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PENETRATING FLUID AEROSOL

SECTION 1. IDENTIFICATION OF THE PREPARATION AND THE COMPANY / UNDERTAKING

- 1.1 Product Name:** Penetrating Fluid (Aerosol)
1.2 Identified uses: Industrial, automotive.
Uses advised against None known
1.3 Details of supplier of sds: New Tech Lubes Ltd, Unit 3 Harrison Drive Ind Est, Worksop Notts, S81 9RL
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1.4 Emergency Telephone: +44 (0)1909 730900 (09.00 -17.00 GMT Monday to Friday)

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance /mixture:

2.1.1 Regulation EC 1272/2008:

Aerosol (cat 1) H222
Health STOT-RE (cat 1) – H372, STOT-SE (cat 3) - H336,
Environmental Aquatic chronic (cat 2) - H411

2.2 Label elements:

Contains: Hydrocarbons, C9-C12,alkanes,aromatics (2-25%). Butyl acetate



Signal word(s): Danger

Hazard statements:

H222 Extremely flammable aerosol
H229 Pressurised container: may burst if heated
H336 May cause drowsiness or dizziness
H372 Causes damage to organs (CNS) through prolonged or repeated exposure if inhaled.
EUOH66 Repeated exposure may cause skin dryness or cracking
H411 Toxic to aquatic life with long-lasting effects

Precautionary statements:

P210	Keep away from heat/sparks/open flames/hot surfaces – No smoking
P211	Do not spray on an open flame or other ignition source
P251	Pressurised container – do not pierce or burn even after use.
P261	Avoid breathing fumes/ vapours/spray
P264	Wash contaminated skin thoroughly after handling
P271	Use only outdoors or in well-ventilated area
P280	Wear protective gloves/ protective clothing/ eye protection
P304 +P340	IF INHALED Remove person to fresh air and keep comfortable for breathing
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C

2.3 Other hazards

The mixture does not contain any vPvB or PBT substances.
 Danger of bursting (explosion) when heated over 50°C

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS**3.2 Mixture:**

HAZARDOUS INGREDIENTS	%W/W	CAS No EC No	REACH REG NO	HAZARD PICT/STATEMENTS
Hydrocarbon aerosol propellant (<0.1 butadiene)	25-50	68476-85-7 270-704-2	N/A	Flam gas1, H220
Hydrocarbons C9-C12, n-alkanes, isoalkanes, cyclic (aromatics <25%)	10-25	- 919-446-0	01-2119458049-33	Flam liq 3 H226 STOT-RE1 H372 STOT-SE3 H336 (CNS) Asp Tox 1 H304 EUH066 Aqua Chron 2 H411
Mineral oil – paraffinic, severely refined	10-25	Mixture	N/A mixture	Asp Tox 1 H304
N Butyl acetate	10-25	123-86-4 204-658-1	01-2119456620-43	Flam liq 3 H226 STOT-SE 3 H336
Residual oils, petroleum, oxidised (component)	<5	64742-99-0 265-204-1	N/A mixture	Eye Irrit 2 H319
4-hydroxy-4-methylpentanone	<5	123-42-2 204-626-7		Flam liq 3 H226 Eye Irrit 2 H319 STOT-SE 3 H335

3.3 Additional information

See sect 16 for full text of H phrases.

SECTION 4. FIRST AID MEASURES**4.1 Description of first aid measures:**

Eyes: Remove contact lenses. Rinse with water immediately for at least 10 minutes. Obtain medical attention if any discomfort occurs.

Skin: Remove severely contaminated clothing. Wash with soap and water. Obtain medical attention if any discomfort occurs.

Inhalation: Move to fresh air. Provide rest and warmth. If effects occur, obtain medical attention.

Ingestion: If swallowed, drink plenty of water. **Do not induce vomiting.** Obtain immediate medical attention.

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

The following symptoms may be apparent depending upon the routes of absorption as detailed in

4.1 above; eye irritation, headache, nausea, dizziness, respiratory tract irritation..
Resultant acute /long-term effect to the CNS, dermatitis, vomiting, diarrhoea and are further detailed in sect 11

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

Excessive exposure may aggravate pre-existing asthma and other respiratory disorders.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media: Powder, alcohol resistant foam. CO2, dry chemicals.

