCF 15.3

12.4. Mobility in soil

N-BUTYL ACETATE

Partition coefficient: soil/water < 3

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

13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Neat product residues should be considered special non-hazardous waste.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

14. Transport information

14.1. UN number

ADR / RID, IMDG, IATA: 1993

14.2. UN proper shipping name

ADR / RID: FLAMMABLE LIQUID, N.O.S. (Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics; N-BUTYL

ACETATE)

IMDG: FLAMMABLE LIQUID, N.O.S. (Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics; N-BUTYL

ACETATE)

IATA: FLAMMABLE LIQUID, N.O.S. (Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics; N-BUTYL

ACETATE)



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4. Transport information .../>

14.3. Transport hazard class(es)

ADR / RID: Class: 3 Label: 3

IMDG: Class: 3 Label: 3

IATA: Class: 3 Label: 3



14.4. Packing group

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards

ADR / RID: NO IMDG: NO IATA: NO

14.6. Special precautions for user

ADR / RID: HIN - Kemler: 30 Limited Quantities: 5 L Tunnel restriction code: (D/E)

Special Provision: -

IMDG: EMS: F-E, S-E Limited Quantities: 5 L

IATA: Cargo: Maximum quantity: 220 L Packaging instructions: 366
Pass.: Maximum quantity: 60 L Packaging instructions: 355

Special Instructions: A:

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

Information not relevant

15. Regulatory information

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

U.S. Federal Regulations

TSCA:

All components are listed on TSCA Inventory.

Clean Air Act Section 112(b):

No component(s) listed.

Clean Air Act Section 602 Class I Substances:

No component(s) listed.

Clean Air Act Section 602 Class II Substances:

No component(s) listed.

Clean Water Act – Priority Pollutants:

No component(s) listed.

Clean Water Act – Toxic Pollutants:

No component(s) listed.

DEA List I Chemicals (Precursor Chemicals):

No component(s) listed.

DEA List II Chemicals (Essential Chemicals):



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15. Regulatory information .../>>

No component(s) listed.

EPA List of Lists:

313 Category Code:

No component(s) listed.

EPCRA 302 EHS TPQ:

No component(s) listed.

EPCRA 304 EHS RQ:

No component(s) listed.

CERCLA RQ:

123-86-4 N-BUTYL ACETATE

EPCRA 313 TRI:

No component(s) listed.

RCRA Code:

No component(s) listed.

CAA 112 (r) RMP TQ:

No component(s) listed.

State Regulations

Massachussetts:

123-86-4 N-BUTYL ACETATE

Minnesota:

123-86-4 N-BUTYL ACETATE

New Jersey:

123-86-4 N-BUTYL ACETATE

New York:

123-86-4 N-BUTYL ACETATE

Pennsylvania:

123-86-4 N-BUTYL ACETATE

California:

123-86-4 N-BUTYL ACETATE

Proposition 65:

This product does not contain any substances know to the State of California to cause cancer, reproductive harm or birth defects.

International Regulations

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

Candadian WHMIS

Information not available

16. Other information

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

H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H336 May cause drowsiness or dizziness.

LEGEND:



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16. Other information ... / >:

- 313 CATEGORY CODE: Emergency Planning and Community Right-to Know Act Section 313 Category Code- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAA 112 ® RMP TQ: Risk Management Plan Threshold Quantity (Clean Air Act Section 112®)
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CERCLA RQ: Reportable Quantity (Comprehensive Environment Response, Compensation, and Liability Act)
- CLP: EC Regulation 1272/2008
- DEA: Drug Enforcement Administration
- EmS: Emergency Schedule
- EPA: US Environmental Protection Agency
- EPCRA: Emergency Planning and Community Right-to Know Act
- EPCRA 302 EHS TPQ: Extremely Hazardous Substance Threshold Planning Quantity (Section 302 Category Code)
- EPCRA 304 EHS RQ: Extremely Hazardous Substance Reportable Quantity (Section 304 Category Code)
- EPCRA 313 TRI: Toxics Release Inventory (Section 313 Category Code)
- 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
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PEL: Predicted exposure level
- RCRA Code: Resource Conservation and Recovery Act Code
- REL: Recommended exposure limit
- 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.
- TSCA: Toxic Substances Control Act
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- WHMIS: Workplace Hazardous Materials Information System.

GENERAL BIBLIOGRAPHY:

- GHS rev. 3
- The Merck Index. 10th Edition
- Handling Chemical Safety
- Niosh Registry of Toxic Effects of Chemical Substances
- INRS Fiche Toxicologique (toxicological sheet)
- Patty Industrial Hygiene and Toxicology
- N.I. Sax Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA website
- Database of SDS models for chemicals Ministry of Health and ISS (Istituto Superiore di Sanità) Italy
- 6 NYCRR part 597
- Cal/OSHA website
- California Safe Drinking Water and Toxic Enforcement Act
- EPA website
- Hazard Comunication Standard (HCS 2012)
- IARC website
- List Of Lists EPA: Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112® of the Clean Air Act
- Massachussetts 105 CMR Department of public health 670.000: "Right to Know"
- Minensota Chapter 5206 Departemnt Of Labor and Industry Hazardous Substances, Employee "Right to Know".
- New Jersey Worker and Community Right to know Act N.J.S.A.
- NTP. 2011. Report on Carcinogens, 12th Edition.
- OSHA website
- Pennsylvania, Hazardous Substance List, Chapter 323

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.



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16. Other information ... / >>

Changes to previous review: The following sections were modified: 01 / 03 / 11.