JECTRON 300ML

Liqui Moly GmbH

Chemwatch Hazard Alert Code: **2**

Chemwatch: **47-8467**
Version No: **2.1.1.1**
Safety Data Sheet

Issue Date: **12/02/2015**
Print Date: **12/03/2015**
Initial Date: **Not Available**
S.GHS.CAN.EN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	JECTRON 300ML
Synonyms	Item No. 2007
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains naphtha petroleum, heavy, hydrodesulfurised)
Other means of identification	Not Available

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

Relevant identified uses	Fuel injection cleaner.

Details of the manufacturer/importer

Registered company name	Liqui Moly GmbH
Address	Jerg-Wieland-Strasse 4 Ulm D-89081 Germany
Telephone	+49 731 1420 0
Fax	+49 731 1420 82
Website	Not Available
Email	Not Available

Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	Not Available
Other emergency telephone numbers	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

CHEMWATCH HAZARD RATINGS

		Min	Max
Flammability	1		
Toxicity	1		
Body Contact	1		
Reactivity	1		
Chronic	2		

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

CANADIAN WHMIS SYMBOLS

CANADIAN WHMIS CLASSIFICATION

Ingredient	CAS number	Classification Description	Classification Code
naphtha petroleum, heavy, hydrodesulfurised	64742-82-1.	Combustible liquid, Toxic Material Causing Other Toxic Effects	B3, D2B
naphthalene	91-20-3	Flammable Solid, Very Toxic Material Causing Other Toxic Effects	B4, D2A

GHS Classification	Flammable Liquid Category 4, Carcinogen Category 2, STOT - SE (Narcosis) Category 3, Aspiration Hazard Category 1, Acute Aquatic Hazard Category 2, Chronic Aquatic Hazard Category 2

Label elements

Continued...

GHS label elements	
SIGNAL WORD	**DANGER**

Hazard statement(s)

H227	Combustible liquid
H351	Suspected of causing cancer
H336	May cause drowsiness or dizziness
H304	May be fatal if swallowed and enters airways
H401	Toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement(s) Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider
P308+P313	IF exposed or concerned: Get medical advice/attention.
P331	Do NOT induce vomiting.
P370+P378	In case of fire: Use alcohol resistant foam or normal protein foam for extinction.

Precautionary statement(s) Storage

P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
64742-82-1.	>60	naphtha petroleum, heavy, hydrodesulfurised
64742-47-8.	0.5-1.5	isoparaffins petroleum hydrotreated HFP
64742-94-5	0.5-1.5	solvent naphtha petroleum, heavy aromatic
91-20-3	0.1-1	naphthalene

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: ▸ Wash out immediately with fresh running water. ▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▸ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ▸ Immediately remove all contaminated clothing, including footwear. ▸ Flush skin and hair with running water (and soap if available). ▸ Seek medical attention in event of irritation.
Inhalation	▸ If fumes or combustion products are inhaled remove from contaminated area. ▸ Lay patient down. Keep warm and rested. ▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ▸ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ▸ Transport to hospital, or doctor.

Continued...

Ingestion	▸ If swallowed do **NOT** induce vomiting. ▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▸ Observe the patient carefully. ▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▸ Seek medical advice. ▸ Avoid giving milk or oils. ▸ Avoid giving alcohol. ▸ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

Indication of any immediate medical attention and special treatment needed

For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:

- Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO2 50 mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
- Lavage is indicated in patients who require decontamination; ensure use of cuffed endotracheal tube in adult patients. [Ellenhorn and Barceloux: Medical Toxicology]

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

for naphthalene intoxication: Naphthalene requires hepatic and microsomal activation prior to the production of toxic effects. Liver microsomes catalyse the initial synthesis of the reactive 1,2-epoxide intermediate which is subsequently oxidised to naphthalene dihydrodiol and alpha-naphthol. The 2-naphthoquinones are thought to produce haemolysis, the 1,2-naphthoquinones are thought to be responsible for producing cataracts in rabbits, and the glutathione-adducts of naphthalene-1,2-oxide are probably responsible for pulmonary toxicity. Suggested treatment regime:

