



SAFETY DATA SHEET NITROX HOT SHOT

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

1.1. Product identifier

Product name	NITROX HOT SHOT
Product number	NHS555, NHS500, NHS501, CHS500, CHS501, NHS000, CHP500

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

Identified uses	Fuel additive.
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1.3. Details of the supplier of the safety data sheet

Supplier	TETROSYL LIMITED Bury Lancashire England BL9 7NY 0161 764 5981 0161 797 5899 info@tetrosyl.com
Manufacturer	TETROSYL LIMITED Bury Lancashire England BL9 7NY 0161 764 5981 0161 797 5899 info@tetrosyl.com

1.4. Emergency telephone number

Emergency telephone	+44 (0)161 764 5981
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Flam. Liq. 2 - H225
Health hazards	Acute Tox. 3 - H301 Acute Tox. 3 - H311 Acute Tox. 2 - H330 STOT SE 1 - H370
Environmental hazards	Aquatic Chronic 3 - H412

Environmental The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

Physicochemical The product is highly flammable. Vapours may form explosive mixtures with air.

2.2. Label elements

NITROX HOT SHOT

Pictogram



Signal word

Danger

Hazard statements

H225 Highly flammable liquid and vapour.
 H301+H311 Toxic if swallowed or in contact with skin.
 H330 Fatal if inhaled.
 H370 Causes damage to organs .
 H412 Harmful to aquatic life with long lasting effects.
 EUH208 Contains C12-C14 t-ALKYL AMINES (+ REACTION PRODUCTS). May produce an allergic reaction.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P260 Do not breathe vapour/ spray.
 P264 Wash contaminated skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 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.
 P284 [In case of inadequate ventilation] wear respiratory protection.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P308+P311 IF exposed or concerned: Call a POISON CENTER or doctor.
 P330 Rinse mouth.
 P361+P364 Take off immediately all contaminated clothing and wash it before reuse.
 P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.
 P501 Dispose of contents/ container in accordance with national regulations.

Contains

METHANOL, C12-C14 t-ALKYL AMINES (+ REACTION PRODUCTS)

Supplementary precautionary statements

P240 Ground and bond container and receiving equipment.
 P241 Use explosion-proof electrical equipment.
 P242 Use non-sparking tools.
 P243 Take action to prevent static discharges.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P312 Call a POISON CENTRE/doctor if you feel unwell.
 P320 Specific treatment is urgent (see medical advice on this label).
 P321 Specific treatment (see medical advice on this label).
 P403+P235 Store in a well-ventilated place. Keep cool.

2.3. Other hazards

Not applicable.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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METHANOL		60-100%
CAS number: 67-56-1	EC number: 200-659-6	REACH registration number: 01-2119433307-44-0000
Classification		
Flam. Liq. 2 - H225		
Acute Tox. 3 - H301		
Acute Tox. 3 - H311		
Acute Tox. 3 - H331		
STOT SE 1 - H370		
AROMATIC HYDROCARBONS (<0.1% BENZENE)		1-<2.5%
CAS number: 64742-95-6	EC number: 918-668-5	REACH registration number: 01-2119455851-35-0000
Classification		
Flam. Liq. 3 - H226		
STOT SE 3 - H335, H336		
Asp. Tox. 1 - H304		
Aquatic Chronic 2 - H411		
C12-C14 t-ALKYL AMINES (+ REACTION PRODUCTS)		0.5-<1%
CAS number: 68955-53-3		
M factor (Acute) = 1	M factor (Chronic) = 1	
Classification		
Met. Corr. 1 - H290		
Acute Tox. 4 - H302		
Acute Tox. 3 - H311		
Acute Tox. 2 - H330		
Skin Corr. 1C - H314		
Eye Dam. 1 - H318		
Skin Sens. 1 - H317		
Aquatic Acute 1 - H400		
Aquatic Chronic 1 - H410		

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Get medical attention immediately. Remove affected person from source of contamination. CAUTION! First aid personnel must be aware of own risk during rescue! Keep affected person away from heat, sparks and flames.

Inhalation

Remove affected person from source of contamination. Move affected person to fresh air at once. Get medical attention. Place unconscious person on their side in the recovery position and ensure breathing can take place. If breathing stops, provide artificial respiration.

