

SECTION 1: Identification

1.1. Identification

Product form : Substance
 Substance name : **A111 - Alkaryl polymeric hydrocarbon**
 Chemical name : **Alkaryl polymeric hydrocarbon**
 CAS-No. : -
 Product code : A111

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Use of the product
 Lubricant for vacuum pump
 Reserved for professional users
 Restrictions on use : No data available.

1.3. Supplier

Pfeiffer Vacuum SAS
 98, avenue de Brogny - BP 2069
 74009 Annecy Cedex - FRANCE
 T +(33) 04 50 65 77 77
support-service@adixen.fr

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
USA	American Association of Poison Control Centers	515 King Street, Suite 510 VA 22314 Alexandria	1-800-222-1222	

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Hazardous to the aquatic environment — Chronic Hazard, Category 4 H413 May cause long lasting harmful effects to aquatic life.

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard statements (GHS US) : H413 - May cause long lasting harmful effects to aquatic life.
 Precautionary statements (GHS US) : P273 - Avoid release to the environment.
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : Inhalation may cause chemically-induced pneumopathy. Prolonged or repeated contact with the skin may cause dermatitis. The oil used may contain harmful impurities. Not categorised as flammable but is combustible. Regulations forbid the disposal of oils and lubricants in the natural environment. In the event of contact with the eyes: irritation, in particular in the event of prolonged contact.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%	GHS-US classification
A111 - Alkaryl polymeric hydrocarbon	(CAS-No.) - (EC-No.) -	100	Aquatic Chronic 4, H413

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : Get medical advice/attention if you feel unwell. Protection of emergency staff
No initiative should be taken that implies an individual risk or the absence of appropriate training. Before trying to rescue the victims, isolate the area from all potential inflammation sources, including by disconnecting the power supply. Ensure adequate ventilation and check that the atmosphere is breathable and without danger before entering confined spaces.
- First-aid measures after inhalation : In case of dizziness or nausea, expose the person to fresh air. If symptoms persist, seek medical attention or admit the person to hospital.
- First-aid measures after skin contact : Remove contaminated clothing. Wash with water and soap. Should skin come into contact with high-pressure spray, there is a risk of entry into the body. The injured person should be taken to hospital even if there is no apparent wound.
- First-aid measures after eye contact : In case of eye contact, immediately rinse with clean water for 10-15 minutes. Consult an ophthalmologist if irritation, redness, pain or persistent visual discomfort.
- First-aid measures after ingestion : If the person is conscious, rinse mouth with water. Do NOT induce vomiting. Immediately call a poison center or doctor/physician. If inhalation is suspected (occurrence of vomiting, for example), transfer immediately to hospital.

4.2. Most important symptoms and effects (acute and delayed)

- Potential Adverse human health effects and symptoms : No data available.
- Symptoms/effects after inhalation : Irritation of the respiratory tract due to excessive exposure to emanations, mist or vapour.
- Symptoms/effects after eye contact : Eye contact can cause reddening and pain.
- Symptoms/effects after ingestion : The ingestion (swallowing) of this product may cause a loss of awareness and coordination.
- Chronic symptoms : See Sub Heading 2.1/2.3.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically. Inhalation may cause chemically-induced pneumopathy. Prolonged or repeated contact with the skin may cause dermatitis.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Sprayed water with additive, chemical powder, chemical foam, carbon dioxide extinguisher.
- Unsuitable extinguishing media : Solid water jet.

5.2. Specific hazards arising from the chemical

- Fire hazard : Combustible liquid.
- Explosion hazard : The increase in pressure resulting from a fire or exposure to high temperatures may cause the explosion of the container.
- Reactivity in case of fire : Combustion probably produces a complex mixture of solid and liquid particles suspended in the air and gases including: metal oxides, nitrogen oxides (NOx), phosphorous oxides, carbon monoxide, carbon dioxide, unburned hydrocarbons (smoke), hydrogen sulphide and unidentified organic and inorganic compounds. Inhalation is highly dangerous.
- Hazardous decomposition products in the event of fire : The incomplete combustion and thermolysis produce more or less toxic gases, such as carbon oxides.