Unsuitable extinguishing media: Water stream

5.2 Special hazards arising from the substance or mixture

May produce oxides of Carbon and other combustion products. Danger of explosion when heated.

Contents will add to fuelling of fire. Solvent vapours may form explosive mixtures with air.

5.3 Advice for fire-fighters

Wear SCBA. Keep containers cool by spraying with water. Ventilate closed spaces before entering.

SECTION 6. ACCIDENTAL RELEASE MEASURES:

6.1 Personal precautions, protective equipment and emergency procedures

Remove possible sources of ignition. Avoid breathing fumes/ vapours. Ensure sufficient ventilation. Wear suitable protective equipment as in Sect 8.

6.2 Environmental precautions.

Prevent from entering drainage systems or water courses.

6.3 Methods and material for containment and clearing

If spray or gas escapes, ensure plenty of fresh air / ventilation. Absorb spilled contents on inert material such as sand or earth - collect and dispose of as in Sect 13. Scrub area with detergent and water to prevent slippery residues.

6.4 Reference to other sections

For PPE and disposal see sections 8 and 13 respectively.

SECTION 7. HANDLING AND STORAGE:

7.1 Precautions for safe handling

Keep away from all sources of ignition. Wear protective gloves/ eye protection. Do not use on hot surfaces .Wash hands after use and before eating. Do not breathe vapours / fumes.

7.2 Conditions for safe storage, including any incompatibilities

Store tightly closed, in a cool, dry, ventilated area. Keep protected from direct sunlight and temperatures above 50°C.

7.3 Specific end use (s)

For general penetration/ release applications in general industrial and automotive use.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Workplace exposure limits

Ingredients	LTEL 8 Hr	STEL 15 min	Note
Hydrocarbons C9-C12 Alkanes	350 mg/m ³	-	WEL
Oil mists	5 mg/m ³	-	NIOSH
N Butyl acetate	724 mg/m ³	966 mg/m ³	WEL
4-hydroxy-4-methylpentanone	50 ppm	75 ppm	WEL
Hydrocarbon aerosol propellant (<0.1 butadiene)	1000 ppm	1250 ppm	EH40

Biological limit value - Not established
PNECs, DNELs - Not established

8.2 Exposure controls

8.2.1 Appropriate engineering controls - Ensure good ventilation /local exhaust ventilation to keep airborne contaminants below exposure limits.

8.2.2 Personal protective equipment:

Eye / face protection - Safety goggles/glasses if there is a risk of eye contact.

Skin protection – Nitrile gloves (EN 374). See glove manufacturer data for glove selection and breakthrough time for use conditions.

Respiratory protection – If engineering controls do not maintain safe level, then filter/respirator. Type A filter material.

8.2.3 Environmental exposure controls – See sects 6,12, 13.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance/physical state:	Aerosol
Colour:	Clear, colourless –pale straw
Odour:	Strong solvent
Odour threshold:	Not established
pH:	Not applicable
Melting /freezing point:	< 0°C
IBP /boiling range:	< 0°C
Flash Point	< 0°C
Evaporation rate:	Not established
Upper /lower explosive limits:	1.8 – 9.4% by volume
Vapour pressure:	Approx 3 bar at 20°C
Vapour density:	Not established
Relative density:	Not applicable
Solubility:	Negligible water miscibility
Partition coefficient (n-octanol/water):	Not established
Auto-ignition temperature:	Not established
Decomposition temperature:	Not established
Viscosity:	Not applicable
Explosive properties:	Not established
Oxidising properties:	None

SECTION 10 STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reactions known under normal conditions of use.

10.2 Chemical Stability

Stable under proper storage and handling conditions.

10.3 Possibility of chemical reactions

No dangerous reactions known.

10.4 Conditions to avoid

Heat, flame and other ignition sources .Pressurised container: Protect from sunlight and do not Expose to temperatures exceeding 50°C. Do not pierce or burn even after use.