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Ingestion	Get medical attention immediately. Never give anything by mouth to an unconscious person. Keep affected person away from heat, sparks and flames. Place unconscious person on their side in the recovery position and ensure breathing can take place. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention. Show this Safety Data Sheet to the medical personnel.
Skin contact	Remove contaminated clothing and rinse skin thoroughly with water. Get medical attention immediately.
Eye contact	Remove any contact lenses and open eyelids wide apart. Do not rub eye. Rinse immediately with plenty of water. Continue to rinse for at least 10 minutes. Get medical attention immediately. Continue to rinse.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure. Get medical attention.
Inhalation	May cause unconsciousness, blindness and possibly death. Vapours may cause headache, fatigue, dizziness and nausea. Vapours in high concentrations are anaesthetic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Central nervous system depression.
Ingestion	May cause unconsciousness, blindness and possibly death. May cause discomfort if swallowed. May cause stomach pain or vomiting. May cause nausea, headache, dizziness and intoxication. Central nervous system depression.
Skin contact	This product is rapidly absorbed through the skin and may cause symptoms similar to those of ingestion. May cause skin irritation/eczema.
Eye contact	Conjunctivitis, irritation, tearing. Corneal damage.

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

Notes for the doctor	Ethanol or fomepizole can be administered under medical supervision.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.
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5.2. Special hazards arising from the substance or mixture

Specific hazards	The product is highly flammable. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. Vapours may form explosive mixtures with air.
Hazardous combustion products	Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapours. Keep up-wind to avoid fumes. Risk of re-ignition after fire has been extinguished. Risk of explosion. Water spray may be used to flush spills away from exposures and dilute spills to non-flammable mixtures.
Special protective equipment for firefighters	Leave danger zone immediately.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. Use suitable respiratory protection if ventilation is inadequate. Take precautionary measures against static discharges. No smoking, sparks, flames or other sources of ignition near spillage. In case of spills, beware of slippery floors and surfaces. Avoid inhalation of vapours and contact with skin and eyes.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground. Avoid the spillage or runoff entering drains, sewers or watercourses. Avoid discharge to the aquatic environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up For waste disposal, see Section 13. Stop leak if possible without risk. Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Provide adequate ventilation. Contain spillage with sand, earth or other suitable non-combustible material. Avoid the spillage or runoff entering drains, sewers or watercourses. Cover large spillages with alcohol-resistant foam.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Eliminate all sources of ignition. Keep away from heat, sparks and open flame. Do not eat, drink or smoke when using the product. Avoid inhalation of vapours/spray and contact with skin and eyes. Good personal hygiene procedures should be implemented. Mechanical ventilation or local exhaust ventilation may be required. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep away from heat, sparks and open flame. Keep container tightly closed. Keep containers upright. Keep only in the original container. Avoid contact with oxidising agents. Do not store near heat sources or expose to high temperatures. Keep away from food, drink and animal feeding stuffs. Store away from the following materials: Oxidising materials. Acids. Alkalis.

Storage class Flammable liquid storage. Toxic storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

No exposure limits known for ingredient(s).

METHANOL

Long-term exposure limit (8-hour TWA): WEL 200 ppm 266 mg/m³

Short-term exposure limit (15-minute): WEL 250 ppm 333 mg/m³

Sk

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

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8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients. All handling should only take place in well-ventilated areas.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

Hand protection

It should be noted that liquid may penetrate the gloves. Frequent changes are recommended. It is recommended that gloves are made of the following material: Nitrile rubber.

Other skin and body protection

Wear suitable protective clothing as protection against splashing or contamination.

Hygiene measures

Provide eyewash station. Wash promptly with soap and water if skin becomes contaminated. When using do not eat, drink or smoke. Contaminated clothing should be placed in a closed container for disposal or decontamination.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Check that the respirator fits tightly and the filter is changed regularly. Wear a respirator fitted with the following cartridge: Gas filter, type AX.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid. Liquid.
Colour	Colourless.
Odour	Organic solvents.
Melting point	Not determined.
Initial boiling point and range	64°C @
Flash point	12°C
Evaporation rate	Not determined.
Upper/lower flammability or explosive limits	Not determined.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	0.793 g/cm ³ @ 20°C
Solubility(ies)	Insoluble in water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	<50 cP @ 20°C

9.2. Other information

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Other information None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Vapours may form explosive mixtures with air. The following materials may react with the product: Acids. Strong oxidising agents. Strong alkalis.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not relevant.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents. Strong acids. Strong alkalis.