5.3. Special protective equipment and precautions for fire-fighters

- Precautionary measures fire : Do not enter the danger zone without suitable chemical protection clothing and self-contained breathing apparatus.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.
- Other information : Packaging exposed to heat or open flames should be cooled with a fine water spray. Prevent fire-fighting water from entering drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Eliminate every possible source of ignition. Keep non-involved staff away from the spillage area. Alert the security staff. Unless the spillage is minor, the feasibility of any action should be evaluated and if possible submitted to a competent person, trained in managing emergencies. Block the leak if this can be done without danger. Avoid any direct contact with the product. Remain upwind/at a distance from the source. In case of large spillages, alert inhabitants downwind. Remove all sources of ignition if this can be done without danger. Spillages of small quantities of product, particularly in the open where vapours usually disperse rapidly, are dynamic situations that will limit exposure to dangerous concentrations.

Note - the recommended measures are based on spillage scenarios that are the most likely for this product; however, local conditions (wind, air temperature, direction and speed of waves/current) can have considerable influence on the choice of appropriate measures. Local experts should therefore be consulted if necessary. Local regulations may also prescribe or limit the measures to take.

6.1.1. For non-emergency personnel

Protective equipment : Personal protection : see section 8.
 Emergency procedures : Avoid contact with eyes and skin. Do not breathe vapor. To minimise the risk of exposure, wear gloves, goggles, boots and hydrocarbon-resistant clothes.

6.1.2. For emergency responders

Protective equipment : Personal protection : see section 8.
 Emergency procedures : Avoid contact with eyes and skin. Do not breathe vapor. To minimise the risk of exposure, wear gloves, goggles, boots and hydrocarbon-resistant clothes. Small spillages: normal antistatic work clothes are usually sufficient. Large spillages: a full protective suit, in a material resistant to chemicals and heat should be used. Work gloves offering sufficient resistance against chemicals, particularly aromatic hydrocarbons. Note: PVA gloves are not watertight, and are not suitable for an emergency operation. Safety helmet, anti-slip and antistatic safety shoes or boots. Safety goggles and/or visor if projections or eye contact are possible/foreseeable. Respiratory protection: a half-mask or full respiratory mask with filter(s) against organic vapours (and for H₂S if necessary). It is possible to use a self-contained breathing apparatus, depending on the extent of the spillage and foreseeable exposure levels. If the situation cannot be correctly evaluated, or if a lack of oxygen is possible, only a self-contained breathing apparatus should be used.

6.2. Environmental precautions

Avoid discharge or leakage into drains, trenches or rivers by using sand, soil or other appropriate barrier. In the event of spreading, alert the competent authorities if the situation cannot be quickly and efficiently managed. In case of minor spillages in closed bodies of water (ports for example), contain the product with floating barriers or other devices. Collect the spilled product by absorption with specific floating absorbents. If possible, large spillages in natural bodies of water should be contained by floating barriers or other mechanical devices. If this is impossible, keep the propagation of the spillage under control and collect the product by skimming or other appropriate mechanical methods. The use of dispersants should be subject to the opinion of an expert, and approved by the local authorities if necessary.

6.3. Methods and material for containment and cleaning up

For containment : Limited spillage: Absorb the liquid with sand or soil. Gather up and place in an appropriate container, clearly marked, for disposal in accordance with regulations. Major spillage: Prevent any spreading by using a barrier of sand, soil or other material to contain the product. Gather up the product directly or with absorbent material. Dispose of as for limited spillage. Do not discharge the recovered product as is into the Environment.
 Methods for cleaning up : Wash soiled surfaces taking care not to contaminate the natural environment.

6.4. Reference to other sections

For information on handling, see section 7. For information on personal protective equipment, see section 8. For information on disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Ensure adequate ventilation. Use in well ventilated place.
 Precautions for safe handling : Do not breathe vapor. Avoid contact with skin and eyes. Do not eat or drink at point of use. Personal protection : see section 8.

Hygiene measures : Provide good ventilation in process area to prevent formation of vapour, aerosol. Keep packaging tightly closed and away from sources of heat, sparks and naked flames. To avoid the risk of fire, design facilities in order to prevent: - accidental spattering of the product (for example, due to a broken seal) on hot casings or electrical contacts. - accidental oil leaks from a pressurised circuit resulting in very fine flammable spray (the lower flammability limit for oil mist is reached at concentrations of about 45 g/m³). Cloths saturated with the product, paper or materials used to absorb spills are a fire hazard. Do not allow them to accumulate. Dispose of them immediately in a safe way after use.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Store at room temperature away from water, humidity, heat and any ignition source. Keep containers closed when not in use.

Storage conditions : Storage - away from: strong oxidising agents; direct sunlight; sources of heat.

Incompatible materials : Oxidizing agents, reducing agents, acids, bases.

Heat-ignition : Keep away from heat and ignition sources.