- Induce emesis and/or perform gastric lavage with large amounts of warm water where oral poisoning is suspected.
- Instill a saline cathartic such as magnesium or sodium sulfate in water (15 to 30g).
- Demulcents such as milk, egg white, gelatin, or other protein solutions may be useful after the stomach is emptied but oils should be avoided because they promote absorption.
- If eyes/skin contaminated, flush with warm water followed by the application of a bland ointment.
- Severe anaemia, due to haemolysis, may require small repeated blood transfusions, preferably with red cells from a non-sensitive individual.
- Where intravascular haemolysis, with haemoglobinuria occurs, protect the kidneys by promoting a brisk flow of dilute urine with, for example, an osmotic diuretic such as mannitol. It may be useful to alkalinise the urine with small amounts of sodium bicarbonate but many researchers doubt whether this prevents blockage of the renal tubules.
- Use supportive measures in the case of acute renal failure. GOSSELIN, SMITH HODGE: Clinical Toxicology of Commercial Products, 5th Ed.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

	▸ Foam. ▸ Dry chemical powder. ▸ BCF (where regulations permit). ▸ Carbon dioxide.

Special hazards arising from the substrate or mixture

Fire Incompatibility	▸ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Advice for firefighters

Fire Fighting	▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ Wear full body protective clothing with breathing apparatus. ▸ Prevent, by any means available, spillage from entering drains or water course. ▸ Use water delivered as a fine spray to control fire and cool adjacent area.
Fire/Explosion Hazard	▸ Combustible. ▸ Slight fire hazard when exposed to heat or flame. ▸ Heating may cause expansion or decomposition leading to violent rupture of containers. ▸ On combustion, may emit toxic fumes of carbon monoxide (CO).

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills	Environmental hazard - contain spillage. ▸ Clean up all spills immediately. ▸ Avoid breathing vapours and contact with skin and eyes. ▸ Control personal contact with the substance, by using protective equipment.
Major Spills	Environmental hazard - contain spillage. Moderate hazard. ▸ Clear area of personnel and move upwind. ▸ Alert Fire Brigade and tell them location and nature of hazard.

	Personal Protective Equipment advice is contained in Section 8 of the MSDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	▸ Containers, even those that have been emptied, may contain explosive vapours.

Continued...

	▸ Do NOT cut, drill, grind, weld or perform similar operations on or near containers. ▸ **DO NOT** allow clothing wet with material to stay in contact with skin ▸ Electrostatic discharge may be generated during pumping - this may result in fire. ▸ Ensure electrical continuity by bonding and grounding (earthing) all equipment.
Other information	▸ Store in original containers. ▸ Keep containers securely sealed. ▸ No smoking, naked lights or ignition sources. ▸ Store in a cool, dry, well-ventilated area.

Conditions for safe storage, including any incompatibilities

Suitable container	▸ Metal can or drum ▸ Packaging as recommended by manufacturer. ▸ Check all containers are clearly labelled and free from leaks.
Storage incompatibility	For alkyl aromatics: The alkyl side chain of aromatic rings can undergo oxidation by several mechanisms. The most common and dominant one is the attack by oxidation at benzylic carbon as the intermediate formed is stabilised by resonance structure of the ring. ▸ Following reaction with oxygen and under the influence of sunlight, a hydroperoxide at the alpha-position to the aromatic ring, is the primary oxidation product formed (provided a hydrogen atom is initially available at this position) - this product is often short-lived but may be stable dependent on the nature of the aromatic substitution; a secondary C-H bond is more easily attacked than a primary C-H bond whilst a tertiary C-H bond is even more susceptible to attack by oxygen ▸ Monoalkylbenzenes may subsequently form monocarboxylic acids; alkyl naphthalenes mainly produce the corresponding naphthalene carboxylic acids. ▸ Oxidation in the presence of transition metal salts not only accelerates but also selectively decomposes the hydroperoxides.