10.5 Incompatible materials

Avoid contact with strong oxidising agents

10.6 Hazardous decomposition products

None when used as directed.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

11.1.2. Mixtures

Acute toxicity	}	No data available
Irritation		
Corrosivity		
Sensitisation		
Repeated dose toxicity		
Carcinogenicity		
Mutagenicity		
Toxicity for reproduction		

Other information

May cause irritation and discomfort to eyes. Prolonged or repeated contact may cause irritation and dermatitis. High concentrations of vapours may cause drowsiness and dizziness
Ingestion may cause irritation to mouth and cause damage to respiratory system.

Hydrocarbons, C9-C12, Alkanes (<25% aromatics)

Toxicity / Effect	Endpoint	Value	Organism	Method	Notes
Acute Tox -Oral	LD50	>15000mg/kg	Rat	OECD 401	
Acute tox-Inhal	LC50	>13000mg/l 4 Hr	Rat		Irritating vapours, CNS effects
Acute Tox- DERM	LD50	>3400mg/kg	Rat		Minimally toxic
Skin corrosion / Irritation				OECD 404	Repeated exposure may cause skin dryness or cracking
Serious eye damage / Irritation				OECD 405	May irritate eyes
Sensitisation – Respiratory or Skin				OECD 406	No known effect.
Aspiration					May be fatal if swallowed and enters airways
CMR effects			Did not show carcinogenic, teratogenic or mutagenic effects in animal experiments.		

Mineral oil – paraffinic, severely refined

Toxicity/ Effect	Endpoint	Value	Organism	Method	Notes
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Tox -Oral	LD50	>5000mg/kg	Rat		
Toxi Inhal	LC50	>5000mg/m ³	Rat		
Tox-Derm	LD50	>5000mg/kg	Rabbit		
Skin/ Eye -Irritat				Mild, short lasting eye discomfort	
Sensitisation				No evidence skin /respiratory sensitiser	
CMR - Mut				Not expected to be CMR toxicant	

N Butyl acetate

Toxicity / Effect	Endpoint	Value	Organism	Method	Notes
Tox -Oral	LD50	10760mg/kg	Rat	OECD 423	
Toxi Inhal	LC50	23.4mg/l	Rat	OECD 403	4Hr dust/mist
Tox-Derm	LD50	>14100mg/kg	Rabbit	OECD 402	
Skin / Eye -Irritat			Rabbit	OECD 404/5	No irritation
Sensitisation				OECD 406	Not sensitising
CMR - Mut				Ames test	Negative

4-hydroxy-4-methylpentanone

Toxicity / Effect	Endpoint	Value	Organism	Method	Notes
Tox -Oral	LD50	3000mg/kg	Rat	OECD 401	
Toxi Inhal	LC0	7.6mg/l	Rat	OECD 403	4Hr vapour
Tox-Derm	LD50	13630mg/kg	Rabbit	OECD 402	
Skin -Irritat			Rabbit		Mild irritation
Eye -Irritat			Rabbit		Irritating
Sensitisation				OECD 406	Not sensitising
Carcinogenicity		Tumours noticed after prolonged inhalation tox testing on rats. The observed tumours do not appear to be relevant for men. Info based on data from similar substances			
Mutagenicity		No effects shown on mammalian or bacterial cell cultures			
Teratogenicity		No effects on foetal development (animals) based on similar substances			
Reproductive tox		No effects on fertility (animals) based on similar substances			

Hydrocarbon aerosol propellant (<0.1% Butadiene)

General

In low concentrations may cause narcotic effects. Symptoms include dizziness, headache, nausea and loss of co-ordination.

SECTION 12 ECOLOGICAL INFORMATION:

Mixture

12.1 Toxicity

- Toxic to aquatic life with long-lasting effects

12.2 Persistence and degradability

12.3 Bioaccumulative potential

12.4 Mobility in soil

12.4 results of PBT and vPvB assessment

12.6 Other adverse effects.

} No data available

Hydrocarbons, C9-C12, Alkanes (<25% aromatics)

12.1 Toxicity – Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Test	Duration	Organism	Method	Result	Notes
Aquatic -acute	48 hrs	Daphnia magna	ECO	1000mg/l	
Aquatic -acute	72 hrs	Pseudokirchneriella subcapitata	IC 50	>1000mg/l	
Aquatic -acute	96 hrs	Oncorhynchus mykiss	LC50	1000mg/l	