Information on mixed storage : The recommended materials for the containers or container linings: soft steel, stainless steel. Not to be used: some synthetic materials may not be appropriate for the containers or their lining depending on the properties of the materials in question and the intended use. Compatibility should be verified by consulting the manufacturer. Only store in the original container or a container adapted to this type of product. Keep the containers tightly sealed and correctly labelled. Protect from direct sunlight. Empty containers may contain vapours or harmful, flammable or explosive residue. Do not cut, crush, drill, weld, reuse or throw away containers unless the proper precautions have been taken to counter these risks.

Storage area : Store away from heat. Store in a well-ventilated place.

Special rules on packaging : Only use hydrocarbon-resistant containers, seals, pipes, etc.

Packaging materials : Keep in original containers closed. Empty packaging may contain flammable or explosive vapours.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Alkaryl polymeric hydrocarbon (-)

France	In France, neither the Ministry of Labour responsible for defining the occupational exposure limits in France nor the Scientific Committee for Occupational Exposure Limits (SCOEL) in Europe has set any limit values concerning oil mists. Within the prevention institution (CRAM, INRS, etc.), it has been decided to retain the NIOSH value of 0.5 mg/m ³ as an objective to be achieved in terms of sanitation of the workshops where the cutting fluids are used. SOURCE: CUTTING FLUID AEROSOL METROLOGY; ND 2267 - 207 - 07; INRS; Occupational health and safety - Documentary notes booklets - 2nd quarter 2007.
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8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Use only in well ventilated areas.

Environmental exposure controls : Avoid release into natural bodies of water, waste water or the soil.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Due to the many possible conditions of exposure, the user should consider the actual period of use of a chemical protective glove to be significantly shorter than the period prior to permeation. You must follow the manufacturer's instructions, particularly concerning minimum thickness and minimum period prior to permeation. This information must not replace the compliance tests carried out by the final user. The protection provided by the glove depends on the conditions in which the substance/mix is used.

Use at minimum a pair of chemical-resistant, leak-proof gloves (compliant with the EN 374 standard). The use of this product means that the type of material and thickness of the gloves and the time taken to break down the material used to make the gloves cannot be decided until an in-depth study of the workstation has taken place, leading to a clear definition of the conditions of use and the most accurate possible evaluation. The gloves should therefore be chosen with the advice of the individual protective equipment manufacturer.

Wear waterproof, hydrocarbon-resistant gloves (Nitrile gloves recommended in accordance with the norm EN374). Oil-tight rubber

Eye protection:

Goggles with lateral protection (according to standard EN 166).

Skin and body protection:

Avoid any skin contact. Depending on the conditions, face shields, hydrocarbon-resistant boots and clothing, or protective footwear should be worn.

Respiratory protection:

No special respiratory protection equipment is required under normal conditions of use.

If the mist or vapours cannot be controlled, a breathing apparatus fitted with a cartridge for organic vapours combined with a pre-filter is to be used (type A/P combined filter in accordance with EN141/EN143 standards).

Thermal hazard protection:

Heated product causes burns.

Other information:

Ensure sufficient ventilation. Do not breathe smoke/gas/mists/vapours/aerosols. Wear protective gloves/protective clothes/eye protection/face protection. Do not touch the product without suitable protective equipment. Do not eat, drink or smoke in the workplace under any circumstances.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear liquid.
Colour	: Light brown.
Odour	: Hydrocarbon compound.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 195 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: ≈ 0.87 (15°C)
Solubility	: Insoluble in water.
Log Pow	: No data available
Viscosity, kinematic	: 97 °C
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity relating to the substances, containers and contaminants to which the substance or mixture may be exposed during their transport, storage and use : No data available.

10.2. Chemical stability

The product is stable in normal conditions of use. Stability of the substance or mixture under normal and predictable storage and handling room conditions in terms of temperature and pressure : Chemically stable under standard room conditions (room temperature).

10.3. Possibility of hazardous reactions

Reaction or polymerisation of the substance or mixture releasing excessive heat or pressure or generating other dangerous conditions : This product will not polymerise by releasing excessive heat or pressure or by generating other dangerous conditions. (See section 10.1 for reactivity which can generate risks by taking into account the substances, containers and contaminants to which the substance or mixture may be exposed during their transport, storage and use.).

10.4. Conditions to avoid

Listing of conditions such as temperature, pressure, light, shocks, electrostatic discharges, vibrations or other physical stresses which may lead to a dangerous situation : According to our knowledge, temperature, pressure, light, shocks, etc. do not lead to a dangerous situation. Keep away from open flames, hot surfaces and ignition sources. Continuous exposure to temperatures >200° C.