PACKAGE MATERIAL INCOMPATIBILITIES

Not Available

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances	naphtha petroleum, heavy, hydrodesulfurised	Stoddard solvent	575 mg/m3 / 100 ppm	720 mg/m3 / 150 ppm	Not Available	Not Available
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	naphtha petroleum, heavy, hydrodesulfurised	Stoddard solvent	100 ppm	125 ppm	Not Available	Not Available
Canada - Northwest Territories Occupational Exposure Limits (English)	naphtha petroleum, heavy, hydrodesulfurised	Stoddard solvent	575 mg/m3 / 100 ppm	720 mg/m3 / 125 ppm	Not Available	Not Available
Canada - Nova Scotia Occupational Exposure Limits	naphtha petroleum, heavy, hydrodesulfurised	Stoddard solvent	100 ppm	Not Available	Not Available	TLV Basis: eye, skin & skidney damage; nausea; central nervous system impairment
Canada - Prince Edward Island Occupational Exposure Limits	naphtha petroleum, heavy, hydrodesulfurised	Stoddard solvent	100 ppm	Not Available	Not Available	TLV® Basis: Eye, skin, & kidney dam; nausea; CNS impair
Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)	naphtha petroleum, heavy, hydrodesulfurised	Stoddard solvent	525 mg/m3 / 100 ppm	Not Available	Not Available	Not Available
Canada - Alberta Occupational Exposure Limits	naphtha petroleum, heavy, hydrodesulfurised	Stoddard solvent	572 mg/m3 / 100 ppm	Not Available	Not Available	Not Available
Canada - British Columbia Occupational Exposure Limits	naphtha petroleum, heavy, hydrodesulfurised	Stoddard solvent (mineral spirits)	290 mg/m3 mg/m3	580 mg/m3 mg/m3	Not Available	Not Available
Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances	isoparaffins petroleum hydrotreated HFP	Stoddard solvent	575 mg/m3 / 100 ppm	720 mg/m3 / 150 ppm	Not Available	Not Available
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	isoparaffins petroleum hydrotreated HFP	Stoddard solvent	100 ppm	125 ppm	Not Available	Not Available
Canada - Saskatchewan Occupational Health and Safety Regulations - Designated Chemical Substances	isoparaffins petroleum hydrotreated HFP	Mineral oils, untreated and mildly treated	Not Available	Not Available	Not Available	Not Available
Canada - Northwest Territories Occupational Exposure Limits (English)	isoparaffins petroleum hydrotreated HFP	Stoddard solvent	575 mg/m3 / 100 ppm	720 mg/m3 / 125 ppm	Not Available	Not Available
Canada - Nova Scotia Occupational Exposure Limits	isoparaffins petroleum hydrotreated HFP	Stoddard solvent	100 ppm	Not Available	Not Available	TLV Basis: eye, skin & skidney damage; nausea; central nervous system impairment

Continued...