12.2 Persistence and degradability – 69% (exposure time 28 days), Readily biodegradable

12.3 Bioaccumulative potential – No data available.

12.4 Mobility in soil – Surface tension 0.02mN/m @ 25⁰C

12.5 Results of PBT and vPvB assessment – Contains no PBT or vPvB components at levels of 0.01% or higher

12.6 Other adverse effects – Danger to drinking water if leakage into soil

Mineral oil – paraffinic, severely refined

12.1 Toxicity – Not classified as dangerous for the environment.

12.2 Persistence and degradability – Limited biodegradability

12.3 Bioaccumulative potential – Has the potential to bio-accumulate.

12.4 Mobility in soil – Little mobility and low potential to migrate through soil.

12.5 Results of PBT and vPvB assessment – Not classified by current EU criteria.

12.6 Other adverse effects – None known

N Butyl acetate

12.1 Toxicity – Not classified as dangerous for the environment.

Test	Duration	Organism	Method	Result	Notes
Aquatic -acute	48 hrs	Daphnia magna	EC50	44mg/l	
Aquatic -acute	72 hrs	Green algae	EC 50	648mg/l	Growth inhibition
Aquatic -acute	96 hrs	Fathead minnow	LC50	18mg/l	
Aquatic -acute	40 hrs	Tetrahymena-bacteria	IC50	356mg/l	

12.2 Persistence and degradability – 69% (exposure time 28 days), Readily biodegradable

12.3 Bioaccumulative potential – No data available.

12.4 Mobility in soil – Surface tension 61.3 mN/m @ 20⁰C

12.5 Results of PBT and vPvB assessment – Contains no PBT or vPvB components at levels of 0.01% or higher

12.6 Other adverse effects – Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration

4-hydroxy-4-methylpentanone

12.1 Toxicity – Not classified as dangerous for the environment.

Test	Duration	Organism	Method	Result	Notes
Aquatic -acute	48 hrs	Daphnia magna	EC50	1000mg/l	
Aquatic -acute	72 hrs	Pseudokirchneriella subcapitata	IC 50	>1000mg/l	
Aquatic -acute	96 hrs	Oryzias latipes	LC50	>100mg/l	
Aquatic-chronic	21 days	Daphnia magna	NOEC	100mg/l	

12.2 Persistence and degradability – 98.5% (exposure time 28 days), Readily biodegradable

12.3 Bioaccumulative potential – Readily evaporates. Does not bio-accumulate

12.4 Mobility in soil – Not expected to adsorb on soil.

12.5 Results of PBT and vPvB assessment – Contains no PBT or vPvB components at levels of 0.01% or higher

12.6 Other adverse effects – Do not flush into surface water or sanitary sewer system.

Hydrocarbon aerosol propellant (<0.1% Butadiene)

General

No known ecological damage.

SECTION 13 DISPOSAL CONSIDERATIONS:

13.1 Waste Treatment Methods

Empty containers must not be burnt or incinerated because of explosion hazard. Dispose of in accordance with local authority guidelines. Empty aerosol products may be recyclable via local authority.

SECTION 14. TRANSPORT INFORMATION:

14.1 UN number	1950
14.2 UN proper shipping name	Aerosols
14.3 Transport hazard class	2 (UN / IMDG).
ADR Classification code	5F
14.4 Packing group	None
14.5 Environmental hazards	Not applicable

SECTION 15. REGULATORY INFORMATION:

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

REACH - 1907/2006
CLP - 1272/2008
DPD - 199/45/EC
COSHH - 2002 (as amended)

15.2 Chemical safety assessment

A CSA has not been carried out for this mixture.

SECTION 16. OTHER INFORMATION:

Legend

LTEL	Long term exposure limit
STEL (SE)	Short term exposure limit (Single exposure)
STOT	Specific target organ toxicity
PNEC	Predicted no effect concentration
DNEL	Derived no effect level

Hazard statements –referred to in sect 3

H220	Extremely flammable gas
H226	Flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H319	Causes serious eye irritation
H335	May cause respiratory irritation

Classification methods used to derive classification of mixture

Classification according to calculation procedure detailed in EC1272/2008

Additional information

This safety data sheet has been produced based on information supplied by the manufacturers of the materials therein and is believed to be accurate. No warranty is expressed or implied by this information. It is for the user to satisfy themselves of the suitability of the product for their own purposes.