10.5. Incompatible materials

Families of substances or mixtures, or specific substances, such as water, air, acids, bases, oxidising agents, with which the substance or mixture may react by generating a dangerous situation : Strong oxidising agents, strong acids and strong bases.

10.6. Hazardous decomposition products

Known dangerous decomposition products and products which may be reasonably predictable as such following use, storage, pouring and heating : This product does not decompose under normal conditions. Decomposition products in case of fire : consult section 5.2.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met)
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met)
Respiratory or skin sensitization	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
	This product consists of severely refined mineral oils and others considered as non-carcinogenic. All the oils of this product have been shown to contain less than 3% of extractible products by the IP 346 test.
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
Specific target organ toxicity – single exposure	: Not classified (Based on available data, the classification criteria are not met)
Specific target organ toxicity – repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Viscosity, kinematic	: No data available
Potential Adverse human health effects and symptoms	: No data available.
Symptoms/effects after inhalation	: Irritation of the respiratory tract due to excessive exposure to emanations, mist or vapour.
Symptoms/effects after eye contact	: Eye contact can cause reddening and pain.
Symptoms/effects after ingestion	: The ingestion (swallowing) of this product may cause a loss of awareness and coordination.
Chronic symptoms	: See Sub Heading 2.1/2.3.

Other information : Prolonged or repeated contact with products containing mineral oils may cause the skin's lipidic layer to be removed, especially at high temperatures. Such contact may lead to irritation and probably dermatosis, particularly when adequate personal hygiene is not practiced.

The oils used may contain harmful impurities that have accumulated during use. The concentration of impurities depends on usage, and may cause increasing irritation of the skin and eyes and may pose risks to safety and the environment during disposal. Any oil used is to be handled with caution so as to avoid skin contact if possible.

In France, neither the Ministry of Labour responsible for defining the occupational exposure limits in France nor the Scientific Committee for Occupational Exposure Limits (SCOEL) in Europe has set any limit values concerning oil mists. Within the prevention institution (CRAM, INRS, etc.), it has been decided to retain the NIOSH value of 0.5 mg/m³ as an objective to be achieved in terms of sanitation of the workshops where the cutting fluids are used. SOURCE: CUTTING FLUID AEROSOL METROLOGY; ND 2267 - 207 - 07; INRS; Occupational health and safety - Documentary notes booklets - 2nd quarter 2007.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Water-insoluble mixture. May settle in deposits and physically ensnare aquatic organisms. May cause long lasting harmful effects to aquatic life.

12.2. Persistence and degradability

Persistence and degradability	Not easily biodegradable. Intrinsically biodegradable.
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12.3. Bioaccumulative potential

Bioaccumulative potential	No data / information available.
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12.4. Mobility in soil

Ecology - soil	Largely insoluble, floats and tends to drift from water to land. Susceptible to disperse into sediment and the solid phase of waste-water.
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12.5. Other adverse effects

Other information : Regulations forbid the disposal of oils and lubricants in the natural environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional legislation (waste) : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of in accordance with the local/national safety regulations in force.
Additional information : Regulations forbid the disposal of oils and lubricants in the natural environment. It is recommended to avoid or reduce waste production as much as possible.

The disposal of this product, solutions and by-products shall comply with the legal requirements for environmental protection and waste disposal and the requirements of all local authorities at all times.

A licensed waste disposal contractor will be in charge of the disposal of surplus and non-recyclable products. Do not evacuate untreated waste into the sewers.

Only dispose of this product and its container by taking all standard precautions. Handle non-cleaned and non-rinsed containers with care. Empty containers or liners may retain product residues. Avoid dispersing spilled materials, as well as their leakage, and any contact with the soil, waterways, drains and sewers.

Ecology - waste materials : Unused residues of the product must be considered as dangerous waste.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not applicable

Transportation of Dangerous Goods

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

No additional information available

National regulations

Ensure all national/local regulations are observed.

15.3. US State regulations

No additional information available

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-statements:

H413

May cause long lasting harmful effects to aquatic life.

Abbreviations and acronyms:

A111 - Alkaryl polymeric hydrocarbon

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 8/20/2018

Version: 1.0

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
DPD	Dangerous Preparations Directive 1999/45/EC
DSD	Dangerous Substances Directive 67/548/EEC
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
vPvB	Very Persistent and Very Bioaccumulative
TLM	Median Tolerance Limit

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product