

Material Safety Data Sheet

according to 91/155/EEC



Product name : Armidur L281
Silicone Enamel
Revision : 12.03.2006 **Version :** 3.0.0
Print date : 12.03.2006

01. Identification of substance, preparation and company

Product name:

Armidur L 281
Silicone enamel

Manufacturer/Supplier

MONOPOL AG

Street/P.O.Box

Oberrohrdorferstrasse 51

Country code/Postal code/Town/City

CH-5442 Fisisbach

Telephone / Telefax

+4156 484 77 77 / +41 56 484 77 99

Emergency information

+41 44 251 51 51

02. Composition/information on ingredients

Chemical characterization

Paint material solventborne

Hazardous components

TOLUENE ; EC-No. : 203-625-9 ; CAS-No. : 108-88-3

Percentage : 60 - 65 %

Classification : F ; R 11 Xn ; R 20

NAPHTHA (PETROLEUM), HYDROTREATED HEAVY ; EC-No. : 265-150-3 ; CAS-No. : 64742-48-9

Percentage : 1 - 5 %

Classification : Xn ; R 65

SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM. ; EC-No. : 265-199-0 ; CAS-No. : 64742-95-6

Percentage : 1 - 5 %

Classification : Xn ; R 65

XYLENE ; EC-No. : 215-535-7 ; CAS-No. : 1330-20-7

Percentage : 1 - 5 %

Classification : R 10 Xn ; R 20/21 Xi ; R 38

METHANOL ; EC-No. : 200-659-6 ; CAS-No. : 67-56-1

Percentage : < 0.5 %

Classification : F ; R 11 T ; R 39/23/24/25 T ; R 23/24/25

03. Hazards identification

Hazard designation

Highly flammable · Harmful by inhalation

Classification : F ; R 11 · Xn ; R 20

04. First-aid measures

General

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In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

After inhalation

Take the casualty into the fresh air and keep warm. Keep at rest. Irregular breathing/no breathing: artificial respiration. Unconsciousness: lateral position - call a physician.

After skin contact

Immediately remove all contaminated clothing. Wash away with soap and water and rinse. Do NOT use solvents or thinners.

After eye contact

Remove contact lenses, keep eyelids open. Flush with plenty of water (10 - 15 min.). Call a physician.

After ingestion

Contact a doctor immediately. Keep at rest. Do not induce vomiting.

05. Fire-fighting measures

Suitable extinguishing media

Alcohol resistant foam, CO₂, powders, water spray.

Unsuitable extinguishing media

Waterjet.

Special risk posed by the substance or by the actual preparation, its combustion products or gases discharged

Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Special protective equipment

Appropriate breathing apparatus may be required.

Additional information

Cool endangered containers with water in case of fire. Do not allow the quenching water into the sewage system.

06. Accidental release measures

Personal precautions

Remove ignition sources. Provide for sufficient ventilation. Do not inhale the vapour. Refer to protective measures listed in sections 7 and 8.

Environmental precautions

Do not empty into drains. If the product contaminates lakes, rivers or sewages, inform appropriate authorities in accordance with local regulations.

Methods for cleaning up/collecting

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13). Clean preferably with a detergent; avoid use of solvents.

07. Handling and storage

Information for safe handling

Prevent the creation of inflammable or explosive concentrations of vapour in air and avoid vapour concentrations higher than the OEL (=Occupational Exposure Limit). Additionally, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Preparation may charge electrostatically: always use earthing leads when transferring from one container to another. Operators should wear antistatic footwear and clothing. No sparking tools should be used. Avoid contact with skin and eyes. Do not inhale the vapour. Do not eat or drink during work - no smoking. Comply with the health and safety at work laws. For personal protection see Section 8. Gas mask in case of spray processing.

Information about protection against explosions and fires

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

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Requirements to be met by storerooms and containers

Keep container tightly closed. Never use pressure to empty: container is not a pressure vessel. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical equipment should be protected to the appropriate standard. Floors should be of the conducting type.

Information about separation of incompatible products

Keep away from oxidizing agents, from strongly alkaline and strongly acid materials.

Further information about storage conditions

Always keep in containers of same material as the original one. See also instructions on the label. Avoid heating and direct sunlight. Keep away from ignition sources - No smoking. Keep containers dry and cool. Keep containers in a well-ventilated place. Comply with the health and safety at work laws.

Storage class (VCI) : 3A

08. Exposure controls and personal protection

Additional information about engineering measures

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL (=Occupational Exposure Limit) , suitable respiratory protection must be worn.

Components with critical values that require monitoring at the workplace (exposure limits)

TOLUENE ; CAS-No. : 108-88-3

Specification : TRGS 900 - maximum limit in the atmosphere at the workplace (D)
Value : 50 ppm / 190 mg/m³
Category : 4
Remarks : Y, H
Version date : 01.04.2003

Specification : TRGS 903 - biological workplace tolerance values (D)
Parameter : Toluene / whole blood / end of exposure or shift
Value : 1 mg/l
Version date : 01.05.2002

Specification : TRGS 903 - biological workplace tolerance values (D)
Parameter : o-Cresol / urine / end of exposure or shift; after several shifts in cases of long term exposure
Value : 3 mg/l
Version date : 01.05.2002