10.6. Hazardous decomposition products

Hazardous decomposition products None at ambient temperatures. Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects This product is toxic.

Acute toxicity - oral

Notes (oral LD₅₀) Methanol

ATE oral (mg/kg) 103.2

Acute toxicity - dermal

ATE dermal (mg/kg) 307.69

Acute toxicity - inhalation

ATE inhalation (gases ppm) 16,666.67

ATE inhalation (vapours mg/l) 0.51

ATE inhalation (dusts/mists mg/l) 8.33

Inhalation Toxic: danger of very serious irreversible effects through inhalation. Central nervous system depression. May cause respiratory system irritation.

Ingestion Toxic: danger of very serious irreversible effects if swallowed. May cause stomach pain or vomiting. May cause chemical burns in mouth and throat. Central nervous system depression.

Skin contact Toxic: danger of serious damage to health by prolonged exposure in contact with skin. Toxic through skin absorption (percutaneous). Product has a defatting effect on skin. May cause allergic contact eczema.

Eye contact A single exposure may cause the following adverse effects: Corneal damage. Severe irritation, burning and tearing.

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Acute and chronic health hazards	May cause unconsciousness, blindness and possibly death. A single exposure may cause the following adverse effects: Central nervous system depression. Corrosivity to eyes is assumed. Contains a substance/a group of substances which may cause cancer by inhalation. Contains a substance/a group of substances which may damage fertility and the unborn child.
Route of exposure	Inhalation Ingestion. Skin and/or eye contact Skin absorption
Target organs	Central nervous system Eyes Skin
Medical symptoms	Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo. Unconsciousness, possibly death. Blindness. Nausea, vomiting. Visual disturbances, including blurred vision. Severe stomach pain. Difficulty in breathing.

SECTION 12: Ecological Information

Ecotoxicity The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish

LC₅₀, 96 hours: 1.3 [C12-C14 t-ALKYL AMINES (+ REACTION PRODUCTS)] mg/l, Fish

Acute toxicity - aquatic invertebrates

EC₅₀, 48 hours: 0.2 [C12-C14 t-ALKYL AMINES (+ REACTION PRODUCTS)] mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability There are no data on the degradability of this product.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not determined.

12.4. Mobility in soil

Adsorption/desorption coefficient Not available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste is classified as hazardous waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods Confirm disposal procedures with environmental engineer and local regulations.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 1992

UN No. (IMDG) 1992

NITROX HOT SHOT

UN No. (ICAO) 1992

14.2. UN proper shipping name

Proper shipping name (ADR/RID) FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL, C9 - AROMATICS)

Proper shipping name (IMDG) FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL, C9 - AROMATICS)

Proper shipping name (ICAO) FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL, C9 - AROMATICS)

Proper shipping name (ADN) FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL, C9 - AROMATICS)

14.3. Transport hazard class(es)

ADR/RID class 3

ADR/RID subsidiary risk 6.1

ADR/RID label 3 & 6.1

IMDG class 3

IMDG subsidiary risk 6.1

ICAO class/division 3

ICAO subsidiary risk 6.1

Transport labels



14.4. Packing group

ADR/RID packing group II

IMDG packing group II

ICAO packing group II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS F-E, S-D

Emergency Action Code 3WE

Hazard Identification Number (ADR/RID) 336

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

SECTION 15: Regulatory information

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

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

15.2. Chemical safety assessment

NITROX HOT SHOT

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Issued by	Health & Safety Department
Revision date	09/03/2017
Revision	12
Supersedes date	12/04/2016
SDS status	Approved.
Hazard statements in full	H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H290 May be corrosive to metals. H301 Toxic if swallowed. H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H311 Toxic in contact with skin. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H330 Fatal if inhaled. H331 Toxic if inhaled. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H370 Causes damage to organs . H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects. EUH208 Contains C12-C14 t-ALKYL AMINES (+ REACTION PRODUCTS). May produce an allergic reaction.