Canada - Prince Edward Island Occupational Exposure Limits	isoparaffins petroleum hydrotreated HFP	Stoddard solvent	100 ppm	Not Available	Not Available	TLV® Basis: Eye, skin, & kidney dam; nausea; CNS impair
Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)	isoparaffins petroleum hydrotreated HFP	Stoddard solvent	525 mg/m3 / 100 ppm	Not Available	Not Available	Not Available
Canada - Alberta Occupational Exposure Limits	isoparaffins petroleum hydrotreated HFP	Stoddard solvent	572 mg/m3 / 100 ppm	Not Available	Not Available	Not Available
Canada - British Columbia Occupational Exposure Limits	isoparaffins petroleum hydrotreated HFP	Stoddard solvent (mineral spirits)	290 mg/m3 mg/m3	580 mg/m3 mg/m3	Not Available	Not Available
Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances	naphthalene	Naphthalene	50 mg/m3 / 10 ppm	75 mg/m3 / 15 ppm	Not Available	Not Available
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	naphthalene	Naphthalene	10 ppm	15 ppm	Not Available	Skin
Canada - Northwest Territories Occupational Exposure Limits (English)	naphthalene	Naphthalene	52 mg/m3 / 10 ppm	79 mg/m3 / 15 ppm	Not Available	Not Available
Canada - Nova Scotia Occupational Exposure Limits	naphthalene	Naphthalene	10 ppm	15 ppm	Not Available	TLV Basis: hemotologic effects; upper respiratory tract & eye irritation; eye damage
Canada - Prince Edward Island Occupational Exposure Limits	naphthalene	Naphthalene	10 ppm	15 ppm	Not Available	TLV® Basis: (Hematologic eff; URT & eye irr; eye dam)
Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)	naphthalene	Naphthalene	52 mg/m3 / 10 ppm	79 mg/m3 / 15 ppm	Not Available	Not Available
Canada - Alberta Occupational Exposure Limits	naphthalene	Naphthalene	52 mg/m3 / 10 ppm	79 mg/m3 / 15 ppm	Not Available	Not Available
Canada - British Columbia Occupational Exposure Limits	naphthalene	Naphthalene	10 ppm ppm	15 ppm ppm	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
naphtha petroleum, heavy, hydrodesulfurised	Stoddard solvent; (Mineral spirits, 85% nonane and 15% trimethyl benzene)	100 ppm	350 ppm	29500 ppm
isoparaffins petroleum hydrotreated HFP	Stoddard solvent; (Mineral spirits, 85% nonane and 15% trimethyl benzene)	100 ppm	350 ppm	29500 ppm
solvent naphtha petroleum, heavy aromatic	Aromatic hydrocarbon solvents; (High flash naphtha distillates; Solvent naphtha (petroleum), light aromatic)	3.1 ppm	34 ppm	410 ppm
naphthalene	Naphthalene	15 ppm	15 ppm	500 ppm

Ingredient	Original IDLH	Revised IDLH
naphtha petroleum, heavy, hydrodesulfurised	29,500 mg/m3	20,000 mg/m3
isoparaffins petroleum hydrotreated HFP	29,500 mg/m3	20,000 mg/m3
solvent naphtha petroleum, heavy aromatic	Not Available	Not Available
naphthalene	500 ppm	250 ppm

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.
Personal protection	
Eye and face protection	▸ Safety glasses with side shields. ▸ Chemical goggles. ▸ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.
Skin protection	See Hand protection below
Hands/feet protection	▸ Wear chemical protective gloves, e.g. PVC. ▸ Wear safety footwear or safety gumboots, e.g. Rubber The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where

Continued...

	the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and.has to be observed when making a final choice.
Body protection	See Other protection below
Other protection	▸ Overalls. ▸ P.V.C. apron. ▸ Barrier cream.
Thermal hazards	Not Available

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:
"Forsberg Clothing Performance Index".
The effect(s) of the following substance(s) are taken into account in the ***computer-generated*** selection:
JECTRON 300ML

Material	CPI
TEFLON	C

* CPI - Chemwatch Performance Index
A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion
NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -
* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Respiratory protection

Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.
Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 5 x ES	A-AUS / Class 1 P2	-	A-PAPR-AUS / Class 1 P2
up to 25 x ES	Air-line*	A-2 P2	A-PAPR-2 P2
up to 50 x ES	-	A-3 P2	-
50+ x ES	-	Air-line**	-

* - Continuous-flow; ** - Continuous-flow or positive pressure demand
^ - Full-face
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Yellow liquid with characteristic odour; not miscible with water.

Physical state	Liquid	**Relative density (Water = 1)**	0.806
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Available
pH (as supplied)	Not Applicable	**Decomposition temperature**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	<7
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Applicable
Flash point (°C)	63	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Combustible.	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	7	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	0.6	**Volatile Component (%vol)**	97
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water (g/L)	Immiscible	**pH as a solution**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	▸ Unstable in the presence of incompatible materials. ▸ Product is considered stable. ▸ Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7

Continued...

Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo. There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.
Ingestion	Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733) Accidental ingestion of the material may be damaging to the health of the individual. Ingestion of petroleum hydrocarbons can irritate the pharynx, oesophagus, stomach and small intestine, and cause swellings and ulcers of the mucous. Symptoms include a burning mouth and throat; larger amounts can cause nausea and vomiting, narcosis, weakness, dizziness, slow and shallow breathing, abdominal swelling, unconsciousness and convulsions.
Skin Contact	Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.
Eye	There is evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Severe inflammation may be expected with pain. The liquid produces a high level of eye discomfort and is capable of causing pain and severe conjunctivitis. Corneal injury may develop, with possible permanent impairment of vision, if not promptly and adequately treated.
Chronic	There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Constant or exposure over long periods to mixed hydrocarbons may produce stupor with dizziness, weakness and visual disturbance, weight loss and anaemia, and reduced liver and kidney function.

