Material Safety Data Sheet

Jectron 300ml

1. Product and company identification

Product name : Jectron 300ml

Material uses : Not available.

Code : 2007

Supplier/Manufacturer : LIQUI MOLY GmbH
Jerg-Wieland-Strasse 4
D-89081 Ulm-Lehr, Germany
Tel.: +49(0)731 / 1420-0
Fax: +49(0)731 / 1420-88

Validation date : 15/04/2012.

Prepared by : Chemical Check GmbH

In case of emergency : +49(0)731 / 1420-0

2. Hazards identification

Physical state : Liquid. [Clear.]

Color : Yellow.

Odor : Characteristic.

Emergency overview

Signal word : WARNING!

Hazard statements : COMBUSTIBLE LIQUID AND VAPOR. MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. HARMFUL OR FATAL IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. CANCER HAZARD - CAN CAUSE CANCER.

Precautions : Keep away from heat, sparks and flame. Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Do not ingest. Do not get on skin or clothing. Avoid contact with eyes. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Inhalation : Slightly irritating to the respiratory system.

Ingestion : Aspiration hazard if swallowed. Can enter lungs and cause damage.

Skin : Slightly irritating to the skin.

Eyes : Slightly irritating to the eyes.

Potential chronic health effects

Chronic effects : Contains material that may cause target organ damage, based on animal data. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : Can cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

2. Hazards identification

Target organs : Contains material which may cause damage to the following organs: lungs, upper respiratory tract, skin, central nervous system (CNS).

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Skin : Adverse symptoms may include the following:
irritation
redness
dryness
cracking

Eyes : Adverse symptoms may include the following:
irritation
watering
redness

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

3. Composition/information on ingredients

Name	CAS number	%
Naphtha (petroleum), hydrodesulfurized heavy	64742-82-1	60-100
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	64742-47-8	1-5
Hydrocarbons, C10, aromatics, <1% naphthalene	64742-94-5	1-5
naphthalene	91-20-3	0.1-1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Antidote information

4. First aid measures

Product/ingredient name	Antidote information
No antidote information known	

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Flammability of the product : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Extinguishing media

Suitable : Use dry chemical, CO_2, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
Hydrocarbon.
Toxic pyrolysis products

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on explosion hazards : Air/vapor mixtures may be explosive.

6. Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Avoid exposure - obtain special instructions before use. Do not get in eyes or on skin or clothing. Do not swallow. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	**List name**	**ppm**	**mg/m³**	**Other**	**ppm**	**mg/m³**	**Other**	**ppm**	**mg/m³**	**Other**	**Notations**
Naphtha (petroleum), hydrodesulfurized heavy naphthalene	US ACGIH 1/2011	-	5	-	-	-	-	-	-	-	[a]
	US ACGIH 2/2010	10	52	-	15	79	-	-	-	-	
	AB 4/2009	10	52	-	15	79	-	-	-	-	[1]
	BC 9/2010	10	-	-	15	-	-	-	-	-	[1]
	ON 7/2010	10	52	-	15	79	-	-	-	-	
	QC 6/2008	10	52	-	15	79	-	-	-	-	
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics, as total hydrocarbon vapor	US ACGIH 2/2010	-	200	-	-	-	-	-	-	-	[1]
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics, as total hydrocarbon vapour	AB 4/2009	-	200	-	-	-	-	-	-	-	[1]
	BC 9/2010	-	200	-	-	-	-	-	-	-	[1] [A]
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	ON 7/2010	-	200	-	-	-	-	-	-	-	[1]
Hydrocarbons, C10, aromatics, <1% naphthalene, as total hydrocarbon vapor	US ACGIH 2/2010	-	200	-	-	-	-	-	-	-	[1]

[1]Absorbed through skin.
Form: [a]Mist
Notes: [A]as total hydrocarbon vapour

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

8. Exposure controls/personal protection

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Use appropriate respiratory protection if there is a risk of exceeding any exposure limits. [organic vapor filter (Type A)] high concentrations : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. >8 hours (breakthrough time): Viton®.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: Tight fitting protective goggles with side shields.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Recommended: Long-sleeved protective clothing. Safety shoes.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Physical state : Liquid. [Clear.]

Flash point : 63°C (145.4°F)

Auto-ignition temperature : Not available.

Flammable limits : Lower: 0.6%
Upper: 7%
(Naphtha (petroleum), hydrodesulfurized heavy)

Color : Yellow.

Odor : Characteristic.

pH : Not available.

Boiling/condensation point : Not available.

Melting/freezing point : Not available.

Density : 0.806 g/cm^3 [15°C (59°F)]

Vapor pressure : Not available.