XYLENE ; CAS-No. : 1330-20-7

Specification : TRGS 900 - maximum limit in the atmosphere at the workplace (D)
Value : 100 ppm / 440 mg/m³
Category : 4
Remarks : H
Version date : 01.03.2002

Specification : TRGS 903 - biological workplace tolerance values (D)
Parameter : Xylene / whole blood / end of exposure or shift
Value : 1.5 mg/l
Version date : 01.05.2002

Specification : TRGS 903 - biological workplace tolerance values (D)
Parameter : Methylhippuric acid / urine / end of exposure or shift
Value : 2 g/l
Version date : 01.05.2002

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Specification : Short term exposure limit (EC)
Value : 100 ppm / 442 mg/m³
Remarks : H
Version date : 08.06.2000

Specification : threshold limit value (EC)
Value : 50 ppm / 221 mg/m³
Remarks : H
Version date : 08.06.2000

METHANOL ; CAS-No. : 67-56-1

Specification : TRGS 900 - maximum limit in the atmosphere at the workplace (D)
Value : 200 ppm / 270 mg/m³
Category : 4
Remarks : H, Y
Version date : 01.03.2002

Specification : TRGS 903 - biological workplace tolerance values (D)
Parameter : Methanol / urine / end of exposure or shift; after several shifts in cases of long term exposure
Value : 30 mg/l
Version date : 01.05.2002

Personal protective equipment

Respiratory protection

If workplace limits are exceeded, a gas mask approved for this purpose must be worn.

Hand protection

Solvent-resistant protective gloves must be worn. For prolonged or repeated handling, use barrier creams to protect the exposed areas of the skin.

Eye protection

Use safety glasses.

Body protection

Personal should wear antistatic clothings made of natural fiber or of high temperature resistant synthetic fiber. All parts of the body should be washed after contact. After skin contact wash thoroughly with soap and water or use recognised skin cleanser. Do Not use solvents or thinners.

09. Physical and chemical properties

Image

Form : Liquid.
Colour : Coloured.
Odour : Like solvent.

Relevant safety data

Boiling point / range :	(1013 hPa)	not applicable
Flash point :		4 °C
Vapour pressure :	(50 °C)	not applicable
Density :	(20 °C)	0.981 g/cm ³
Solvent-separation test :	(20 °C) <	3 %
Flow time :	(20 °C) >	50 s DIN-cup 4 mm

10. Stability and reactivity

Conditions to avoid

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Stable under recommended storage and handling conditions(See section 7).

Materials to avoid

Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

Hazardous decomposition products

When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

11. Toxicological information

Experience on practice

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

Additional toxicological information

There no data available on the preparation itself. The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See Sections 2 and 15 for details.

12. Ecological information

Additional ecological information

General ecological information

There are no data available on the product itself. Do not empty into waters or drains.

13. Disposal considerations

Contaminated packaging must be emptied of all residues and, following appropriate cleaning, may be sent to a recycling plant. Uncleaned packaging must be disposed of in the same manner as the medium.

14. Transport information

Land transport ADR/RID (2003)

Classification

Class :	3	Kemlercode :	33
Substance number :	1263	Classification-Code :	F1

Proper shipping name

PAINT

Packaging

Packaging group :	III
Label :	3

Maritime transport IMDG/GGVSea

Classification

IMDG-Code :	3	IMDG - Page :	3372
UN number :	1263	Marine Poll. :	-

Proper shipping name

PAINT

Packaging

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Packaging group : III
Label : 3

Air transport ICAO-TI and IATA-DGR

Classification

Class : 3
UN number : 1263

Proper shipping name

PAINT

Packaging

Packaging group : III
Label : 3

15. Regulatory information

Classification according to EEC directives

Danger symbol and danger designation



F+ ; Highly flammable



Xn ; Harmful

Hazard-determining components of labelling

TOLUENE ; CAS-No. : 108-88-3

R-phrases

11 Highly flammable
20 Harmful by inhalation

S-phrases

29/35 Do not empty into drains; dispose of this material and its container in a safe way
51 Use only in well-ventilated areas.
16 Keep away from sources of ignition - No smoking
33 Take precautionary measures against static discharges
7/9 Keep container tightly closed in a well-ventilated place
43 In case of fire, use..(indic. the precise type of fire-fighting equip..If water increases the risk,add-Never use water)

National regulatory information

Regulation on inflammable liquids (VbF)

VbF-Class : AI

Emission control act ("TA-Luft")

Sum organic substances class I : 60 - 65 %

Water pollution classification

Class : 2 according VwVwS

Poisonous law (CH)

Class : 4
BAGT-number : 619004

16. Other information

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Further information

The details in this material safety data sheet satisfy national and EU legislation. We have no knowledge or control over the user's working conditions however. The product may not be used for any purpose other than that specified in chapter 1 unless written consent has been obtained. The user is responsible for the observance of all required statutory provisions.

Relevant changes

02. Hazardous components · 08. Components with critical values that require monitoring at the workplace (exposure limits) · 14. Classification (ADR 2003) · 15. Hazard-determining components of labelling · 15. S-phrases · 15. Emission control act ("TA-Luft")

R-Phrases of components

10	Flammable
11	Highly flammable
20	Harmful by inhalation
20/21	Harmful by inhalation and in contact with skin
23/24/25	Toxic by inhalation, in contact with skin and if swallowed
38	Irritating to skin
39/23/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
65	Harmful: may cause lung damage if swallowed

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