JECTRON 300ML	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
naphtha petroleum, heavy, hydrodesulfurised	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: >1900 mg/kg[1]	Not Available
	Inhalation (rat) LC50: >1400 ppm/8H[2]	
isoparaffins petroleum hydrotreated HFP	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: >1900 mg/kg[1]	Not Available
	Inhalation (rat) LC50: >1400 ppm/8H[2]	
solvent naphtha petroleum, heavy aromatic	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: >1900 mg/kg[1]	[PETROFIN]
	Inhalation (rat) LC50: >3670 ppm/8 h *[2]	Eye (rabbit): Irritating
	Oral (rat) LD50: >4500 mg/kg/4H[1]	
naphthalene	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: >2500 mg/kg[2]	Eye (rabbit): 100 mg - mild
	Oral (rat) LD50: 490 mg/kg[2]	Skin (rabbit):495 mg (open) - mild
Legend:	*1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's msds Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*	

NAPHTHA PETROLEUM, HEAVY, HYDRODESULFURISED	No significant acute toxicological data identified in literature search. **for petroleum:** This product contains benzene which is known to cause acute myeloid leukaemia and n-hexane which has been shown to metabolize to compounds which are neuropathic. This product contains toluene. There are indications from animal studies that prolonged exposure to high concentrations of toluene may lead to hearing loss.
ISOPARAFFINS PETROLEUM HYDROTREATED HFP	No significant acute toxicological data identified in literature search.
SOLVENT NAPHTHA PETROLEUM, HEAVY AROMATIC	**for petroleum:** This product contains benzene which is known to cause acute myeloid leukaemia and n-hexane which has been shown to metabolize to compounds which are neuropathic. This product contains toluene. There are indications from animal studies that prolonged exposure to high concentrations of toluene may lead to hearing loss. This product contains ethyl benzene and naphthalene from which there is evidence of tumours in rodents **Carcinogenicity:** Inhalation exposure to mice causes liver tumours, which are not considered relevant to humans.

Continued...

NAPHTHALENE	The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. **WARNING:** This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.

Acute Toxicity	⊘	**Carcinogenicity**	✔
Skin Irritation/Corrosion	⊘	**Reproductivity**	⊘
Serious Eye Damage/Irritation	⊘	**STOT - Single Exposure**	✔
Respiratory or Skin sensitisation	⊘	**STOT - Repeated Exposure**	⊘
Mutagenicity	⊘	**Aspiration Hazard**	✔

Legend: ✔ *– Data required to make classification available*
✘ *– Data available but does not fill the criteria for classification*
⊘ *– Data Not Available to make classification*

CMR STATUS

SKIN	naphthalene	Canada - Alberta Occupational Exposure Limits - Skin|Canada - British Columbia Occupational Exposure Limits - Skin	1|Skin; 2B

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.
Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
naphthalene	HIGH (Half-life = 258 days)	LOW (Half-life = 1.23 days)

Bioaccumulative potential

Ingredient	Bioaccumulation
isoparaffins petroleum hydrotreated HFP	LOW (BCF = 159)
solvent naphtha petroleum, heavy aromatic	LOW (BCF = 159)
naphthalene	HIGH (BCF = 18000)

Mobility in soil

Ingredient	Mobility
naphthalene	LOW (KOC = 1837)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	▸ Containers may still present a chemical hazard/ danger when empty. ▸ Return to supplier for reuse/ recycling if possible. Otherwise: ▸ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. ▸ Where possible retain label warnings and MSDS and observe all notices pertaining to the product.

SECTION 14 TRANSPORT INFORMATION

Labels Required

	
Marine Pollutant	

Continued...