Vapor density : Not available.

Odor threshold : Not available.

Evaporation rate : Not available.

9. Physical and chemical properties

Viscosity : Kinematic (40°C (104°F)): <0.07 cm^2/s (<7 cSt)

Solubility : Insoluble in the following materials: cold water and hot water.

$LogK_{ow}$: 4.2 to 7.2 (Naphtha (petroleum), hydrodesulfurized heavy)

10. Stability and reactivity

Chemical stability : The product is stable.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials
Keep away from strong acids.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Naphtha (petroleum), hydrodesulfurized heavy	LC50 Inhalation Vapor	Rat	>3 mg/l	4 hours
	LD50 Dermal	Rat	3400 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
naphthalene	LC50 Inhalation Dusts and mists	Rat	>340 mg/L	1 hours
	LC50 Inhalation Dusts and mists	Rat	>110 mg/L	4 hours
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	490 mg/kg	-
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours
	LC50 Inhalation Dusts and mists	Rat	>5000 mg/m^3	8 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Hydrocarbons, C10, aromatics, <1% naphthalene	LC50 Inhalation Vapor	Rat	>5 mg/L	4 hours
	LD50 Oral	Rat	>2000 mg/kg	-

Chronic toxicity

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation

11. Toxicological information

naphthalene	Skin - Mild irritant	Rabbit	-	495 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 0.05 Mililiters	-
Hydrocarbons, C10, aromatics, <1% naphthalene	Skin - Mild irritant	Rabbit	-	24 hours 500 microliters	-

Sensitizer

Product/ingredient name	Route of exposure	Species	Result
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	skin	Rat	Not sensitizing

Conclusion/Summary : Not available.

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
naphthalene	A4	2B	-	-	Possible	-

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	-	Experiment: In vivo Subject: Bacteria	Negative

Teratogenicity

Not available.

Reproductive toxicity

Not available.

12. Ecological information

Ecotoxicity : This product shows a high bioaccumulation potential. This material is harmful to aquatic life with long lasting effects.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Naphtha (petroleum), hydrodesulfurized heavy	NOEC 0.28 mg/l	Daphnia - Daphnai magna	21 days
	Acute EC50 >100 mg/l	Daphnia	48 hours
	Acute IC50 10 to 100 mg/l	Algae	72 hours
	Acute LC50 10 to 100 mg/l	Fish	96 hours
naphthalene	Acute EC50 1600 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <=24 hours	48 hours
	Acute LC50 2350 ug/L Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 213 ug/L Fresh water	Fish - Melanotaenia fluviatilis - Larvae - 1 days	96 hours
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	IC50 4.2 mg/l	Algae - Selenastrum capricornutum	96 hours
	Acute LC50 2200 ug/L Fresh water	Fish - Lepomis macrochirus - 35	4 days

12. Ecological information

		to 75 mm	
	Acute LC50 2900 ug/L Fresh water	Fish - Oncorhynchus mykiss - 35 to 75 mm	96 hours
Hydrocarbons, C10, aromatics, <1% naphthalene	Acute EC50 1 to 3 mg/l	Algae	72 hours
	Acute EC50 3 to 10 mg/l	Daphnia	48 hours
	Acute LC50 2 to 5 mg/l	Fish	96 hours

Persistence/degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Naphtha (petroleum), hydrodesulfurized heavy	OECD 301F Ready Biodegradability - Manometric Respirometry Test	74.7 % - Inherent - 28 days	-	-
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	OECD 301F Ready Biodegradability - Manometric Respirometry Test	69 % - 28 days	-	-

Partition coefficient: n-octanol/water : 4.2 to 7.2 (Naphtha (petroleum), hydrodesulfurized heavy)

Bioconcentration factor : Not available.

Mobility : Not available.

Toxicity of the products of biodegradation : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

TDG/IMDG/IATA : Not regulated.

15. Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.

WHMIS (Canada) : Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).
Class D-2A: Material causing other toxic effects (Very toxic).

Canadian lists

Canadian NPRI : The following components are listed: Hydrotreated light distillate; Heavy aromatic solvent naphtha

CEPA Toxic substances : The following components are listed: Naphthalene

Canada inventory : All components are listed or exempted.

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.

International regulations

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements : COMBUSTIBLE LIQUID AND VAPOR. MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. HARMFUL OR FATAL IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. CANCER HAZARD - CAN CAUSE CANCER.

Hazardous Material Information System (U.S.A.) :

Health	*	1
Flammability		2
Physical hazards		0

16. Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Date of issue : 15/04/2012.

Date of previous issue : 30/08/2008.

Version : 2

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.