Land transport (TDG)

UN number	3082
Packing group	III
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains naphtha petroleum, heavy, hydrodesulfurised)
Environmental hazard	No relevant data
Transport hazard class(es)	Class: 9 Subrisk: Not Applicable
Special precautions for user	Special provisions: 16 Explosive Limit and Limited Quantity Index: 5 ERAP Index: Not Applicable

Air transport (ICAO-IATA / DGR)

UN number	3082
Packing group	III
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. * (contains naphtha petroleum, heavy, hydrodesulfurised)
Environmental hazard	No relevant data
Transport hazard class(es)	ICAO/IATA Class: 9 ICAO / IATA Subrisk: Not Applicable ERG Code: 9L
Special precautions for user	Special provisions: A97 A158 A197 Cargo Only Packing Instructions: 964 Cargo Only Maximum Qty / Pack: 450 L Passenger and Cargo Packing Instructions: 964 Passenger and Cargo Maximum Qty / Pack: 450 L Passenger and Cargo Limited Quantity Packing Instructions: Y964 Passenger and Cargo Limited Maximum Qty / Pack: 30 kg G

Sea transport (IMDG-Code / GGVSee)

UN number	3082
Packing group	III
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains naphtha petroleum, heavy, hydrodesulfurised)
Environmental hazard	Not Applicable
Transport hazard class(es)	IMDG Class: 9 IMDG Subrisk: Not Applicable
Special precautions for user	EMS Number: F-A , S-F Special provisions: 274 335 Limited Quantities: 5 L

Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code

Source	Ingredient	Pollution Category
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	naphtha petroleum, heavy, hydrodesulfurised	Y
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	isoparaffins petroleum hydrotreated HFP	Y
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	naphthalene	X

SECTION 15 REGULATORY INFORMATION

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

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

naphtha petroleum, heavy, hydrodesulfurised(64742-82-1.) is found on the following regulatory lists	"Canada Domestic Substances List (DSL)","Canada - British Columbia Occupational Exposure Limits","Canada - Prince Edward Island Occupational Exposure Limits","Canada - Northwest Territories Occupational Exposure Limits (English)","Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances","Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits","Canada - Nova Scotia Occupational Exposure Limits","Canada Categorization decisions for all DSL substances","Canada - Quebec Permissible Exposure Values for Airborne Contaminants (French)","Canada - Alberta Occupational Exposure Limits"

Continued...

isoparaffins petroleum hydrotreated HFP(64742-47-8.) is found on the following regulatory lists	"Canada Domestic Substances List (DSL)","Canada - British Columbia Occupational Exposure Limits","International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs","Canada - Prince Edward Island Occupational Exposure Limits","Canada - Saskatchewan Occupational Health and Safety Regulations - Designated Chemical Substances","Canada - Northwest Territories Occupational Exposure Limits (English)","Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances","Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits","Canada - Nova Scotia Occupational Exposure Limits","Canada Categorization decisions for all DSL substances","Canada - Quebec Permissible Exposure Values for Airborne Contaminants (French)","Canada - Alberta Occupational Exposure Limits"
solvent naphtha petroleum, heavy aromatic(64742-94-5) is found on the following regulatory lists	"Canada Domestic Substances List (DSL)","Canada Categorization decisions for all DSL substances"
naphthalene(91-20-3) is found on the following regulatory lists	"Canada Domestic Substances List (DSL)","Canada - British Columbia Occupational Exposure Limits","International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs","Canada - Prince Edward Island Occupational Exposure Limits","Canada - Northwest Territories Occupational Exposure Limits (English)","Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances","Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits","Canada - Nova Scotia Occupational Exposure Limits","Canada Categorization decisions for all DSL substances","Canada - Quebec Permissible Exposure Values for Airborne Contaminants (French)","Canada - Alberta Occupational Exposure Limits"

SECTION 16 OTHER INFORMATION

Other information

Ingredients with multiple cas numbers

Name	CAS No
naphtha petroleum, heavy, hydrodesulfurised	64742-82-1., 8052-41-3.
isoparaffins petroleum hydrotreated HFP	101795-05-5., 1030262-12-4., 64742-47-8., 64742-82-1., 8052-41-3.

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.